FCC Radio Test Report

FCC ID: KA2WR920VA1

This report concerns: Original Grant

Project No.	: 1901H008B
Equipment	: U.S. Cellular Home Phone
Test Model	: DWR-920V
Series Model	: N/A
Applicant	: D-Link Corporation
Address	: No.289, Xinhu 3rd Rd., Neihu District, Taipei 11494, Taiwan

Date of Receipt	: Jan. 22, 2019
Date of Test	: Jan. 22, 2019~ Jan. 28, 2019
Issued Date	: May. 13, 2019
Tested by	: BTL Inc.

Technical Manager : David Mao
(David Mao)

Authorized Signatory : Steven Lu
(Steven Lu)

BTL INC.

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Certificate #5123.02

Declaration

BTL represents to the client that testing is done in accordance with standard procedures as applicable and that test instruments used has been calibrated with standards traceable to international standard(s) and/or national standard(s).

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BTL's laboratory quality assurance procedures are in compliance with the **ISO/IEC 17025** requirements, and accredited by the conformity assessment authorities listed in this test report.

BTL is not responsible for the sampling stage, so the results only apply to the sample as received.

The information, data and test plan are provided by manufacturer which may affect the validity of results, so it is manufacturer's responsibility to ensure that the apparatus meets the essential requirements of applied standards and in all the possible configurations as representative of its intended use.

Limitation

For the use of the authority's logo is limited unless the Test Standard(s)/Scope(s)/Item(s) mentioned in this test report is (are) included in the conformity assessment authorities acceptance respective.

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REPORT ISSUED HISTORY

Report Version	Description	Issued Date
R00	Original Issue. This is a supplementary report to the original test report (BTL-FCCP-1-1901H008). In this report only records the test results of AC/DC ADAPTER: AD120A120100UV.	Apr. 03, 2019
R01	Revised report to address TCB`s commnets as below: This is a supplementary report to the original test report of BTL-FCCP-3-1901H008, but it does not issue. In this report, records all the test results.	May. 13, 2019

1. GENERAL SUMMARY

Equipment	:	U.S. Cellular Home Phone
Brand Name	:	N/A
Test Model	:	DWR-920V
Series Model	:	N/A
Applicant	:	D-Link Corporation
Manufacturer	:	D-Link Corporation
Address	:	No.289, Xinhu 3rd Rd., Neihu District, Taipei 11494, Taiwan
Date of Test	:	Jan. 22, 2019~ Jan. 28, 2019
Test Sample	:	Engineering Sample No.: B190100025
Standard(s)	:	47 CFR FCC Part 27 Subpart L 47 CFR FCC Part 27 Subpart M 47 CFR FCC Part 27 Subpart H 47 CFR FCC Part 2 & ANSI/TIA/EIA-603-E-2016 KDB 971168 D01 Power Meas License Digital Systems v03r01

The above equipment has been tested and found compliance with the requirement of the relative standards by BTL Inc.
The test data, data evaluation, and equipment configuration contained in our test report (Ref No. BTL-FCCP-3-1901H008B) were obtained utilizing the test procedures, test instruments, test sites that has been accredited by the Authority of A2LA according to the ISO/IEC 17025 quality assessment standard and technical standard(s).

Test results included in this report are only for the LTE Band 4, 12, 66 parts.

2. SUMMARY OF TEST RESULTS

Test procedures according to the technical standard(s):

FCC Part 27 Subpart L,M,H & Part 2			
Standard(s) Section	Test Item	Judgment	Tested By
2.1046 & 27.50(d)(4) & 27.50(h)	Radiated power	PASS	Paul Li
2.1046 & 27.50(d)(4) & 27.50(h)	Maximum Output Power	PASS	Paul Li
2.1049 & 27.53(h)	Occupied Bandwidth	PASS	Paul Li
2.1051 & 27.53(h) & 27.53(l)	Conducted Spurious Emissions	PASS	Paul Li
2.1053 / 27.53(h) 2.1051 & 27.53(l)	Radiated Spurious Emissions	PASS	Paul Li
27.53(h) & 27.53(l)	Band Edge Measurements	PASS	Paul Li
27.50(d)(5)	Peak To Average Ratio	PASS	Paul Li
2.1055 & 27.54	Frequency Stability	PASS	Paul Li

Note:

(1)" N/A" denotes test is not applicable to this device.

2.1 TEST FACILITY

The test facilities used to collect the test data in this report is at the location of No.3, Jinshagang 1st Road, Shixia, Dalang Town, Dongguan, Guangdong, China.
BTL's Test Firm Registration Number for FCC: 357015
BTL's Designation Number for FCC: CN1240

2.2 MEASUREMENT UNCERTAINTY

ISO/IEC 17025 requires that an estimate of the measurement uncertainties associated with the emissions test results be included in the report. The measurement uncertainties given below are based on a 95% confidence level (based on a coverage factor (k=2)

The BTL measurement uncertainty as below table:

A. Radiated Measurement :

Test Site	Method	Measurement Frequency Range	Ant. H / V	U,(dB)
DG-CB03	CISPR	9KHz ~ 30MHz	V	3.79
		9KHz ~ 30MHz	H	3.57
		30MHz ~ 200MHz	V	3.82
		30MHz ~ 200MHz	H	3.78
		200MHz ~ 1,000MHz	V	4.10
		200MHz ~ 1,000MHz	H	4.06

Test Site	Method	Measurement Frequency Range	Ant. H / V	U,(dB)
DG-CB03	CISPR	1GHz ~ 18GHz	V	3.12
		1GHz ~ 18GHz	H	3.68
		18GHz ~ 40GHz	V	4.15
		18GHz ~ 40GHz	H	4.14

Note: Unless specifically mentioned, the uncertainty of measurement has not been taken into account to declare the compliance or non-compliance to the specification.

3. GENERAL INFORMATION

3.1 GENERAL DESCRIPTION OF EUT

Equipment	U.S. Cellular Home Phone	
Brand Name	N/A	
Test Model	DWR-920V	
Series Model	N/A	
Model Difference(s)	N/A	
Hardware Version	A1	
Software Version	01.01	
Antenna Type	External Antenna	
Antenna Gain	LTE 4	2.72614 dBi
	LTE 12	-0.814828 dBi
	LTE 66	2.45029 dBi
IMEI No.	357471055275665	
Modulation Type	LTE	UL: QPSK,16QAM DL: QPSK,16QAM, 64QAM
Operation Frequency	LTE 4 (Channel Bandwidth: 1.4MHz)	1710.7MHz ~ 1754.3MHz
	LTE 4 (Channel Bandwidth: 3MHz)	1711.5MHz ~ 1753.5MHz
	LTE 4 (Channel Bandwidth: 5MHz)	1712.5MHz ~ 1752.5MHz
	LTE 4 (Channel Bandwidth: 10MHz)	1715.0MHz ~ 1750.0MHz
	LTE 4 (Channel Bandwidth: 15MHz)	1717.5MHz ~ 1747.5MHz
	LTE 4 (Channel Bandwidth: 20MHz)	1720.0MHz ~ 1745.0MHz
Operation Frequency	LTE 12 (Channel Bandwidth: 1.4MHz)	699.7MHz ~ 715.3MHz
	LTE 12 (Channel Bandwidth: 3MHz)	700.5MHz ~ 714.5MHz
	LTE 12 (Channel Bandwidth: 5MHz)	701.5MHz ~ 713.5MHz
	LTE 12 (Channel Bandwidth: 10MHz)	704.0MHz ~ 711.0MHz
	LTE 66 (Channel Bandwidth: 1.4MHz)	1710.7MHz ~ 1779.5MHz
	LTE 66 (Channel Bandwidth: 3MHz)	1711.5MHz ~ 1778.5MHz
	LTE 66 (Channel Bandwidth: 5MHz)	1712.5MHz ~ 1777.5MHz
	LTE 66 (Channel Bandwidth: 10MHz)	1715.0MHz ~ 1775.0MHz
	LTE 66 (Channel Bandwidth: 15MHz)	1717.5MHz ~ 1772.5MHz
	LTE 66 (Channel Bandwidth: 20MHz)	1720.0MHz ~ 1770.0MHz

Max. EIRP Power	LTE 4 (Channel Bandwidth: 1.4MHz)	QPSK	25.04	dBm
		16QAM	24.18	dBm
	LTE 4 (Channel Bandwidth: 3MHz)	QPSK	25.00	dBm
		16QAM	23.99	dBm
	LTE 4 (Channel Bandwidth: 5MHz)	QPSK	24.95	dBm
		16QAM	23.85	dBm
	LTE 4 (Channel Bandwidth: 10MHz)	QPSK	25.20	dBm
		16QAM	24.16	dBm
	LTE 4 (Channel Bandwidth: 15MHz)	QPSK	25.42	dBm
		16QAM	24.37	dBm
	LTE 4 (Channel Bandwidth: 20MHz)	QPSK	25.41	dBm
		16QAM	24.09	dBm
	LTE 66 (Channel Bandwidth: 1.4MHz)	QPSK	25.21	dBm
		16QAM	24.35	dBm
	LTE 66 (Channel Bandwidth: 3MHz)	QPSK	25.16	dBm
		16QAM	24.14	dBm
	LTE 66 (Channel Bandwidth: 5MHz)	QPSK	25.09	dBm
		16QAM	23.99	dBm
	LTE 66 (Channel Bandwidth: 10MHz)	QPSK	25.35	dBm
		16QAM	24.32	dBm
	LTE 66 (Channel Bandwidth: 15MHz)	QPSK	25.60	dBm
		16QAM	24.91	dBm
	LTE 66 (Channel Bandwidth: 20MHz)	QPSK	25.61	dBm
		16QAM	24.30	dBm
Max. ERP Power	LTE 12 (Channel Bandwidth: 1.4MHz)	QPSK	21.68	dBm
		16QAM	20.65	dBm
	LTE 12 (Channel Bandwidth: 3MHz)	QPSK	21.87	dBm
		16QAM	20.70	dBm
	LTE 12 (Channel Bandwidth: 5MHz)	QPSK	21.72	dBm
		16QAM	20.47	dBm
	LTE 12 (Channel Bandwidth: 10MHz)	QPSK	21.82	dBm
		16QAM	20.65	dBm
Power Source	DC voltage supplied from AC/DC adapter. Model: 1#: AMS135-1201000FU 2#: AD120A120100UV			
Power Rating	I/P: 1#:100-240V~,50/60Hz,0.5A O/P:12V⎓ 1.0A 2#:100-240V~,50-60Hz,0.4A MAX O/P:12V⎓ 1.0A			

Note:
1. For a more detailed features description, please refer to the manufacturer's specifications or the user's manual.

3.2 DESCRIPTION OF TEST MODES AND TEST CONDITION

Following channel(s) was (were) selected for the final test as listed below:

LTE BAND 4 MODE					
Test Item	Available Channel	Tested Channel	Channel Bandwidth	Modulation	Mode
EIRP	19957 to 20393	19957, 20175, 20393	1.4MHz	QPSK, 16QAM	1RB/3RB/6RB
	19965 to 20385	19965, 20175, 20385	3MHz	QPSK, 16QAM	1RB/8RB/15RB
	19975 to 20375	19975, 20175, 20375	5MHz	QPSK, 16QAM	1RB/12RB/25RB
	20000 to 20350	20000, 20175, 20350	10MHz	QPSK, 16QAM	1RB/25RB/50RB
	20025 to 20325	20025, 20175, 20325	15MHz	QPSK, 16QAM	1RB/36RB/75RB
	20050 to 20300	20050, 20175, 20300	20MHz	QPSK, 16QAM	1RB/50RB/100RB
Occupied Bandwidth	19957 to 20393	19957, 20175, 20393	1.4MHz	QPSK, 16QAM	6RB
	19965 to 20385	19965, 20175, 20385	3MHz	QPSK, 16QAM	15RB
	19975 to 20375	19975, 20175, 20375	5MHz	QPSK, 16QAM	25RB
	20000 to 20350	20000, 20175, 20350	10MHz	QPSK, 16QAM	50RB
	20025 to 20325	20025, 20175, 20325	15MHz	QPSK, 16QAM	75 RB
	20050 to 20300	20050, 20175, 20300	20MHz	QPSK, 16QAM	100RB
Conducted Spurious Emission	19957 to 20393	20175	1.4MHz	QPSK	1RB
	19975 to 20375	20175	5MHz	QPSK	1RB
	20050 to 20300	20175	20MHz	QPSK	1RB
Radiated Spurious Emission	19957 to 20393	20175	1.4MHz	QPSK	1RB
	19975 to 20375	20175	5MHz	QPSK	1RB
	20050 to 20300	20175	20MHz	QPSK	1RB

LTE BAND 4 MODE					
Test Item	Available Channel	Tested Channel	Channel Bandwidth	Modulation	Mode
Band Edge	19957 to 20393	19957	1.4MHz	QPSK	1RB/6RB
		20393	1.4MHz	QPSK	
	19965 to 20385	19965	3MHz	QPSK	1RB/15RB
		20385	3MHz	QPSK	
	19975 to 20375	19975	5MHz	QPSK	1RB/25RB
		20375	5MHz	QPSK	
	20000 to 20350	20000	10MHz	QPSK	1RB/50RB
		20350	10MHz	QPSK	
	20025 to 20325	20025	15MHz	QPSK	1RB/75RB
		20325	15MHz	QPSK	
	20050 to 20300	20050	20MHz	QPSK	1RB/100RB
		20300	20MHz	QPSK	
Peak To Average Ratio	19957 to 20393	19957, 20175, 20393	1.4MHz	QPSK, 16QAM	1RB
	19965 to 20385	19965, 20175, 20385	3MHz	QPSK, 16QAM	1RB
	19975 to 20375	19975, 20175, 20375	5MHz	QPSK, 16QAM	1RB
	20000 to 20350	20000, 20175, 20350	10MHz	QPSK, 16QAM	1RB
	20025 to 20325	20025, 20175, 20325	15MHz	QPSK, 16QAM	1RB
	20050 to 20300	20050, 20175, 20300	20MHz	QPSK, 16QAM	1RB
Frequency Stability	19957 to 20393	20175	1.4MHz	QPSK	1RB
	19965 to 20385	20175	3MHz	QPSK	1RB
	19975 to 20375	20175	5MHz	QPSK	1RB
	20000 to 20350	20175	10MHz	QPSK	1RB
	20025 to 20325	20175	15MHz	QPSK	1RB
	20050 to 20300	20175	20MHz	QPSK	1RB

LTE BAND 12 MODE					
Test Item	Available Channel	Tested Channel	Channel	Modulation	Mode
ERP	23017 to 23173	23017, 23095, 23173	1.4MHz	QPSK, 16QAM	1RB/3RB/6RB
	23025 to 23165	23025, 23095, 23165	3MHz	QPSK, 16QAM	1RB/8RB/15RB
	23035 to 23155	23035, 23095, 23155	5MHz	QPSK, 16QAM	1RB/12RB/25RB
	23060 to 23130	23060, 23095, 23130	10MHz	QPSK, 16QAM	1RB/25RB/50RB
Occupied Bandwidth	23017 to 23173	23017, 23095, 23173	1.4MHz	QPSK, 16QAM	6RB
	23025 to 23165	23025, 23095, 23165	3MHz	QPSK, 16QAM	15RB
	23035 to 23155	23035, 23095, 23155	5MHz	QPSK, 16QAM	25RB
	23060 to 23130	23060, 23095, 23130	10MHz	QPSK, 16QAM	50RB
Conducted Spurious Emission	23017 to 23173	23095	1.4MHz	QPSK	1 RB
	23035 to 23155	23095	5MHz	QPSK	1 RB
	23060 to 23130	23095	10MHz	QPSK	1 RB
Radiated Spurious Emission	23017 to 23173	23095	1.4MHz	QPSK	1 RB
	23035 to 23155	23095	5MHz	QPSK	1 RB
	23060 to 23130	23095	10MHz	QPSK	1 RB
Band Edge	23017 to 23173	23017	1.4MHz	QPSK	1RB/6RB
		23173	1.4MHz	QPSK	
	23025 to 23165	23025	3MHz	QPSK	1RB/15RB
		23165	3MHz	QPSK	
	23035 to 23155	23035	5MHz	QPSK	1RB/25RB
		23155	5MHz	QPSK	
	23060 to 23130	23060	10MHz	QPSK	1RB/50RB
		23130	10MHz	QPSK	
Peak to Average Ratio	23017 to 23173	23017, 23095, 23173	1.4MHz	QPSK, 16QAM	1 RB
	23025 to 23165	23025, 23095, 23165	3MHz	QPSK, 16QAM	1 RB
	23035 to 23155	23035, 23095, 23155	5MHz	QPSK, 16QAM	1 RB
	23060 to 23130	23060, 23095, 23130	10MHz	QPSK, 16QAM	1 RB
Frequency Stability	23017 to 23173	23095	1.4MHz	QPSK	1 RB
	23025 to 23165	23095	3MHz	QPSK	1 RB
	23035 to 23155	23095	5MHz	QPSK	1 RB
	23060 to 23130	23095	10MHz	QPSK	1 RB

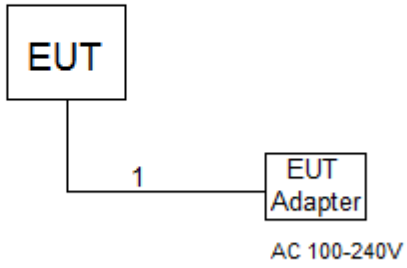
LTE BAND 66 MODE					
Test Item	Available Channel	Tested Channel	Channel Bandwidth	Modulation	Mode
EIRP	131979 to 132665	131979, 132322, 132665	1.4MHz	QPSK, 16QAM	1RB/3RB/6RB
	131987 to 132657	131987, 132322, 132657	3MHz	QPSK, 16QAM	1RB/8RB/15RB
	131997 to 132647	131997, 132322, 132647	5MHz	QPSK, 16QAM	1RB/12RB/25RB
	132022 to 132622	132022, 132322, 132622	10MHz	QPSK, 16QAM	1RB/25RB/50RB
	132047 to 132597	132047, 132322, 132597	15MHz	QPSK, 16QAM	1RB/36RB/75RB
	132072 to 132572	132072, 132322, 132572	20MHz	QPSK, 16QAM	1RB/50RB/100RB
Occupied Bandwidth	131979 to 132665	131979, 132322, 132665	1.4MHz	QPSK, 16QAM	6RB
	131987 to 132657	131987, 132322, 132657	3MHz	QPSK, 16QAM	15RB
	131997 to 132647	131997, 132322, 132647	5MHz	QPSK, 16QAM	25RB
	132022 to 132622	132022, 132322, 132622	10MHz	QPSK, 16QAM	50RB
	132047 to 132597	132047, 132322, 132597	15MHz	QPSK, 16QAM	75 RB
	132072 to 132572	132072, 132322, 132572	20MHz	QPSK, 16QAM	100RB
Conducted Spurious Emission	131979 to 132665	132322	1.4MHz	QPSK	1RB
	131997 to 132647	132322	5MHz	QPSK	1RB
	132072 to 132572	132322	20MHz	QPSK	1RB
Radiated Spurious Emission	131979 to 132665	132322	1.4MHz	QPSK	1RB
	131997 to 132647	132322	5MHz	QPSK	1RB
	132072 to 132572	132322	20MHz	QPSK	1RB

LTE BAND 66 MODE					
Test Item	Available Channel	Tested Channel	Channel Bandwidth	Modulation	Mode
Band Edge	131979 to 132665	131979	1.4MHz	QPSK	1RB/6RB
		132665	1.4MHz	QPSK	
	131987 to 132657	131987	3MHz	QPSK	1RB/15RB
		132657	3MHz	QPSK	
	131997 to 132647	131997	5MHz	QPSK	1RB/25RB
		132647	5MHz	QPSK	
	132022 to 132622	132022	10MHz	QPSK	1RB/50RB
		132622	10MHz	QPSK	
	132047 to 132597	132047	15MHz	QPSK	1RB/75RB
		132597	15MHz	QPSK	
	132072 to 132572	132072	20MHz	QPSK	1RB/100RB
		132572	20MHz	QPSK	
Peak To Average Ratio	131979 to 132665	131979, 132322, 132665	1.4MHz	QPSK, 16QAM	1RB
	131987 to 132657	131987, 132322, 132657	3MHz	QPSK, 16QAM	1RB
	131997 to 132647	131997, 132322, 132647	5MHz	QPSK, 16QAM	1RB
	132022 to 132622	132022, 132322, 132622	10MHz	QPSK, 16QAM	1RB
	132047 to 132597	132047, 132322, 132597	15MHz	QPSK, 16QAM	1RB
	132072 to 132572	132072, 132322, 132572	20MHz	QPSK, 16QAM	1RB
Frequency Stability	131979 to 132665	132322	1.4MHz	QPSK	1RB
	131987 to 132657	132322	3MHz	QPSK	1RB
	131997 to 132647	132322	5MHz	QPSK	1RB
	132022 to 132622	132322	10MHz	QPSK	1RB
	132047 to 132597	132322	15MHz	QPSK	1RB
	132072 to 132572	132322	20MHz	QPSK	1RB

EUT TEST CONDITIONS:

Test Item	Environmental Conditions	Test Voltage
EIRP/ERP	22°C, 45%RH	DC 12V
Conducted Output Power	22°C, 45%RH	DC 12V
Occupied Bandwidth	22°C, 45%RH	DC 12V
Conducted Emission	22°C, 45%RH	DC 12V
Radiated Emission	22°C, 45%RH	AC 120V/60Hz
Band Edge	22°C, 45%RH	DC 12V
Peak to Average Ratio	22°C, 45%RH	DC 12V
Frequency Stability	Normal and Extreme	Normal and Extreme

3.3 BLOCK DIGRAM SHOWING THECONFIGURATIONOFSYSTEMTESTED FOR RADIATED



3.4 DESCRIPTION OF SUPPORT UNITS

The EUT has been tested as an independent unit together with other necessary accessories or support units. The following support units or accessories were used to form a representative test configuration during the tests.

Item	Equipment	Mfr/Brand	Model/Type No.	Series No.
-	-	-	-	-

Item	Shielded Type	Ferrite Core	Length	Note
1	NO	NO	1.2m	DC Cable

4. TEST RESULT

4.1 OUTPUT POWER MEASUREMENT

4.1.1 LIMIT

Mobile / Portable station are limited to 1 watts e.i.r.p. (LTE 4 & LTE 66)
Mobile / Portable station are limited to 3 watts e.r.p. (LTE 12)

4.1.2 TEST PROCEDURE

EIRP/ERP:

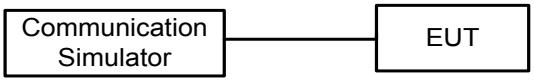
EIRP= Conducted Power +Antenan gain
ERP power=EIPR power-2.15dBi.

Maximun Output Power:

The EUT was set up for the maximum power with LTE link data modulation and link up with simulator. Set the EUT to transmit under low, middle and high channel and record the power level shown on simulator.

4.1.3 TESTSETUP LAYOUT

Conducted Power Measurement



4.1.4 TEST DEVIATION

No deviation

4.1.5 TEST RESULTS

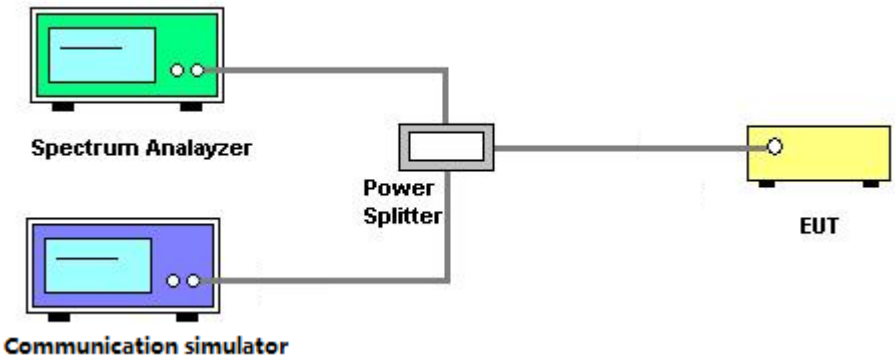
Please refer to the Appendix A.

4.2 OCCUPIED BANDWIDTH MEASUREMENT

4.2.1 TEST PROCEDURE

The EUT makes a call to the communication simulator. All measurements were done at low, middle and high operational frequency range. The communication simulator station system controlled a EUT to export maximum output power under transmission mode and specific channel frequency. Use OBW measurement function of Spectrum analyzer to measure 99 % occupied bandwidth and 26dB bandwidth.

4.2.2 TEST SETUP LAYOUT



4.2.3 TEST DEVIATION

No deviation

4.2.4 TEST RESULTS

Please refer to the Appendix B.

4.3 CONDUCTED EMISSIONS MEASUREMENT

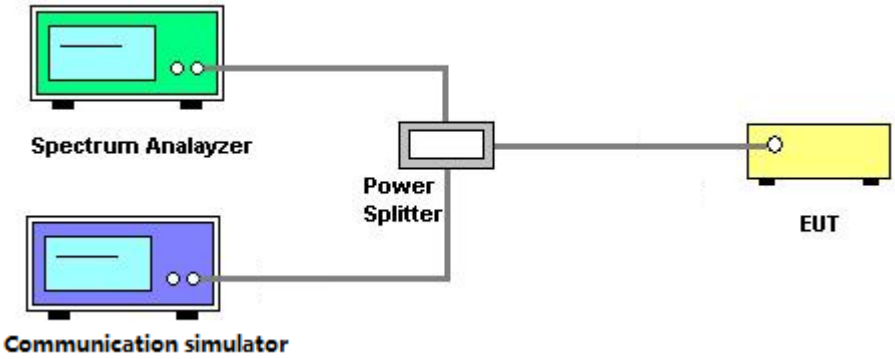
4.3.1 LIMIT

The power of any emission outside of the authorized operating frequency ranges must be attenuated below the transmitting power (P) by a factor of at least 43 + 10 log(P) dB. The emission limit equal to -13dBm. (LTE 4,12,66)

4.3.2 TEST PROCEDURES

1. The testing follows FCC KDB 971168 v03r01 Section 6.0.
2. The EUT was connected to spectrum analyzer and system simulator via a power divider.
3. The band edges of low and high channels for the highest RF powers were measured. Set RBW>=1% EBW in the 1MHz band immediately outside and adjacent to the band edge.
4. Set spectrum analyzer with RMS detector.
5. The RF fundamental frequency should be excluded against the limit line in the operating frequency band.
6. The limit line is derived from 43+10log(P)dB below the transmitter power P(Watts)
   =P(W)-[43+10log(P)](dB)
   =[30+10log(P)](dBm)-[43+10log(P)](dB)
   =-13dBm

4.3.3 TESTSETUP LAYOUT



4.3.4 TESTDEVIATION

No deviation

4.3.5 TEST RESULTS

Please refer to the Appendix C.

4.4 RADIATED EMISSIONS MEASUREMENT

4.4.1 LIMIT

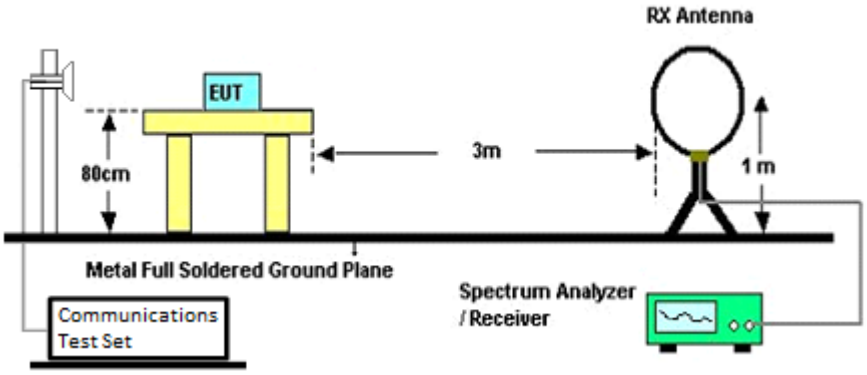
The power of any emission outside of the authorized operating frequency ranges must be attenuated below the transmitting power (P) by a factor of at least 43 + 10 log(P) dB. The emission limit equal to -13dBm. (LTE 4,12, 66)

4.4.2 TEST PROCEDURES

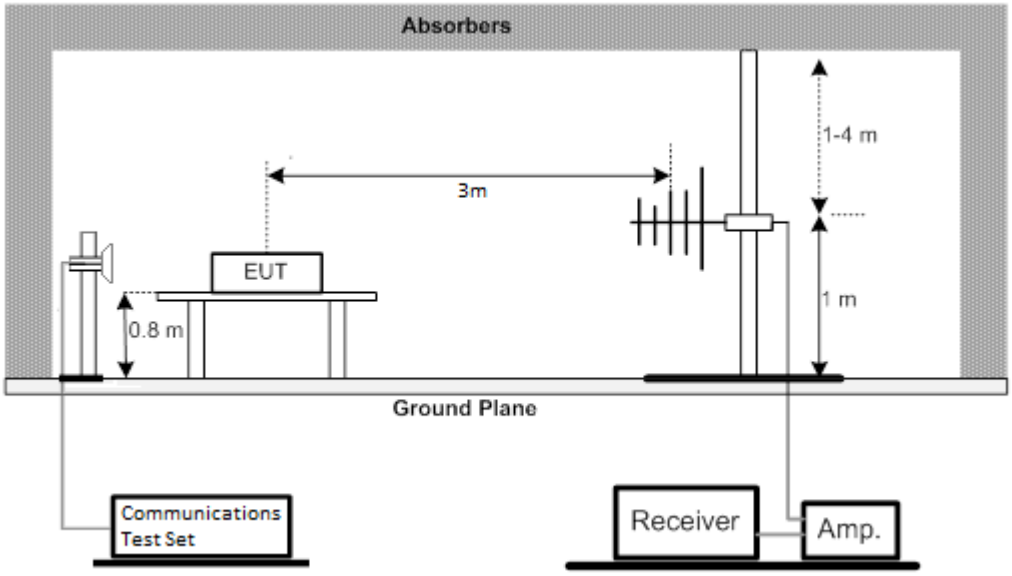
1. In the semi-anechoic chamber, EUT placed on the 0.8m height of Turn Table, rotated the table around 360 degrees to search the maximum radiation power and receiver antenna shall be rotated vertical and horizontal polarization and moved height from 1m to 4m to find the maximum polar radiated power. The “Read Value” is the spectrum reading the maximum power value.
2. 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 a. Record the power level of S.G
3. EIRP = Output power level of S.G – TX cable loss + Antenna gain of substitution horn.
4. E.R.P power can be calculated form E.I.R.P power by subtracting the gain of dipole, E.R.P power = E.I.P.R power - 2.15dBi.
5. The resolution bandwidth and video bandwidth of test receiver/spectrum analyzer is 1MHz/3MHz.

4.4.3 TESTSETUP LAYOUT

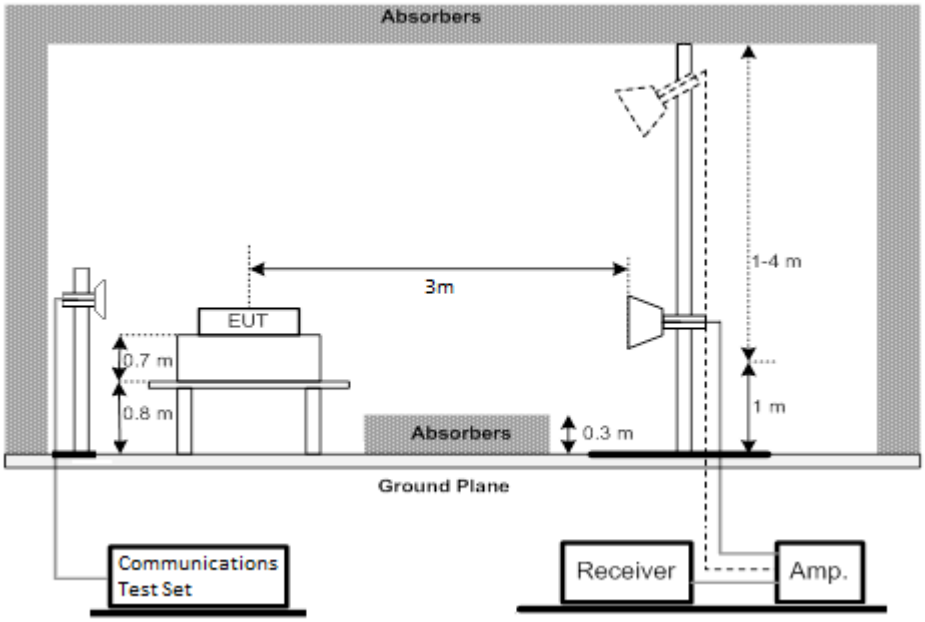
Below 30MHz



30MHz to 1GHz



Above 1GHz



4.4.4 TEST RESULTS (9KHZ TO 30MHZ)

Please refer to the Appendix D.

4.4.5 TEST RESULTS (30MHZ TO 1000MHZ)

Please refer to the Appendix E.

4.4.6 TEST RESULTS (ABOVE 1000MHZ)

Please refer to the Appendix F.

4.5 BAND EDGE MEASUREMENT

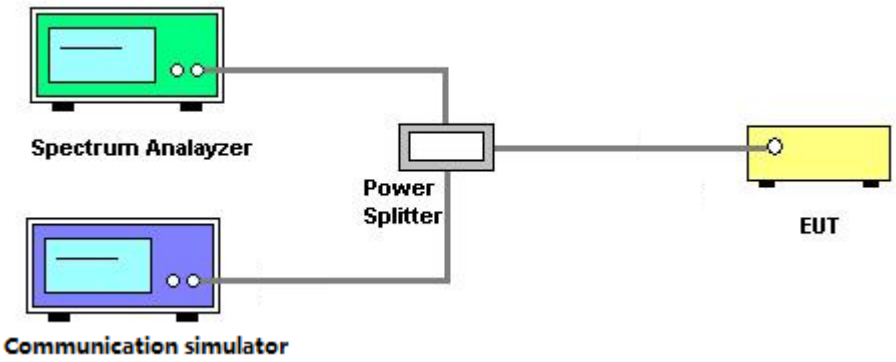
4.5.1 LIMIT

The power of any emission outside a licensee's frequency band(s) of operation shall be attenuated below the transmitter power (P) within the licensed band(s) of operation, measured in watts, by at least 43 + 10 log (P) dB. 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. (LTE 4,12, 66)

4.5.2 TEST PROCEDURES

1. All measurements were done at low and high operational frequency range.
2. The center frequency of spectrum is the band edge frequency and span is 2MHz. RB of the spectrum is 15kHz and VB of the spectrum is 43kHz (LTE Bandwidth 1.4MHz).
3. The center frequency of spectrum is the band edge frequency and span is 2MHz. RB of the spectrum is 30kHz and VB of the spectrum is 91kHz (LTE Bandwidth 3MHz).
4. The center frequency of spectrum is the band edge frequency and span is 2MHz. RB of the spectrum is 51kHz and VB of the spectrum is 150kHz (LTE Bandwidth 5MHz).
5. The center frequency of spectrum is the band edge frequency and span is 2MHz. RB of the spectrum is 100kHz and VB of the spectrum is 300kHz (LTE Bandwidth 10MHz).
6. The center frequency of spectrum is the band edge frequency and span is 2MHz. RB of the spectrum is 150kHz and VB of the spectrum is 470kHz (LTE Bandwidth 15MHz).
7. The center frequency of spectrum is the band edge frequency and span is 2MHz. RB of the spectrum is 200kHz and VB of the spectrum is 620kHz (LTE Bandwidth 20MHz).
8. Record the max trace plot into the test report.

4.5.3 TESTSETUP LAYOUT



4.5.4 TESTDEVIATION

No deviation

4.5.5 TEST RESULTS

Please refer to the Appendix G.

4.6 PEAK TO AVERAGE RATIO MEASUREMENT

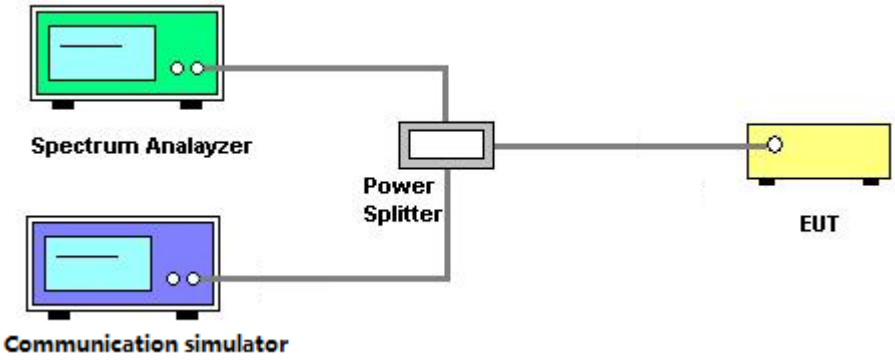
4.6.1 LIMIT

In measuring transmissions in this band using an average power technique, the peak to-average ratio (PAR) of the transmission may not exceed 13 dB.

4.6.2 TEST PROCEDURES

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

4.6.3 TESTSETUP LAYOUT



4.6.4 TESTDEVIATION

No deviation

4.6.5 TEST RESULTS

Please refer to the Appendix H.

4.7 FREQUENCY STABILITY MEASUREMENT

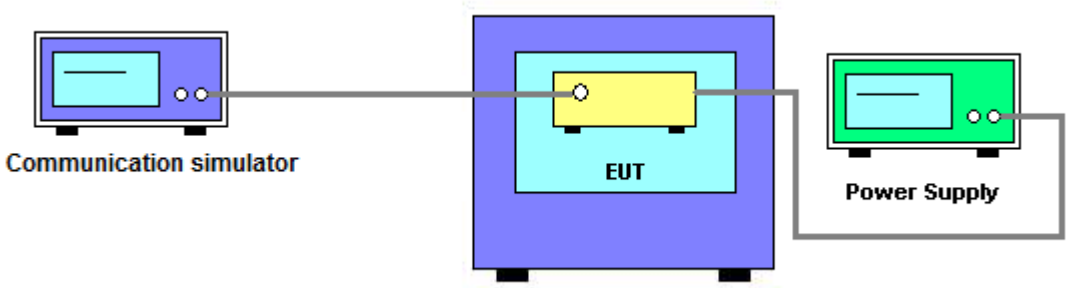
4.7.1 LIMIT

1.5 ppm is for base and fixed station. 2.5 ppm is for mobile station.

4.7.2 TEST PROCEDURES

1. Device is placed at the oven room. The oven room could control the temperatures and humidity. Power warm up is at least 15 min and power applied should perform before recording frequency error.
2. EUT is connected the external power supply to control the DC input power. The test voltage range is from minimum to maximum working voltage. Each step shall be record the frequency error rate.
3. The temperature range step is 10 degrees in this test items. All temperature levels shall be hold the ±0.5°C during the measurement testing. The each temperature step shall be at least 0.5 hours, consider the EUT could be test under the stability condition.
4. The frequency error was recorded frequency error from the communication simulator.

4.7.3 TESTSETUP LAYOUT



4.7.4 TESTDEVIATION

No deviation

4.7.5 TEST RESULTS

Please refer to the Appendix I.

5. LIST OF MEASUREMENT EQUIPMENTS

Radiated Emission Measurement					
Item	Kind of Equipment	Manufacturer	Type No.	Serial No.	Calibrated until
1	Antenna	Schwarbeck	VULB9160	9160-3232	Mar. 09, 2020
2	Amplifier	Agilent	8449B	3008A02274	Mar. 10, 2020
3	Amplifier	HP	8447D	2944A09673	Aug. 11, 2019
4	HighPass Filter	Wairrwright Instruments Gmbh	WHK 1.5/15G-10ST	11	Mar. 10, 2020
5	Band Reject Filter	Wairrwright Instruments Gmbh	WRCG 1710/1785-1690/1805-60/12SS	38	Mar. 10, 2020
6	Band Reject Filter	Wairrwright Instruments Gmbh	WRCG 824/849-810/863-60/9SS	7	Mar. 10, 2020
7	Band Reject Filter	Wairrwright Instruments Gmbh	WRCG 880/915-860/935-60/9SS	14	Mar. 10, 2020
8	Band Reject Filter	Wairrwright Instruments Gmbh	WRCG 1850/1910-1830/1930-60/10SS	17	Mar. 10, 2020
9	HighPass Filter	Wairrwright Instruments Gmbh	WHK3.1/18G-10SS	24	Mar. 10, 2020
10	Wireless Communication Test SET	Agilent	E5515C	MY48364183	Mar. 10, 2020
11	Microwave Preamplifier With Adaptor	EMC INSTRUMENT	EMC2654045	980039 & HA01	Mar. 10, 2020
12	Receiver	Agilent	N9038A	MY52130039	Aug. 11, 2019
13	wideband radio communication tester	R&S	CMW500	152372	Mar. 10, 2020
14	Cable	emci	LMR-400(30MHz-1GHz)(8m+5m)	N/A	May 25, 2019
15	Cable	mitron	B10-01-01-12M	18072744	Jul. 30, 2019
16	Controller	ETS-Lindgren	2090	N/A	N/A
17	Measurement Software	Farad	EZ-EMC Ver.NB-03A1-01	N/A	N/A
18	Loop Antenna	EM	EM-6876-1	230	Jan. 15, 2020
19	Double Ridged Guide Antenna	ETS	3115	75789	Mar. 09, 2020
20	Broad-Band Horn Antenna	Schwarzbeck	BBHA 9170	9170319	Jun. 30, 2019

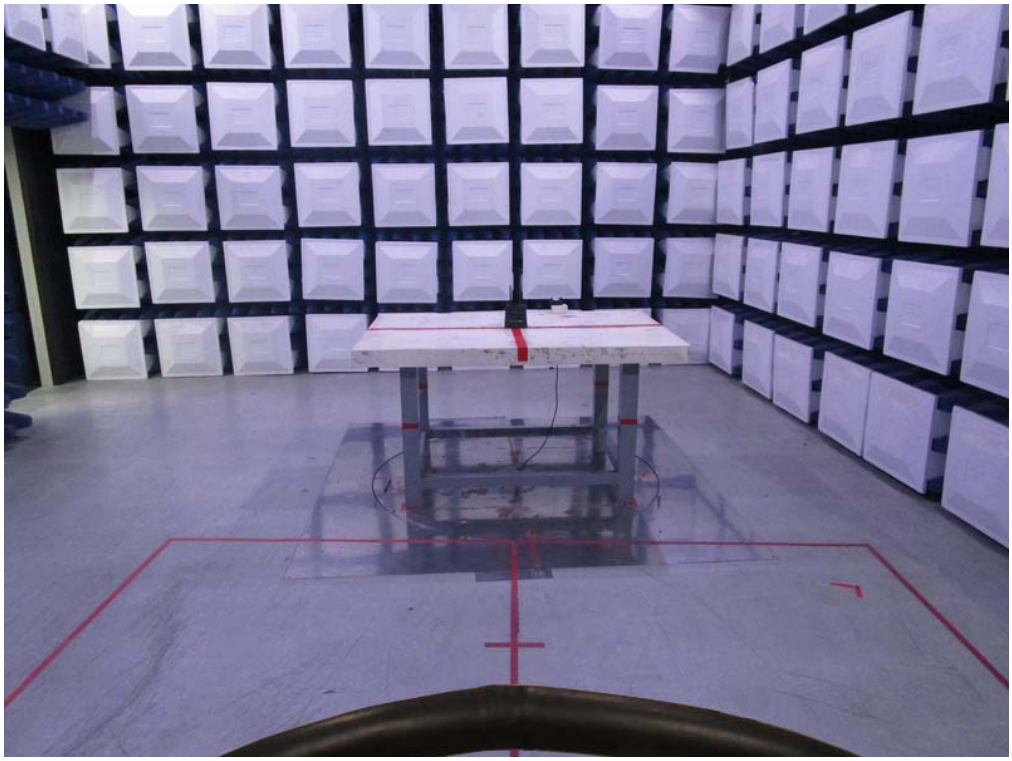
Conducted Emission & Band Edge & Occupied Bandwidth Measurement					
Item	Kind of Equipment	Manufacturer	Type No.	Serial No.	Calibrated until
1	Wireless Communication Test SET	Agilent	E5515C	MY48364183	Mar. 10, 2020
2	EXA Spectrum Analyzer	Agilent	N9010A	MY50520044	Mar. 10, 2020
3	POWER SPLITTER	Mini-Circuits	ZFRSC-123-S+	331000910-1	Mar. 10, 2020
4	wideband radio communication tester	R&S	CMW500	152372	Mar. 10, 2020
5	Spectrum Analyzer	R&S	FSP40	100185	Aug. 11, 2019

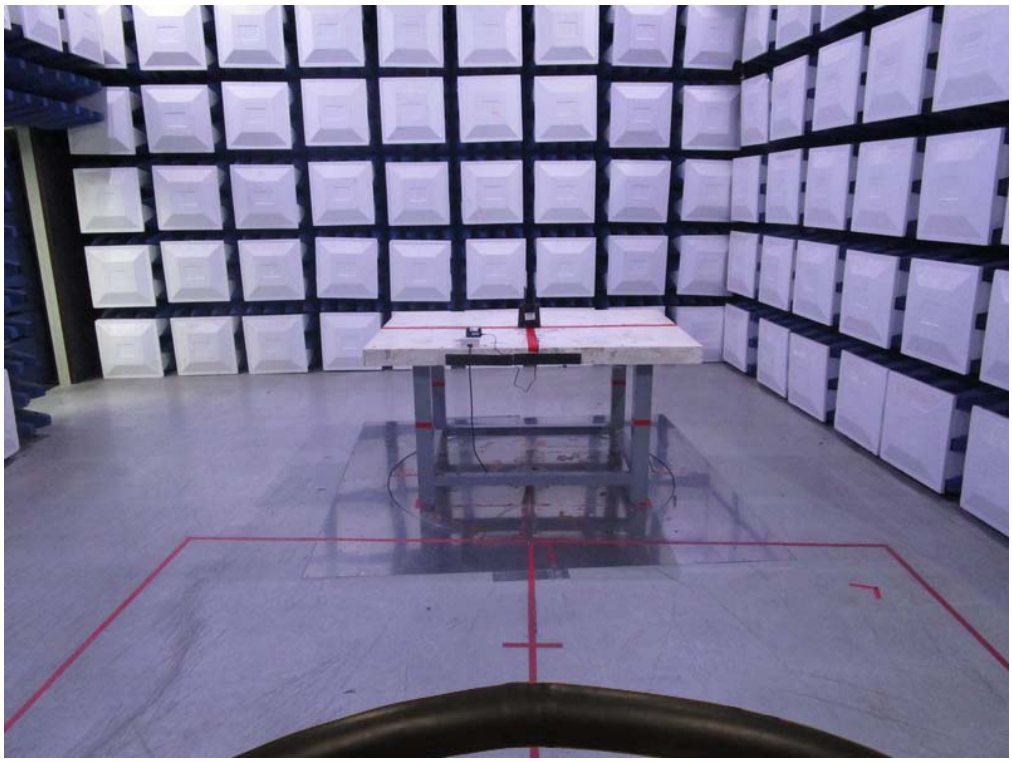
Frequency Stability Measurement					
Item	Kind of Equipment	Manufacturer	Type No.	Serial No.	Calibrated until
1	Wireless Communication Test SET	Agilent	E5515C	MY48364183	Mar. 10, 2020
2*	Multi-output DC Power Supply	GW Instek	GPC-3030DN	EK880675	Sep. 26, 2020
3	POWER SPLITTER	Mini-Circuits	ZFRSC-123-S+	331000910-1	Mar. 10, 2020
4	wideband radio communication tester	R&S	CMW500	152372	Mar. 10, 2020

Remark: ”N/A” denotes no model name, serial no. or calibration specified.
All calibration period of equipment list is one year.
*All calibration period of equipment list is three year.

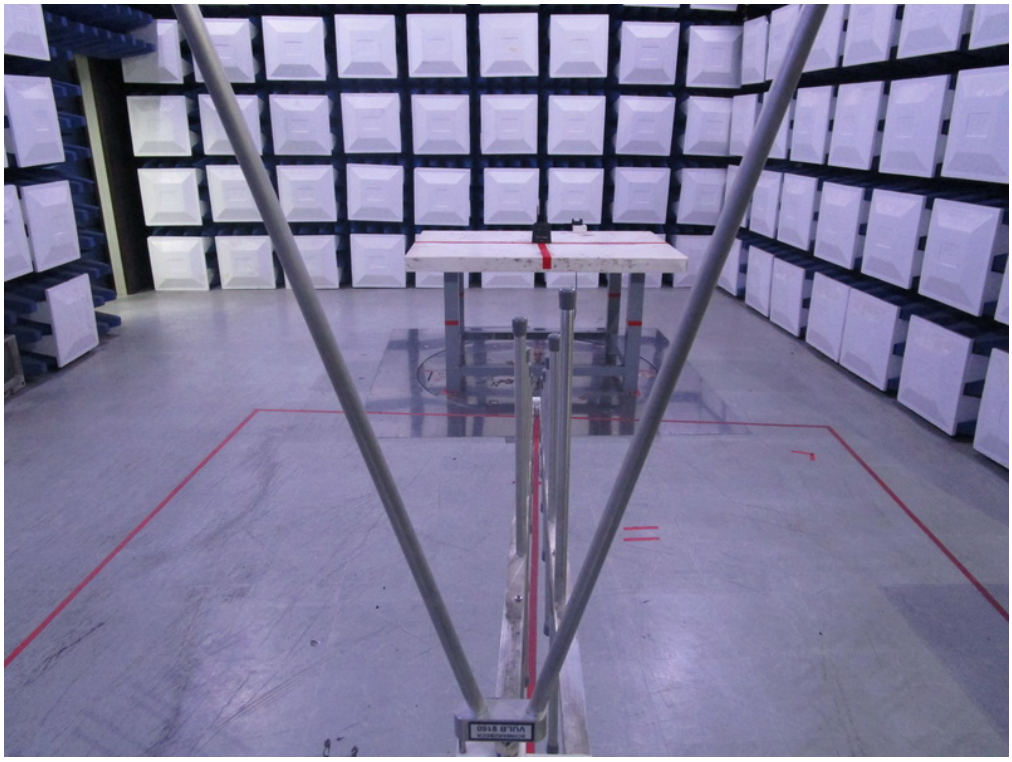
6. EUT TEST PHOTO

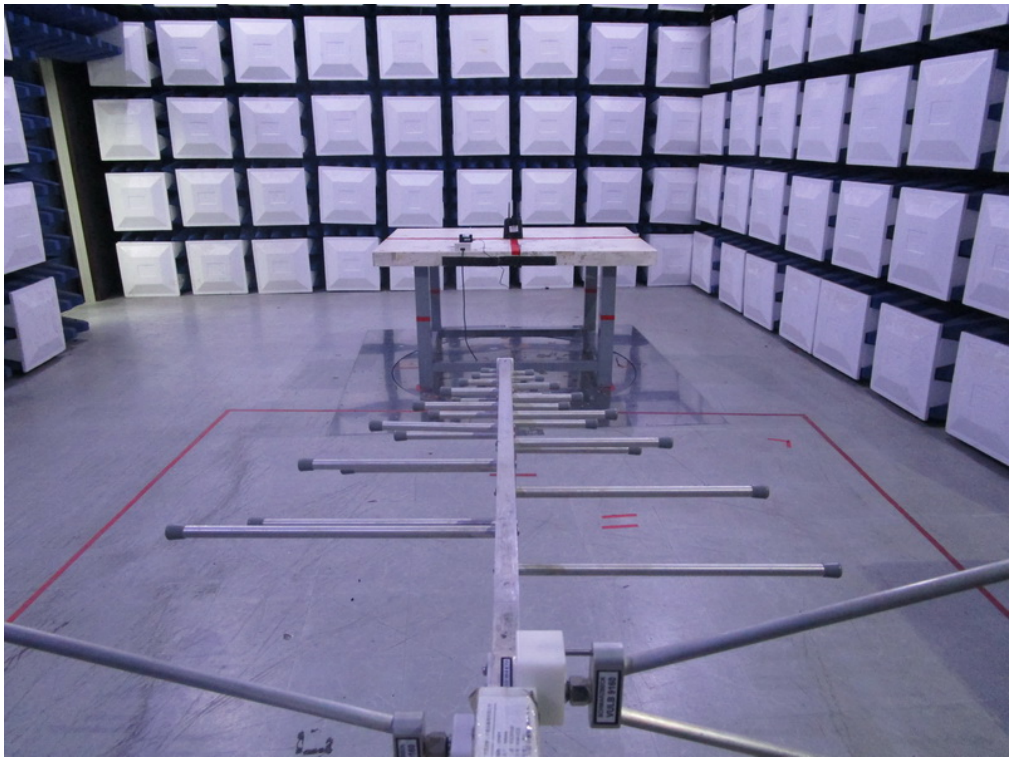
9 kHz to 30 MHz



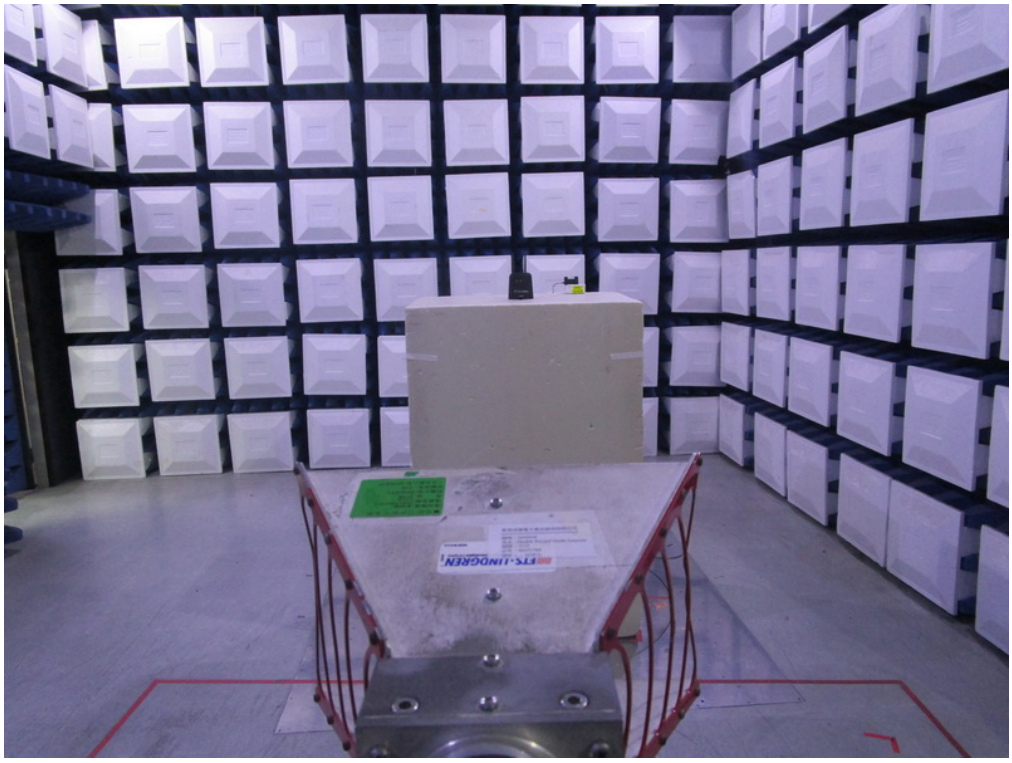


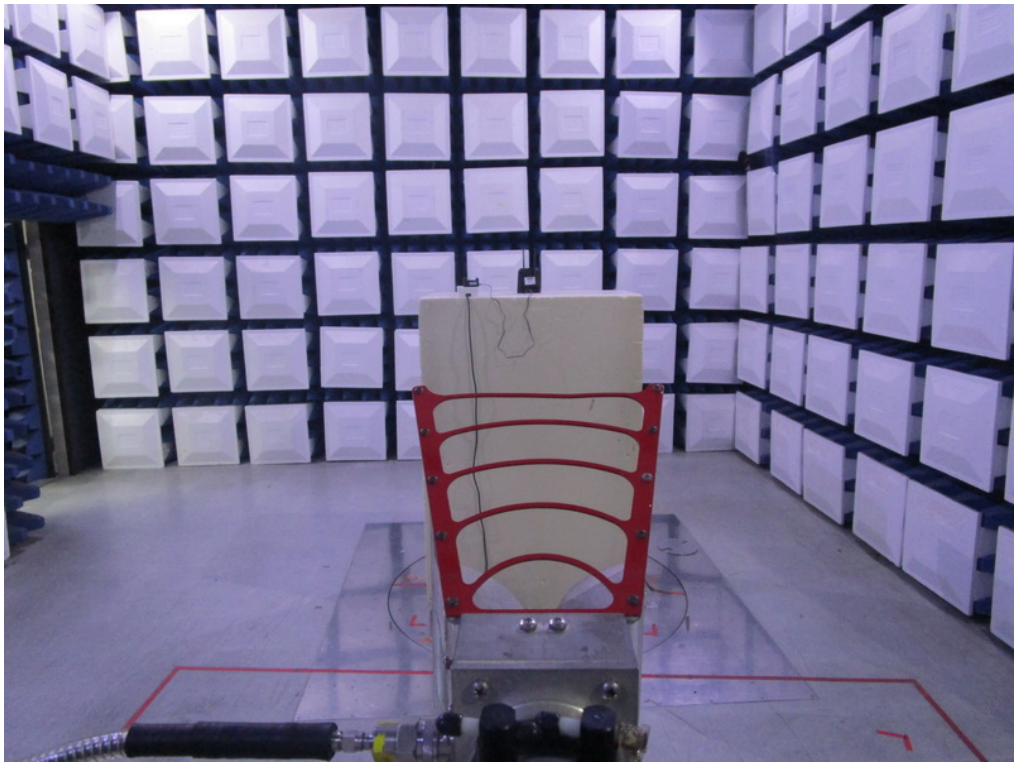
30 MHz to 1 GHz





Above 1 GHz





APPENDIX A - MAXIMUM OUTPUT POWER

Maximum Output Power (dBm):

LTE Band / BW	Modulation	RB Size	RB Offset	Low CH	Mid CH	High CH
				19957CH	20175CH	20393CH
				1710.7MHz	1732.5MHz	1754.3MHz
4 / 1.4M	QPSK	1	0	22.14	21.99	22.09
		1	2	22.15	22.06	22.13
		1	5	22.17	22.01	22.11
		3	0	22.13	22.23	22.13
		3	1	22.16	22.31	22.22
		3	2	22.14	22.28	22.05
		6	0	21.26	21.21	21.10
	16QAM	1	0	21.24	21.09	20.92
		1	2	21.17	21.25	20.89
		1	5	21.15	21.00	20.97
		3	0	21.34	21.35	20.78
		3	1	21.45	21.25	20.86
		3	2	21.36	21.34	20.90
		6	0	20.64	20.60	19.99

LTE Band / BW	Modulation	RB Size	RB Offset	Low CH	Mid CH	High CH
				19965CH	20175CH	20385CH
				1711.5MHz	1732.5MHz	1753.5MHz
4 / 3M	QPSK	1	0	22.28	22.18	22.02
		1	7	22.22	22.24	22.21
		1	14	22.19	22.19	22.16
		8	0	21.22	21.22	21.11
		8	4	21.11	21.17	21.14
		8	7	21.08	21.31	21.13
		15	0	21.17	21.26	21.09
	16QAM	1	0	21.22	20.96	21.10
		1	7	21.11	21.26	21.15
		1	14	20.85	20.79	21.12
		8	0	20.33	20.24	20.33
		8	4	20.31	20.20	20.35
		8	7	20.29	20.11	20.46
		15	0	20.19	20.21	20.32

LTE Band / BW	Modulation	RB Size	RB Offset	Low CH	Mid CH	High CH
				19975CH	20175CH	20375CH
				1712.5MHz	1732.5MHz	1752.5MHz
4 / 5M	QPSK	1	0	22.13	21.97	21.97
		1	13	22.14	22.04	22.17
		1	24	22.23	22.05	22.14
		12	0	21.29	21.19	21.32
		12	6	21.16	21.26	21.36
		12	11	21.10	21.27	21.33
		25	0	21.18	21.21	21.29
	16QAM	1	0	20.56	21.13	20.67
		1	13	20.53	21.07	20.76
		1	24	20.61	20.62	20.93
		12	0	20.36	20.15	20.17
		12	6	20.25	20.19	20.25
		12	11	20.03	20.19	20.32
		25	0	20.18	20.25	20.21

LTE Band / BW	Modulation	RB Size	RB Offset	Low CH	Mid CH	High CH
				20000CH	20175CH	20350CH
				1715MHz	1732.5MHz	1750MHz
4 / 10M	QPSK	1	0	22.43	22.34	22.21
		1	25	22.47	22.37	22.24
		1	49	22.41	22.26	22.45
		25	0	21.22	21.31	21.41
		25	13	21.31	21.19	21.36
		25	25	21.35	21.25	21.32
		50	0	21.34	21.23	21.32
	16QAM	1	0	21.06	20.95	20.74
		1	25	21.25	20.90	21.06
		1	49	21.03	20.90	21.44
		25	0	20.32	20.42	20.42
		25	13	20.31	20.57	20.63
		25	25	20.41	20.51	20.48
		50	0	20.43	20.11	20.37

LTE Band / BW	Modulation	RB Size	RB Offset	Low CH	Mid CH	High CH
				20025CH	20175CH	20325CH
				1717.5MHz	1732.5MHz	1747.5MHz
4 / 15M	QPSK	1	0	22.30	22.31	22.24
		1	38	22.69	22.20	22.25
		1	74	22.56	22.18	22.40
		36	0	21.36	22.18	21.35
		36	18	21.43	21.28	21.45
		36	39	21.31	21.24	21.37
		75	0	21.33	21.24	21.37
	16QAM	1	0	21.22	20.54	21.99
		1	38	21.43	21.07	21.84
		1	74	21.26	20.60	22.00
		36	0	20.43	20.60	20.44
		36	18	20.47	20.31	20.35
		36	39	20.41	20.39	20.42
		75	0	20.36	20.29	20.48

LTE Band / BW	Modulation	RB Size	RB Offset	Low CH	Mid CH	High CH
				20050CH	20175CH	20300CH
				1720MHz	1732.5MHz	1745MHz
4 / 20M	QPSK	1	0	21.88	21.87	22.60
		1	50	22.45	21.36	22.68
		1	99	22.14	21.94	22.37
		50	0	21.36	21.28	21.38
		50	25	21.38	21.31	21.39
		50	50	21.36	21.26	21.38
		100	0	21.40	21.33	21.32
	16QAM	1	0	20.92	20.76	20.99
		1	50	21.12	20.33	21.37
		1	99	21.15	21.27	20.93
		50	0	20.30	20.36	20.32
		50	25	20.36	20.50	20.50
		50	50	20.33	20.47	20.37
		100	0	20.40	20.37	20.43

LTE Band / BW	Modulation	RB Size	RB Offset	Low CH	Mid CH	High CH
				23017CH	23095CH	23173CH
				699.7MHz	707.5MHz	715.3MHz
12 / 1.4M	QPSK	1	0	22.71	22.77	22.94
		1	2	22.68	22.72	22.81
		1	5	22.68	22.68	22.84
		3	0	22.73	22.82	23.01
		3	1	22.90	22.94	23.00
		3	2	22.81	22.92	22.98
		6	0	21.61	21.77	21.97
	16QAM	1	0	21.58	21.66	21.49
		1	2	21.87	21.82	21.94
		1	5	21.99	21.44	21.63
		3	0	21.41	21.42	21.83
		3	1	21.58	21.50	21.93
		3	2	21.80	21.50	21.92
		6	0	20.72	20.63	20.97

LTE Band / BW	Modulation	RB Size	RB Offset	Low CH	Mid CH	High CH
				23025CH	23095CH	23165CH
				700.5MHz	707.5MHz	714.5MHz
12 / 3M	QPSK	1	0	22.86	22.86	22.94
		1	7	23.02	23.14	23.21
		1	14	23.18	23.10	22.98
		8	0	21.67	21.96	21.93
		8	4	21.90	21.87	21.97
		8	7	21.88	21.80	21.91
		15	0	21.76	21.87	21.85
	16QAM	1	0	21.47	21.65	21.77
		1	7	21.70	22.04	21.98
		1	14	21.82	21.56	21.83
		8	0	20.51	20.71	20.63
		8	4	20.83	20.92	21.03
		8	7	20.83	20.83	21.05
		15	0	20.57	20.77	20.81

LTE Band / BW	Modulation	RB Size	RB Offset	Low CH	Mid CH	High CH
				23035CH	23095CH	23155CH
				701.5MHz	707.5MHz	713.5MHz
12 / 5M	QPSK	1	0	22.69	22.37	22.67
		1	13	23.02	22.70	23.05
		1	24	22.87	22.30	22.89
		12	0	21.80	21.84	21.81
		12	6	21.86	21.93	21.92
		12	11	21.75	21.88	21.96
		25	0	21.73	21.84	21.94
	16QAM	1	0	21.04	21.66	21.42
		1	13	21.39	21.80	21.59
		1	24	21.16	21.29	21.66
		12	0	20.62	20.67	20.61
		12	6	20.80	20.86	20.93
		12	11	20.73	20.82	21.01
		25	0	20.81	20.80	20.73

LTE Band / BW	Modulation	RB Size	RB Offset	Low CH	Mid CH	High CH
				23060CH	23095CH	23130CH
				704MHz	707.5MHz	711MHz
12 / 10M	QPSK	1	0	22.59	22.75	22.84
		1	25	23.15	23.03	22.80
		1	49	22.71	22.79	23.00
		25	0	21.63	21.72	21.86
		25	13	21.73	21.82	21.77
		25	25	21.77	21.69	21.85
		50	0	21.73	21.74	21.96
	16QAM	1	0	21.36	21.50	21.68
		1	25	21.98	21.55	21.83
		1	49	21.55	21.05	21.91
		25	0	20.84	21.06	21.01
		25	13	20.73	21.09	20.85
		25	25	20.74	20.77	20.97
		50	0	20.81	20.78	20.93

LTE Band / BW	Modulation	RB Size	RB Offset	Low CH	Mid CH	High CH
				131979CH	132322CH	132665CH
				1710.7MHz	1745MHz	1779.3MHz
66 / 1.4M	QPSK	1	0	22.59	22.44	22.54
		1	2	22.60	22.51	22.58
		1	5	22.62	22.46	22.56
		3	0	22.58	22.68	22.58
		3	1	22.61	22.76	22.67
		3	2	22.59	22.73	22.50
		6	0	21.71	21.66	21.55
	16QAM	1	0	21.69	21.54	21.37
		1	2	21.62	21.70	21.34
		1	5	21.60	21.45	21.42
		3	0	21.79	21.80	21.23
		3	1	21.90	21.70	21.31
		3	2	21.81	21.79	21.35
		6	0	21.09	21.05	20.44

LTE Band / BW	Modulation	RB Size	RB Offset	Low CH	Mid CH	High CH
				131987CH	132322CH	132657CH
				1711.5MHz	1745MHz	1778.5MHz
66 / 3M	QPSK	1	0	22.71	22.61	22.45
		1	7	22.65	22.67	22.64
		1	14	22.62	22.62	22.59
		8	0	21.65	21.65	21.54
		8	4	21.54	21.60	21.57
		8	7	21.51	21.74	21.56
		15	0	21.60	21.69	21.52
	16QAM	1	0	21.65	21.39	21.53
		1	7	21.54	21.69	21.58
		1	14	21.28	21.22	21.55
		8	0	20.76	20.67	20.76
		8	4	20.74	20.63	20.78
		8	7	20.72	20.54	20.89
		15	0	20.62	20.64	20.75

LTE Band / BW	Modulation	RB Size	RB Offset	Low CH	Mid CH	High CH
				131997CH	132322CH	132647CH
				1712.5MHz	1745MHz	1777.5MHz
66 / 5M	QPSK	1	0	22.54	22.38	22.38
		1	13	22.55	22.45	22.58
		1	24	22.64	22.46	22.55
		12	0	21.70	21.60	21.73
		12	6	21.57	21.67	21.77
		12	11	21.51	21.68	21.74
		25	0	21.59	21.62	21.70
	16QAM	1	0	20.97	21.54	21.08
		1	13	20.94	21.48	21.17
		1	24	21.02	21.03	21.34
		12	0	20.77	20.56	20.58
		12	6	20.66	20.60	20.66
		12	11	20.44	20.60	20.73
		25	0	20.59	20.66	20.62

LTE Band / BW	Modulation	RB Size	RB Offset	Low CH	Mid CH	High CH
				132022CH	132322CH	132622CH
				1715MHz	1745MHz	1775MHz
66 / 10M	QPSK	1	0	22.86	22.77	22.64
		1	25	22.90	22.80	22.67
		1	49	22.84	22.69	22.88
		25	0	21.65	21.74	21.84
		25	13	21.74	21.62	21.79
		25	25	21.78	21.68	21.75
		50	0	21.77	21.66	21.75
	16QAM	1	0	21.49	21.38	21.17
		1	25	21.68	21.33	21.49
		1	49	21.46	21.33	21.87
		25	0	20.75	20.85	20.85
		25	13	20.74	21.00	21.06
		25	25	20.84	20.94	20.91
		50	0	20.86	20.54	20.80

LTE Band / BW	Modulation	RB Size	RB Offset	Low CH	Mid CH	High CH
				132047CH	132322CH	132597CH
				1717.5MHz	1745MHz	1772.5MHz
66 / 15M	QPSK	1	0	22.76	22.77	22.70
		1	38	23.15	22.66	22.71
		1	74	23.02	22.64	22.86
		36	0	21.82	22.64	21.81
		36	18	21.89	21.74	21.91
		36	39	21.77	21.70	21.83
		75	0	21.79	21.70	21.83
	16QAM	1	0	21.68	21.00	22.45
		1	38	21.89	21.53	22.30
		1	74	21.72	21.06	22.46
		36	0	20.89	21.06	20.90
		36	18	20.93	20.77	20.81
		36	39	20.87	20.85	20.88
		75	0	20.82	20.75	20.94

LTE Band / BW	Modulation	RB Size	RB Offset	Low CH	Mid CH	High CH
				132072CH	132322CH	132572CH
				1720MHz	1745MHz	1770MHz
66 / 20M	QPSK	1	0	22.36	22.35	23.08
		1	50	22.93	21.84	23.16
		1	99	22.62	22.42	22.85
		50	0	21.84	21.76	21.86
		50	25	21.86	21.79	21.87
		50	50	21.84	21.74	21.86
		100	0	21.88	21.81	21.80
	16QAM	1	0	21.40	21.24	21.47
		1	50	21.60	20.81	21.85
		1	99	21.63	21.75	21.41
		50	0	20.78	20.84	20.80
		50	25	20.84	20.98	20.98
		50	50	20.81	20.95	20.85
		100	0	20.88	20.85	20.91

EIRP Power (dBm):

LTE Band / BW	Modulation	RB Size	RB Offset	Low CH	Mid CH	High CH
				19957CH	20175CH	20393CH
				1710.7MHz	1732.5MHz	1754.3MHz
4 / 1.4M	QPSK	1	0	24.87	24.72	24.81
		1	2	24.87	24.79	24.86
		1	5	24.90	24.73	24.83
		3	0	24.86	24.96	24.85
		3	1	24.88	25.04	24.95
		3	2	24.87	25.01	24.77
		6	0	23.98	23.94	23.83
	16QAM	1	0	23.96	23.82	23.65
		1	2	23.89	23.98	23.62
		1	5	23.88	23.73	23.69
		3	0	24.07	24.08	23.51
		3	1	24.18	23.97	23.58
		3	2	24.08	24.07	23.62
		6	0	23.36	23.33	22.71

LTE Band / BW	Modulation	RB Size	RB Offset	Low CH	Mid CH	High CH
				19965CH	20175CH	20385CH
				1711.5MHz	1732.5MHz	1753.5MHz
4 / 3M	QPSK	1	0	25.00	24.91	24.74
		1	7	24.95	24.97	24.94
		1	14	24.92	24.91	24.88
		8	0	23.95	23.95	23.83
		8	4	23.83	23.90	23.86
		8	7	23.80	24.04	23.86
		15	0	23.90	23.98	23.81
	16QAM	1	0	23.95	23.69	23.82
		1	7	23.84	23.99	23.88
		1	14	23.58	23.52	23.85
		8	0	23.05	22.96	23.06
		8	4	23.03	22.93	23.08
		8	7	23.02	22.83	23.19
		15	0	22.92	22.94	23.05

LTE Band / BW	Modulation	RB Size	RB Offset	Low CH	Mid CH	High CH
				19975CH	20175CH	20375CH
				1712.5MHz	1732.5MHz	1752.5MHz
4 / 5M	QPSK	1	0	24.86	24.69	24.69
		1	13	24.86	24.76	24.90
		1	24	24.95	24.77	24.87
		12	0	24.02	23.92	24.05
		12	6	23.89	23.98	24.09
		12	11	23.83	23.99	24.06
		25	0	23.90	23.93	24.01
	16QAM	1	0	23.29	23.85	23.39
		1	13	23.25	23.79	23.48
		1	24	23.33	23.35	23.65
		12	0	23.08	22.87	22.90
		12	6	22.98	22.91	22.98
		12	11	22.76	22.92	23.04
		25	0	22.91	22.98	22.93

LTE Band / BW	Modulation	RB Size	RB Offset	Low CH	Mid CH	High CH
				20000CH	20175CH	20350CH
				1715MHz	1732.5MHz	1750MHz
4 / 10M	QPSK	1	0	25.16	25.07	24.93
		1	25	25.20	25.09	24.97
		1	49	25.13	24.99	25.17
		25	0	23.95	24.04	24.13
		25	13	24.04	23.92	24.08
		25	25	24.07	23.98	24.05
		50	0	24.07	23.95	24.05
	16QAM	1	0	23.79	23.68	23.46
		1	25	23.97	23.63	23.79
		1	49	23.76	23.63	24.16
		25	0	23.05	23.14	23.15
		25	13	23.04	23.30	23.36
		25	25	23.14	23.23	23.20
		50	0	23.15	22.84	23.10

LTE Band / BW	Modulation	RB Size	RB Offset	Low CH	Mid CH	High CH
				20025CH	20175CH	20325CH
				1717.5MHz	1732.5MHz	1747.5MHz
4 / 15M	QPSK	1	0	25.03	25.04	24.97
		1	38	25.42	24.93	24.98
		1	74	25.29	24.90	25.12
		36	0	24.08	24.90	24.07
		36	18	24.16	24.00	24.17
		36	39	24.04	23.97	24.10
		75	0	24.06	23.97	24.10
	16QAM	1	0	23.95	23.26	24.71
		1	38	24.16	23.79	24.56
		1	74	23.98	23.33	24.73
		36	0	23.16	23.33	23.17
		36	18	23.20	23.04	23.08
		36	39	23.13	23.12	23.15
		75	0	23.08	23.01	23.21

LTE Band / BW	Modulation	RB Size	RB Offset	Low CH	Mid CH	High CH
				20050CH	20175CH	20300CH
				1720MHz	1732.5MHz	1745MHz
4 / 20M	QPSK	1	0	24.61	24.59	25.32
		1	50	25.17	24.08	25.41
		1	99	24.87	24.67	25.10
		50	0	24.08	24.00	24.10
		50	25	24.10	24.04	24.12
		50	50	24.08	23.99	24.11
		100	0	24.12	24.06	24.05
	16QAM	1	0	23.65	23.49	23.72
		1	50	23.84	23.05	24.09
		1	99	23.88	24.00	23.65
		50	0	23.03	23.09	23.04
		50	25	23.08	23.23	23.23
		50	50	23.05	23.20	23.09
		100	0	23.13	23.10	23.15

LTE Band / BW	Modulation	RB Size	RB Offset	Low CH	Mid CH	High CH
				131979CH	132322CH	132665CH
				1710.7MHz	1745MHz	1779.3MHz
66 / 1.4M	QPSK	1	0	25.04	24.89	24.99
		1	2	25.05	24.96	25.03
		1	5	25.07	24.91	25.01
		3	0	25.03	25.13	25.03
		3	1	25.06	25.21	25.12
		3	2	25.04	25.18	24.95
		6	0	24.16	24.11	24.00
	16QAM	1	0	24.14	23.99	23.82
		1	2	24.07	24.15	23.79
		1	5	24.05	23.90	23.87
		3	0	24.24	24.25	23.68
		3	1	24.35	24.15	23.76
		3	2	24.26	24.24	23.80
		6	0	23.54	23.50	22.89

LTE Band / BW	Modulation	RB Size	RB Offset	Low CH	Mid CH	High CH
				131987CH	132322CH	132657CH
				1711.5MHz	1745MHz	1778.5MHz
66 / 3M	QPSK	1	0	25.16	25.06	24.90
		1	7	25.10	25.12	25.09
		1	14	25.07	25.07	25.04
		8	0	24.10	24.10	23.99
		8	4	23.99	24.05	24.02
		8	7	23.96	24.19	24.01
		15	0	24.05	24.14	23.97
	16QAM	1	0	24.10	23.84	23.98
		1	7	23.99	24.14	24.03
		1	14	23.73	23.67	24.00
		8	0	23.21	23.12	23.21
		8	4	23.19	23.08	23.23
		8	7	23.17	22.99	23.34
		15	0	23.07	23.09	23.20

LTE Band / BW	Modulation	RB Size	RB Offset	Low CH	Mid CH	High CH
				131997CH	132322CH	132647CH
				1712.5MHz	1745MHz	1777.5MHz
66 / 5M	QPSK	1	0	24.99	24.83	24.83
		1	13	25.00	24.90	25.03
		1	24	25.09	24.91	25.00
		12	0	24.15	24.05	24.18
		12	6	24.02	24.12	24.22
		12	11	23.96	24.13	24.19
		25	0	24.04	24.07	24.15
	16QAM	1	0	23.42	23.99	23.53
		1	13	23.39	23.93	23.62
		1	24	23.47	23.48	23.79
		12	0	23.22	23.01	23.03
		12	6	23.11	23.05	23.11
		12	11	22.89	23.05	23.18
		25	0	23.04	23.11	23.07

LTE Band / BW	Modulation	RB Size	RB Offset	Low CH	Mid CH	High CH
				132022CH	132322CH	132622CH
				1715MHz	1745MHz	1775MHz
66 / 10M	QPSK	1	0	25.31	25.22	25.09
		1	25	25.35	25.25	25.12
		1	49	25.29	25.14	25.33
		25	0	24.10	24.19	24.29
		25	13	24.19	24.07	24.24
		25	25	24.23	24.13	24.20
		50	0	24.22	24.11	24.20
	16QAM	1	0	23.94	23.83	23.62
		1	25	24.13	23.78	23.94
		1	49	23.91	23.78	24.32
		25	0	23.20	23.30	23.30
		25	13	23.19	23.45	23.51
		25	25	23.29	23.39	23.36
		50	0	23.31	22.99	23.25

LTE Band / BW	Modulation	RB Size	RB Offset	Low CH	Mid CH	High CH
				132047CH	132322CH	132597CH
				1717.5MHz	1745MHz	1772.5MHz
66 / 15M	QPSK	1	0	25.21	25.22	25.15
		1	38	25.60	25.11	25.16
		1	74	25.47	25.09	25.31
		36	0	24.27	25.09	24.26
		36	18	24.34	24.19	24.36
		36	39	24.22	24.15	24.28
		75	0	24.24	24.15	24.28
	16QAM	1	0	24.13	23.45	24.90
		1	38	24.34	23.98	24.75
		1	74	24.17	23.51	24.91
		36	0	23.34	23.51	23.35
		36	18	23.38	23.22	23.26
		36	39	23.32	23.30	23.33
		75	0	23.27	23.20	23.39

LTE Band / BW	Modulation	RB Size	RB Offset	Low CH	Mid CH	High CH
				132072CH	132322CH	132572CH
				1720MHz	1745MHz	1770MHz
66 / 20M	QPSK	1	0	24.81	24.80	25.53
		1	50	25.38	24.29	25.61
		1	99	25.07	24.87	25.30
		50	0	24.29	24.21	24.31
		50	25	24.31	24.24	24.32
		50	50	24.29	24.19	24.31
		100	0	24.33	24.26	24.25
	16QAM	1	0	23.85	23.69	23.92
		1	50	24.05	23.26	24.30
		1	99	24.08	24.20	23.86
		50	0	23.23	23.29	23.25
		50	25	23.29	23.43	23.43
		50	50	23.26	23.40	23.30
		100	0	23.33	23.30	23.36

ERP Power (dBm):

LTE Band / BW	Modulation	RB Size	RB Offset	Low CH	Mid CH	High CH
				23017CH	23095CH	23173CH
				699.7MHz	707.5MHz	715.3MHz
12 / 1.4M	QPSK	1	0	21.37	21.44	21.60
		1	2	21.34	21.39	21.48
		1	5	21.35	21.34	21.50
		3	0	21.40	21.49	21.68
		3	1	21.56	21.60	21.67
		3	2	21.47	21.58	21.64
		6	0	20.27	20.43	20.63
	16QAM	1	0	20.25	20.32	20.16
		1	2	20.53	20.49	20.61
		1	5	20.65	20.11	20.30
		3	0	20.07	20.09	20.49
		3	1	20.25	20.17	20.59
		3	2	20.46	20.16	20.59
		6	0	19.39	19.29	19.64

LTE Band / BW	Modulation	RB Size	RB Offset	Low CH	Mid CH	High CH
				23025CH	23095CH	23165CH
				700.5MHz	707.5MHz	714.5MHz
12 / 3M	QPSK	1	0	21.52	21.52	21.60
		1	7	21.68	21.80	21.87
		1	14	21.85	21.76	21.64
		8	0	20.34	20.63	20.60
		8	4	20.57	20.53	20.64
		8	7	20.55	20.47	20.57
		15	0	20.42	20.54	20.51
	16QAM	1	0	20.13	20.32	20.43
		1	7	20.36	20.70	20.64
		1	14	20.49	20.22	20.49
		8	0	19.17	19.38	19.29
		8	4	19.50	19.58	19.69
		8	7	19.49	19.50	19.71
		15	0	19.23	19.44	19.48

LTE Band / BW	Modulation	RB Size	RB Offset	Low CH	Mid CH	High CH
				23035CH	23095CH	23155CH
				701.5MHz	707.5MHz	713.5MHz
12 / 5M	QPSK	1	0	21.35	21.03	21.34
		1	13	21.68	21.37	21.72
		1	24	21.54	20.96	21.55
		12	0	20.46	20.50	20.47
		12	6	20.52	20.60	20.58
		12	11	20.41	20.54	20.62
		25	0	20.39	20.50	20.60
	16QAM	1	0	19.71	20.32	20.09
		1	13	20.06	20.47	20.25
		1	24	19.82	19.95	20.32
		12	0	19.28	19.33	19.28
		12	6	19.47	19.53	19.60
		12	11	19.39	19.49	19.67
		25	0	19.47	19.46	19.39

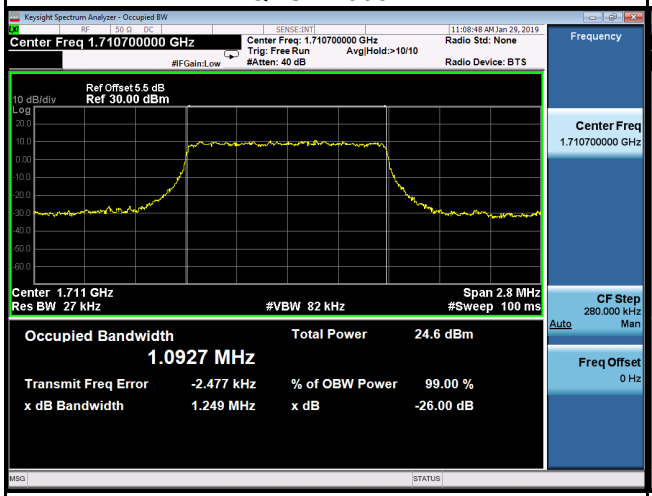
LTE Band / BW	Modulation	RB Size	RB Offset	Low CH	Mid CH	High CH
				23060CH	23095CH	23130CH
				704MHz	707.5MHz	711MHz
12 / 10M	QPSK	1	0	21.26	21.41	21.50
		1	25	21.82	21.70	21.46
		1	49	21.37	21.45	21.67
		25	0	20.30	20.38	20.53
		25	13	20.39	20.49	20.44
		25	25	20.43	20.36	20.52
		50	0	20.40	20.40	20.63
	16QAM	1	0	20.02	20.16	20.34
		1	25	20.65	20.22	20.50
		1	49	20.22	19.72	20.58
		25	0	19.50	19.73	19.67
		25	13	19.39	19.75	19.52
		25	25	19.41	19.43	19.64
		50	0	19.47	19.44	19.59

APPENDIX B - OCCUPIED BANDWIDTH

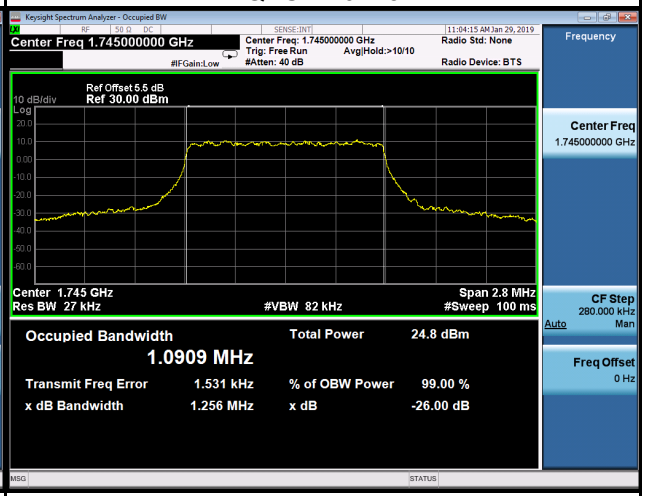
LTE Band 4_1.4M					
QPSK			16QAM		
Channel	Frequency (MHz)	99% Occupied Bandwidth (MHz)	Channel	Frequency (MHz)	99% Occupied Bandwidth (MHz)
19957	1710.7	1.093	19957	1710.7	1.090
20175	1732.5	1.091	20175	1732.5	1.095
20393	1754.3	1.094	20393	1754.3	1.088
Channel	Frequency (MHz)	26dB Bandwidth (MHz)	Channel	Frequency (MHz)	26dB Bandwidth (MHz)
19957	1710.7	1.249	19957	1710.7	1.262
20175	1732.5	1.256	20175	1732.5	1.260
20393	1754.3	1.261	20393	1754.3	1.257

Spectrum Plot

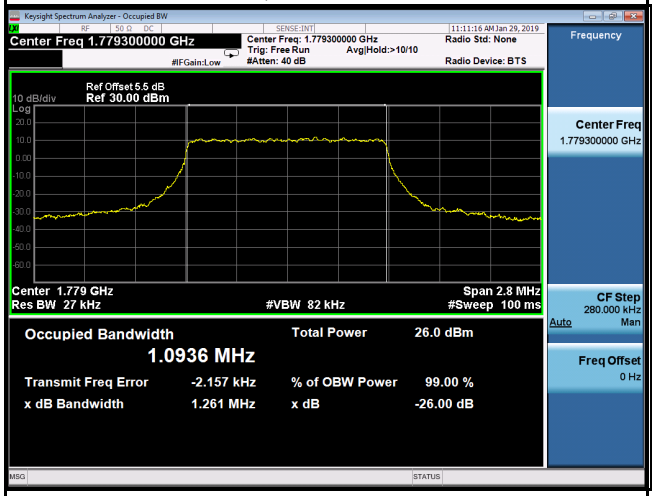
QPSK-19957



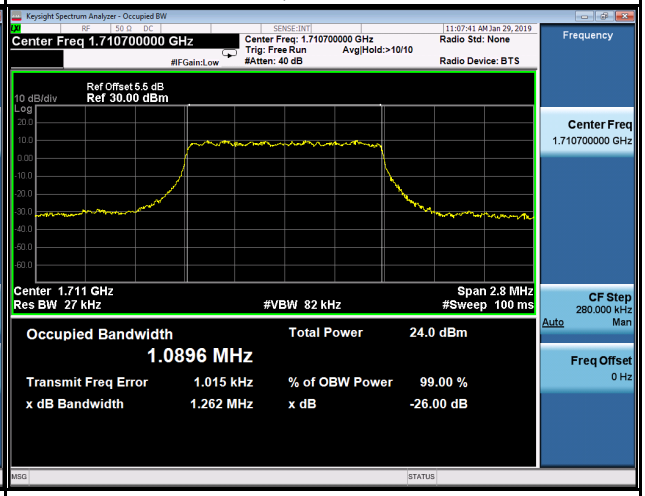
QPSK-20175



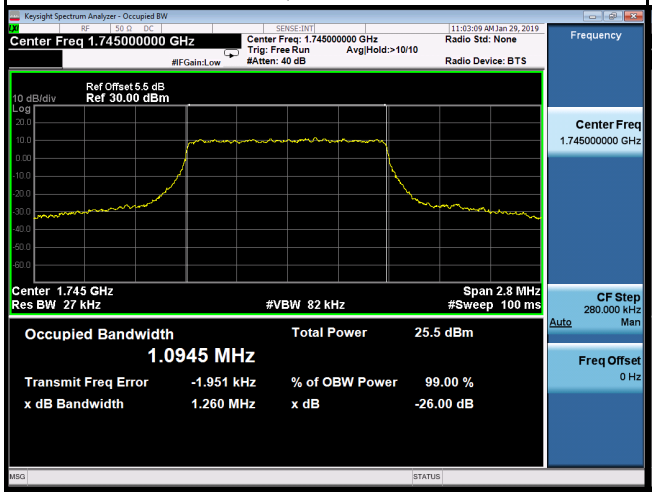
QPSK-20393



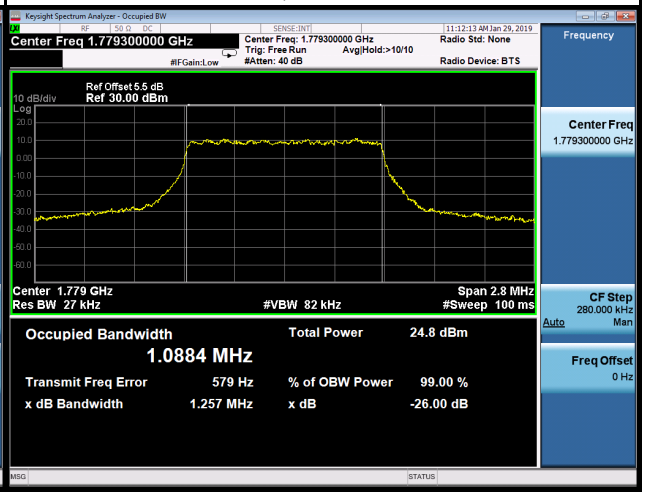
16QAM-19957



16QAM-20175



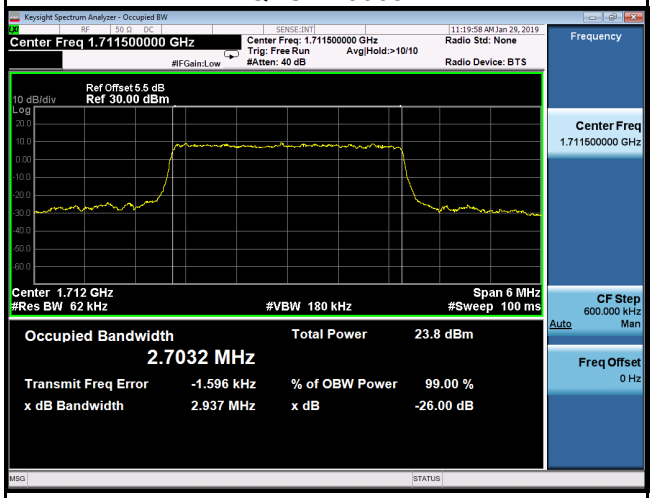
16QAM-20393



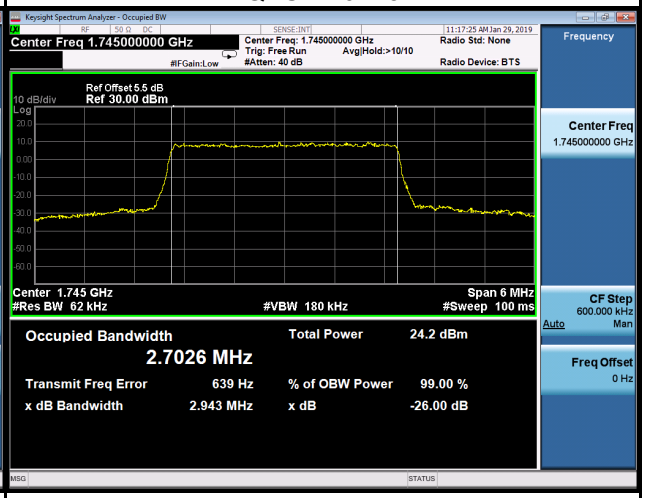
LTE Band 4_3M					
QPSK			16QAM		
Channel	Frequency (MHz)	99% Occupied Bandwidth (MHz)	Channel	Frequency (MHz)	99% Occupied Bandwidth (MHz)
19965	1711.5	2.703	19965	1711.5	2.706
20175	1732.5	2.703	20175	1732.5	2.707
20385	1753.5	2.703	20385	1753.5	2.707
Channel	Frequency (MHz)	26dB Bandwidth (MHz)	Channel	Frequency (MHz)	26dB Bandwidth (MHz)
19965	1711.5	2.937	19965	1711.5	2.933
20175	1732.5	2.943	20175	1732.5	2.943
20385	1753.5	2.935	20385	1753.5	2.938

Spectrum Plot

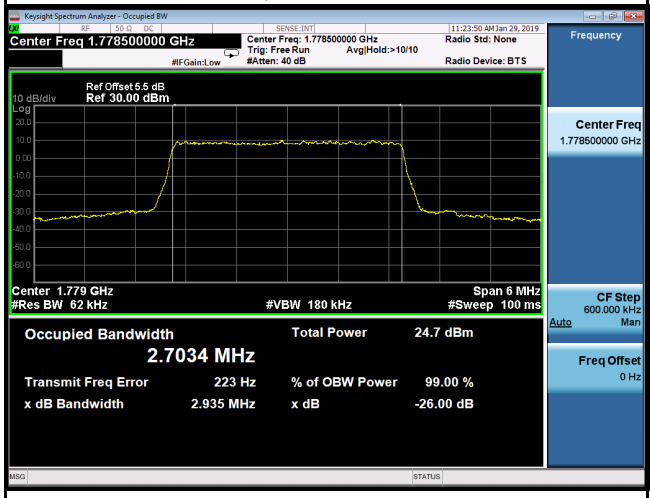
QPSK-19965



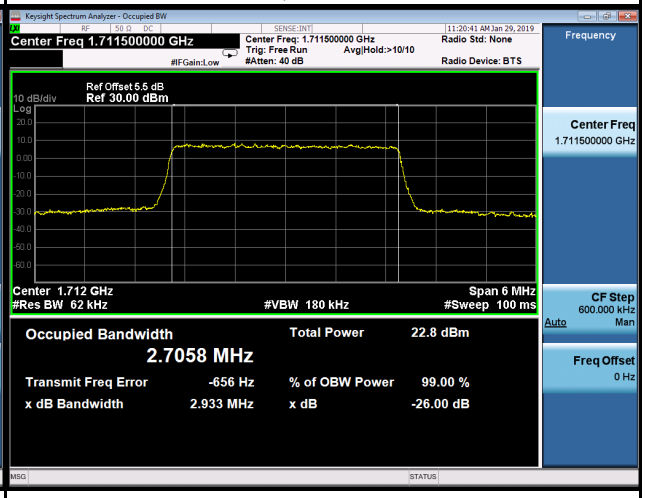
QPSK-20175



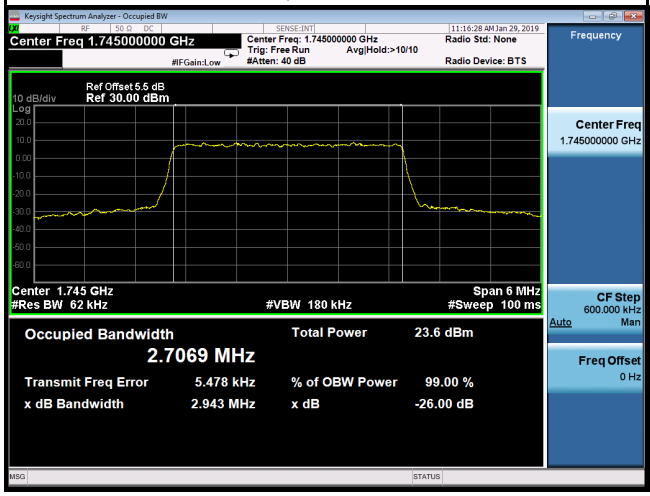
QPSK-20385



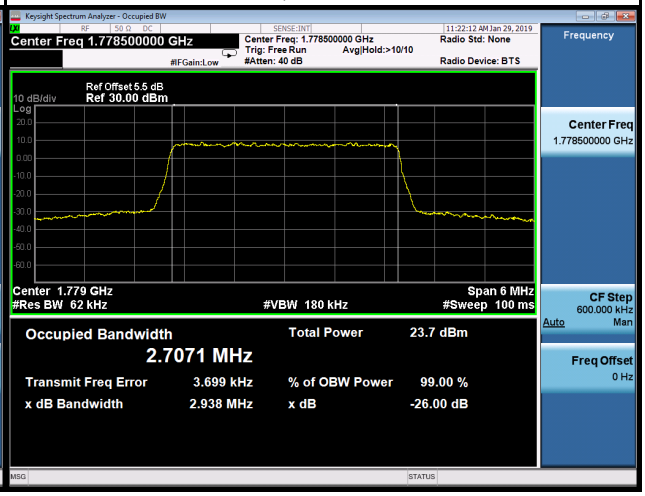
16QAM-19965



16QAM-20175



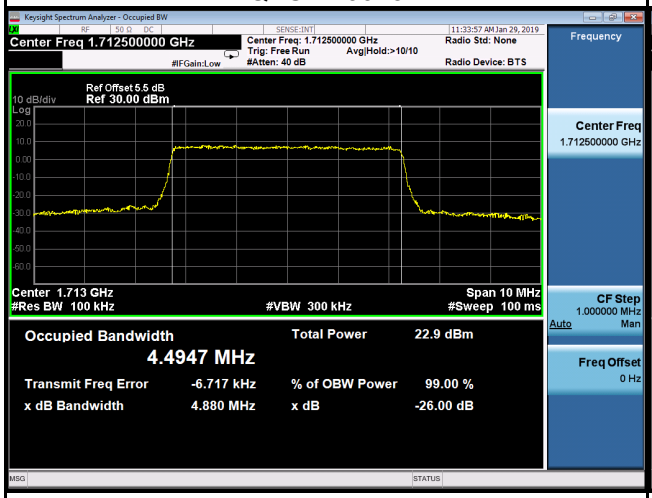
16QAM-20385



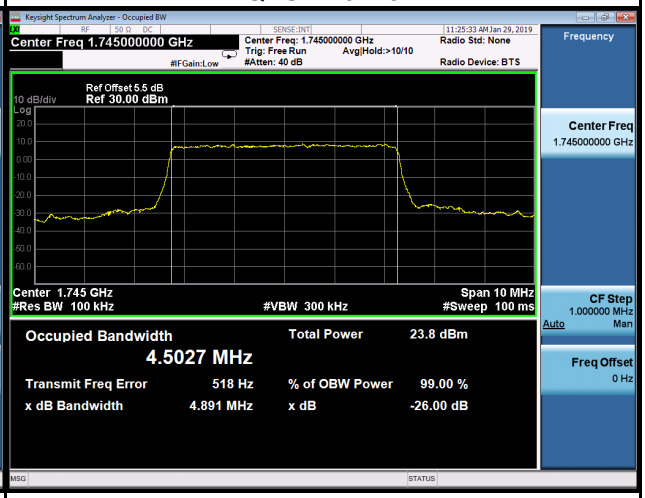
LTE Band 4_5M					
QPSK			16QAM		
Channel	Frequency (MHz)	99% Occupied Bandwidth (MHz)	Channel	Frequency (MHz)	99% Occupied Bandwidth (MHz)
19975	1712.5	4.495	19975	1712.5	4.494
20175	1732.5	4.503	20175	1732.5	4.495
20375	1752.5	4.501	20375	1752.5	4.490
Channel	Frequency (MHz)	26dB Bandwidth (MHz)	Channel	Frequency (MHz)	26dB Bandwidth (MHz)
19975	1712.5	4.880	19975	1712.5	4.865
20175	1732.5	4.891	20175	1732.5	4.851
20375	1752.5	4.891	20375	1752.5	4.856

Spectrum Plot

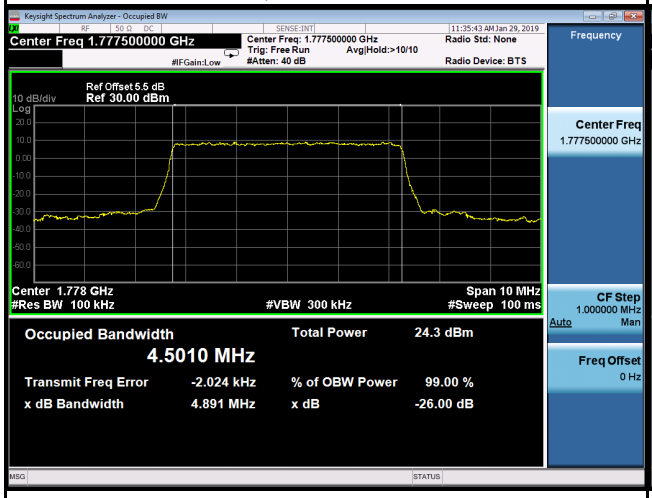
QPSK-19975



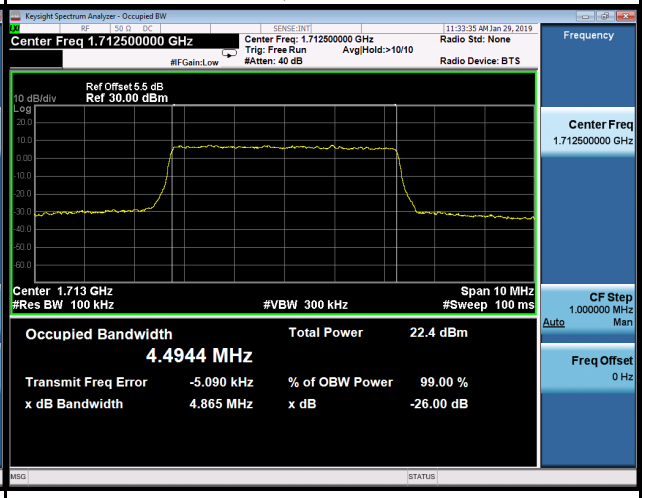
QPSK-20175



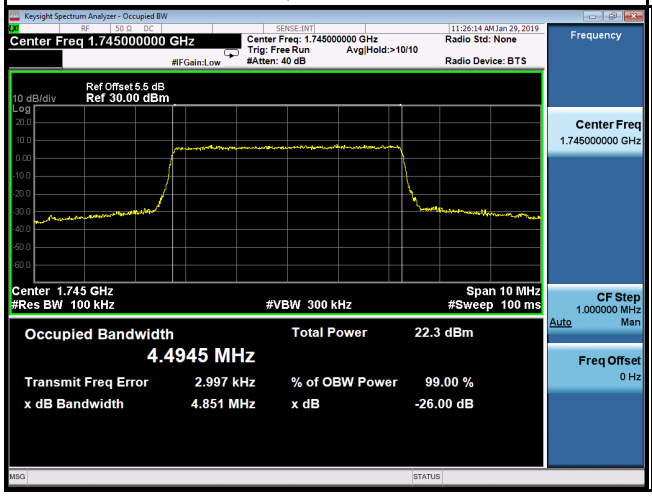
QPSK-20375



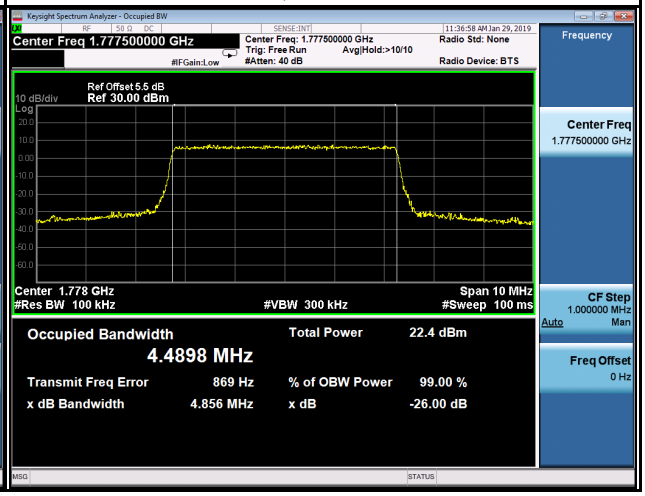
16QAM-19975



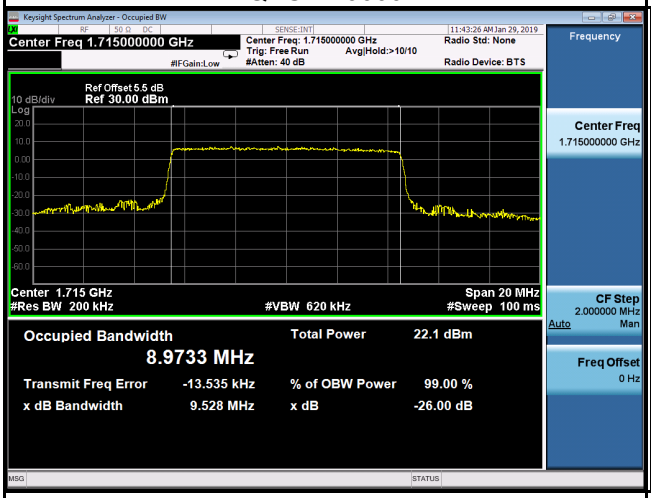
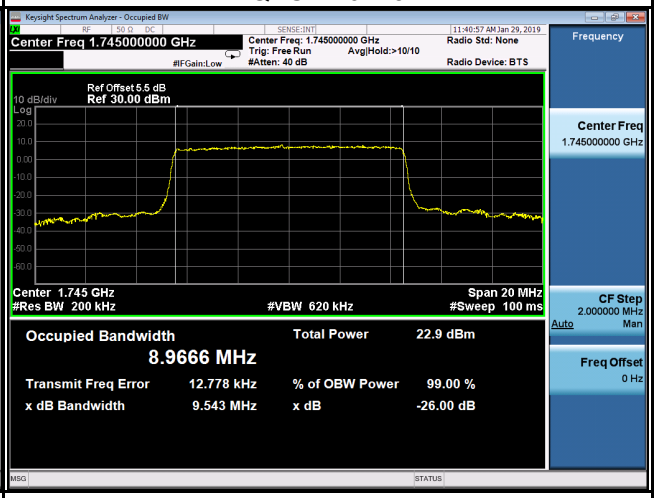
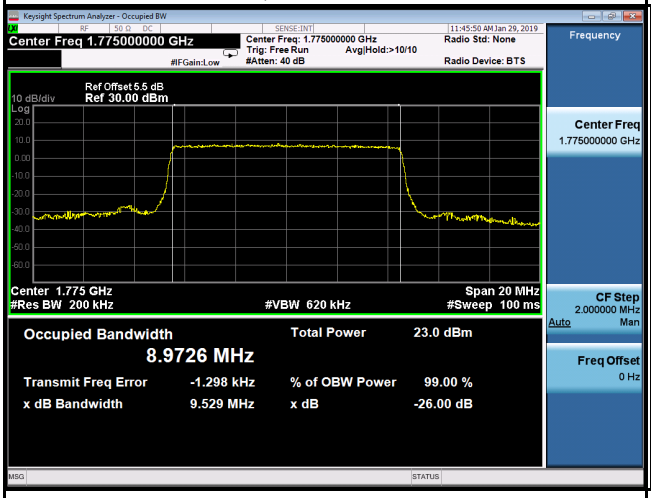
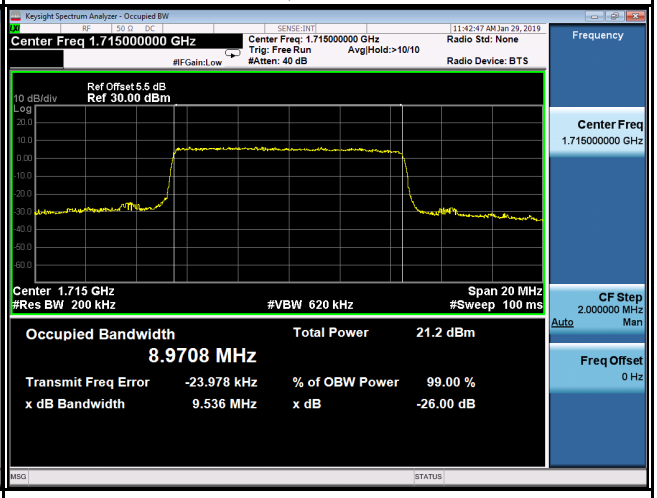
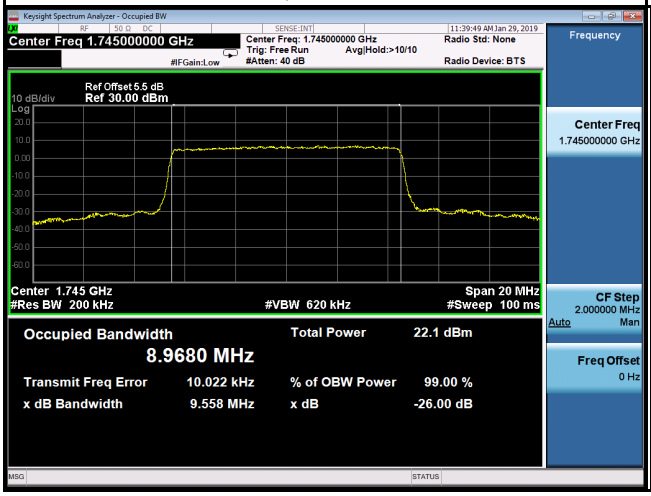
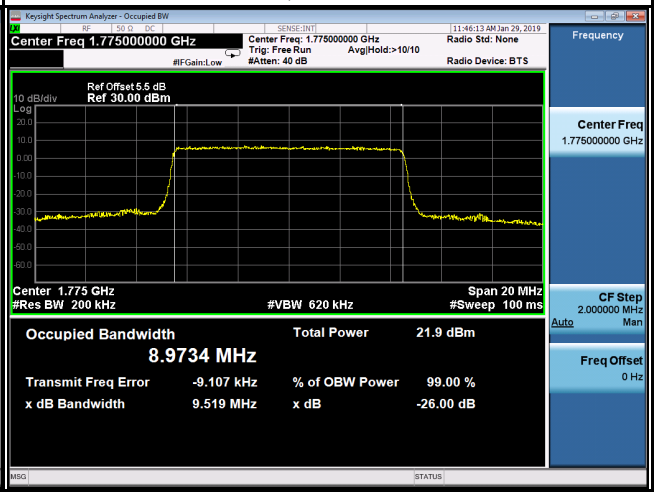
16QAM-20175



16QAM-20375



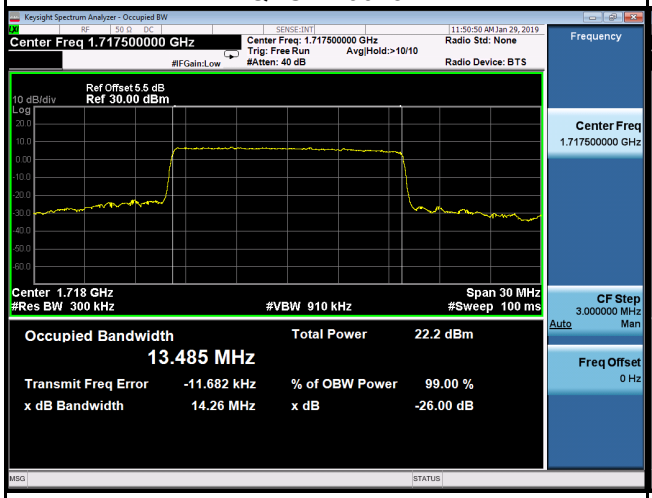
LTE Band 4_10M					
QPSK			16QAM		
Channel	Frequency (MHz)	99% Occupied Bandwidth (MHz)	Channel	Frequency (MHz)	99% Occupied Bandwidth (MHz)
20000	1715	8.973	20000	1715	8.971
20175	1732.5	8.967	20175	1732.5	8.968
20350	1750	8.973	20350	1750	8.973
Channel	Frequency (MHz)	26dB Bandwidth (MHz)	Channel	Frequency (MHz)	26dB Bandwidth (MHz)
20000	1715	9.528	20000	1715	9.536
20175	1732.5	9.543	20175	1732.5	9.558
20350	1750	9.529	20350	1750	9.519

Spectrum Plot	
QPSK-20000	QPSK-20175
	
QPSK-20350	16QAM-20000
	
16QAM-20175	16QAM-20350
	

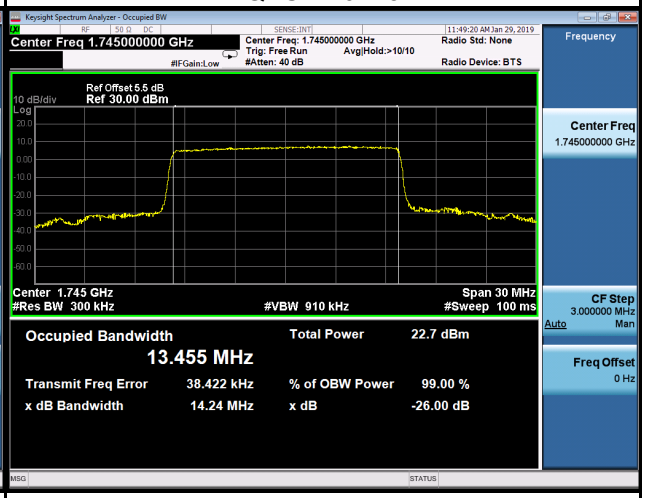
LTE Band 4_15M					
QPSK			16QAM		
Channel	Frequency (MHz)	99% Occupied Bandwidth (MHz)	Channel	Frequency (MHz)	99% Occupied Bandwidth (MHz)
20025	1717.5	13.485	20025	1717.5	13.454
20175	1732.5	13.455	20175	1732.5	13.447
20325	1747.5	13.495	20325	1747.5	13.489
Channel	Frequency (MHz)	26dB Bandwidth (MHz)	Channel	Frequency (MHz)	26dB Bandwidth (MHz)
20025	1717.5	14.260	20025	1717.5	14.290
20175	1732.5	14.240	20175	1732.5	14.280
20325	1747.5	14.470	20325	1747.5	14.350

Spectrum Plot

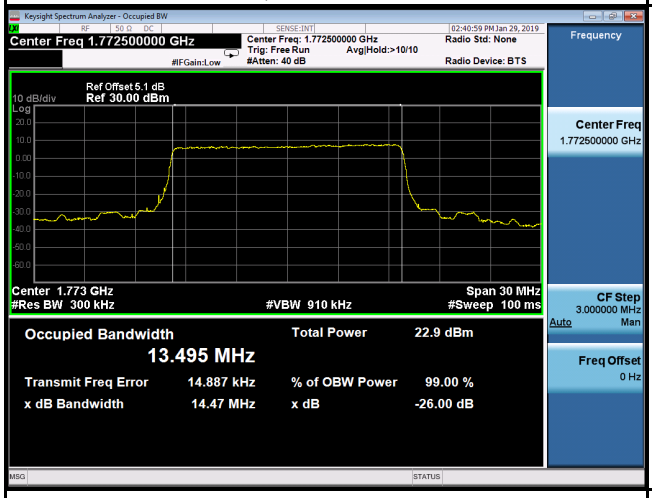
QPSK-20025



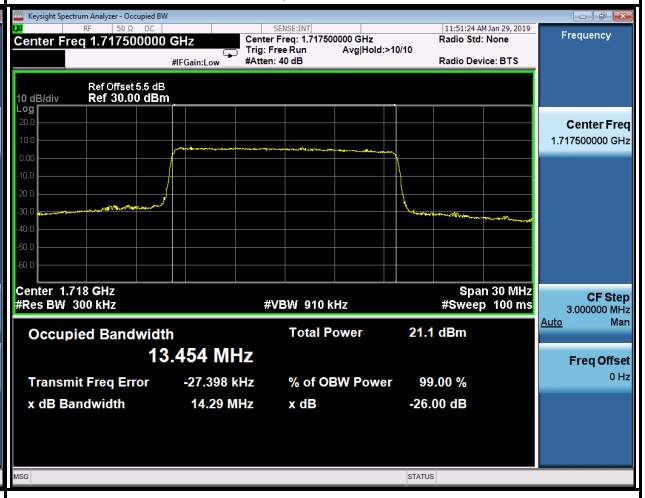
QPSK-20175



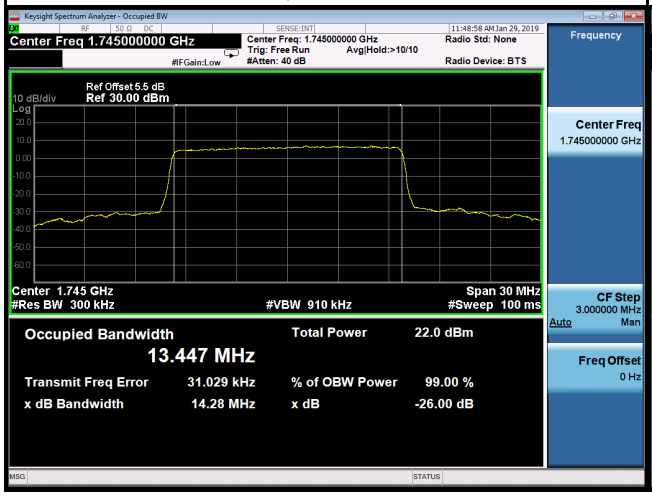
QPSK-20325



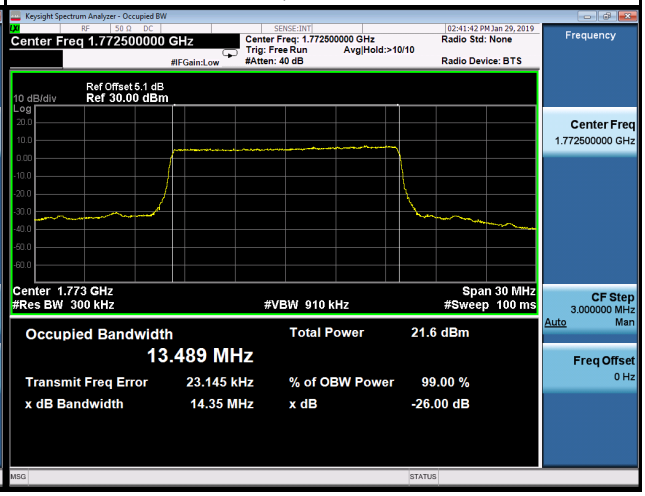
16QAM-20025



16QAM-20175



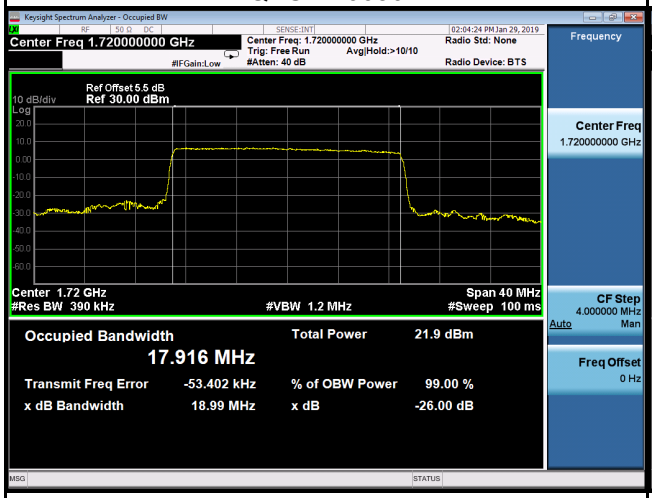
16QAM-20325



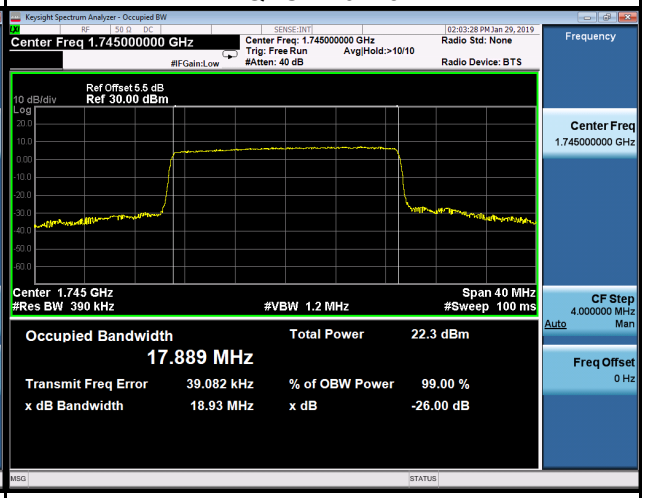
LTE Band 4_20M					
QPSK			16QAM		
Channel	Frequency (MHz)	99% Occupied Bandwidth (MHz)	Channel	Frequency (MHz)	99% Occupied Bandwidth (MHz)
20050	1720	17.916	20050	1720	17.926
20175	1732.5	17.889	20175	1732.5	17.901
20300	1745	17.901	20300	1745	17.914
Channel	Frequency (MHz)	26dB Bandwidth (MHz)	Channel	Frequency (MHz)	26dB Bandwidth (MHz)
20050	1720	18.99	20050	1720	18.93
20175	1732.5	18.93	20175	1732.5	18.94
20300	1745	18.94	20300	1745	18.97

Spectrum Plot

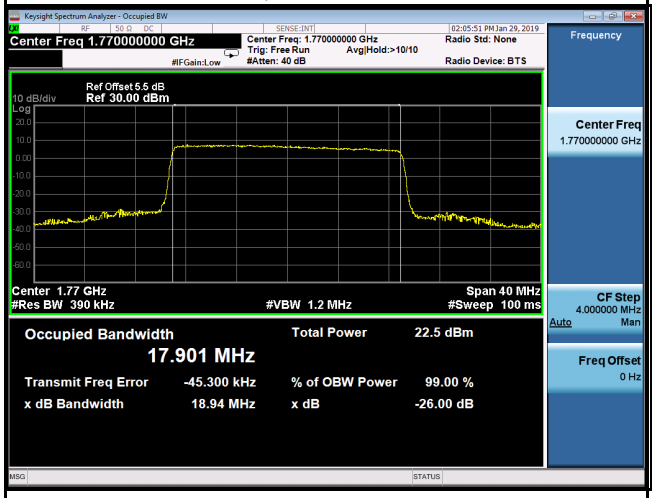
QPSK-20050



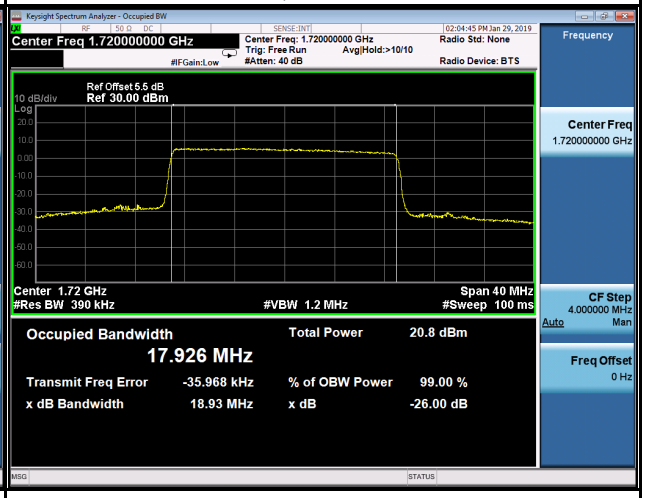
QPSK-20175



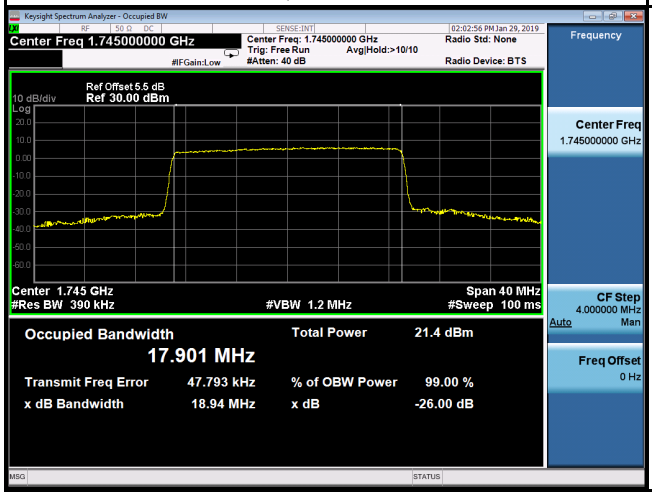
QPSK-20300



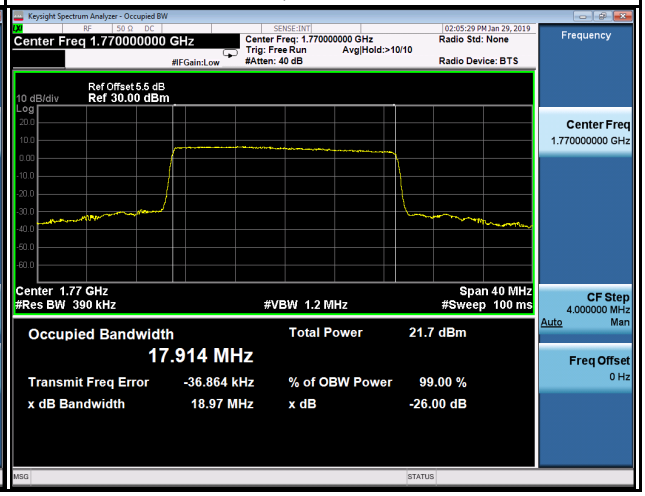
16QAM-20050



16QAM-20175



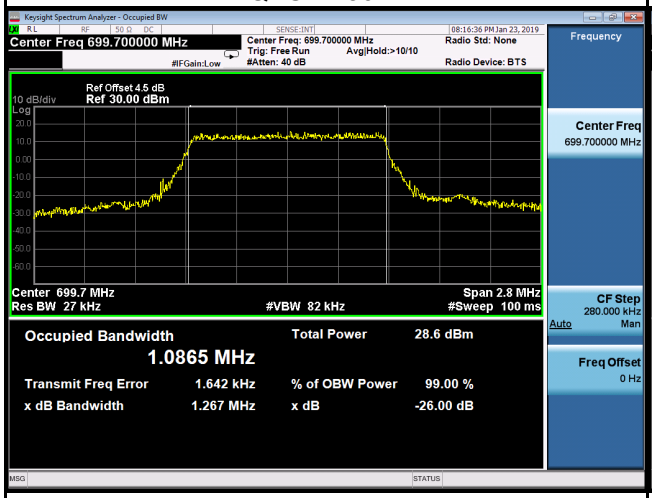
16QAM-20300



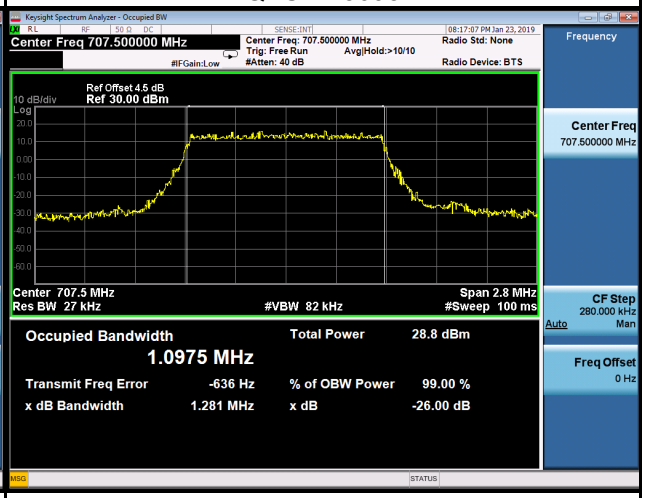
LTE Band 12_1.4M					
QPSK			16QAM		
Channel	Frequency (MHz)	99% Occupied Bandwidth (MHz)	Channel	Frequency (MHz)	99% Occupied Bandwidth (MHz)
23017	699.7	1.087	23017	699.7	1.096
23095	707.5	1.098	23095	707.5	1.092
23173	715.3	1.086	23173	715.3	1.092
Channel	Frequency (MHz)	26dB Bandwidth (MHz)	Channel	Frequency (MHz)	26dB Bandwidth (MHz)
23017	699.7	1.267	23017	699.7	1.285
23095	707.5	1.281	23095	707.5	1.288
23173	715.3	1.263	23173	715.3	1.307

Spectrum Plot

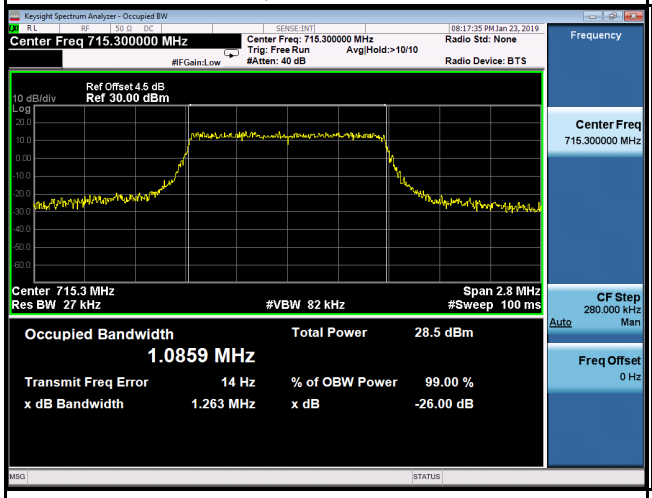
QPSK-23017



QPSK-23095



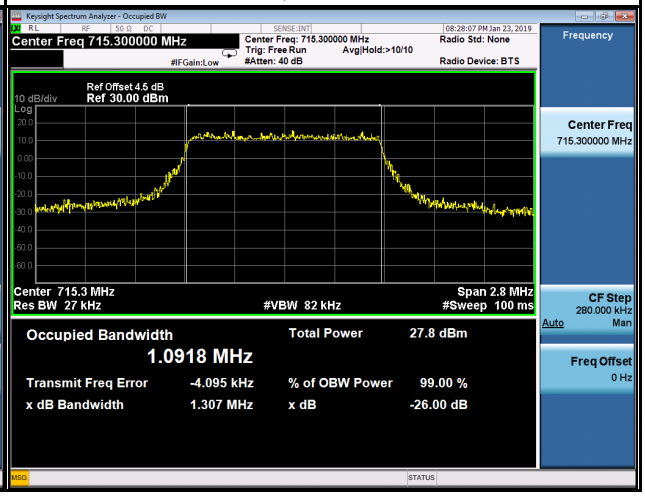
QPSK-23173



16QAM-23017

16QAM-23095

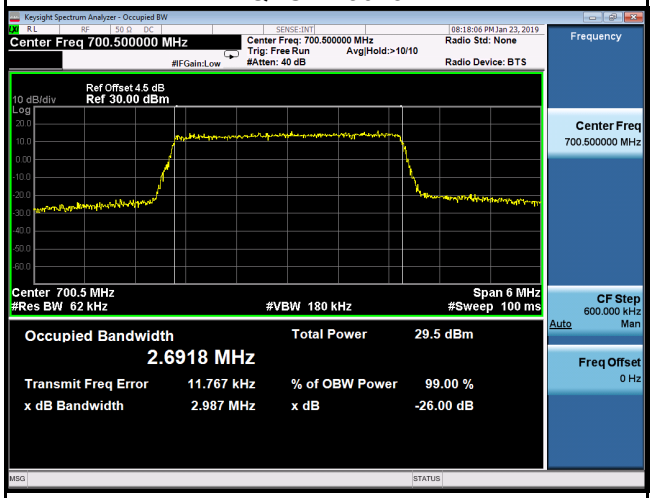
16QAM-23173



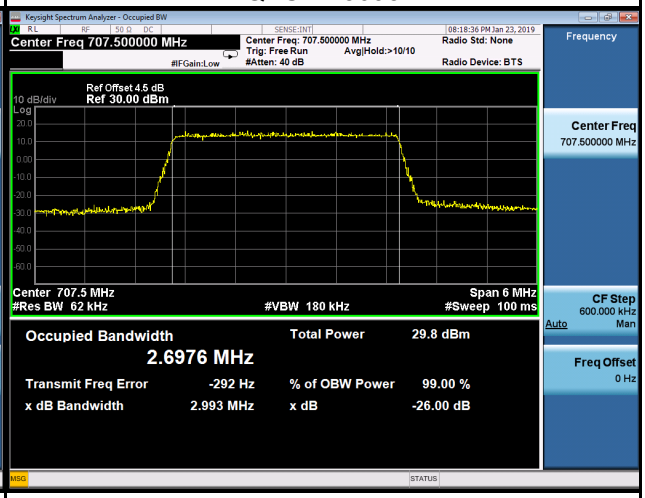
LTE Band 12_3M					
QPSK			16QAM		
Channel	Frequency (MHz)	99% Occupied Bandwidth (MHz)	Channel	Frequency (MHz)	99% Occupied Bandwidth (MHz)
23025	700.5	2.692	23025	700.5	2.694
23095	707.5	2.698	23095	707.5	2.699
23165	714.5	2.692	23165	714.5	2.688
Channel	Frequency (MHz)	26dB Bandwidth (MHz)	Channel	Frequency (MHz)	26dB Bandwidth (MHz)
23025	700.5	2.987	23025	700.5	2.973
23095	707.5	2.993	23095	707.5	2.942
23165	714.5	2.971	23165	714.5	2.980

Spectrum Plot

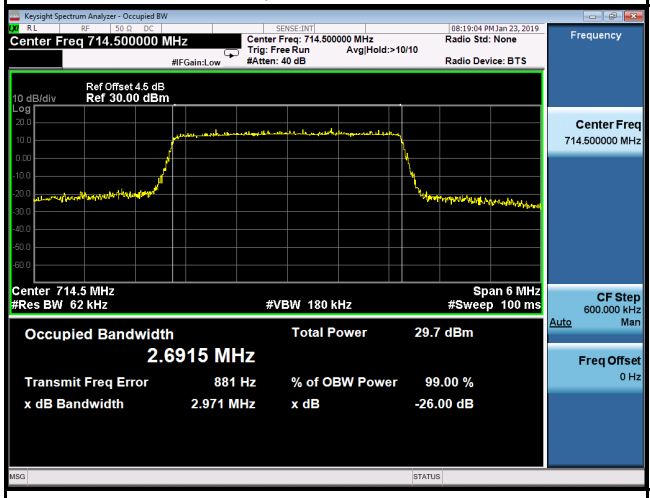
QPSK-23025



QPSK-23095

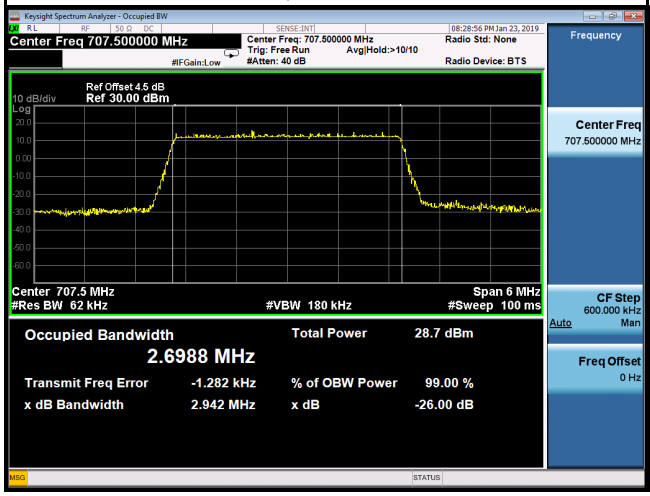


QPSK-23165

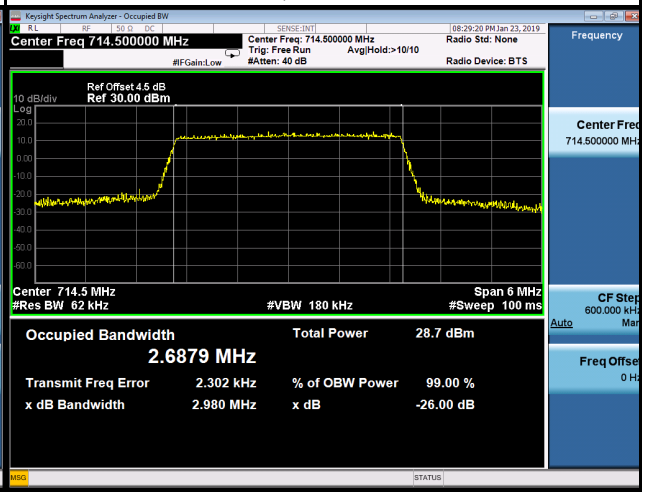


16QAM-23025

16QAM-23095



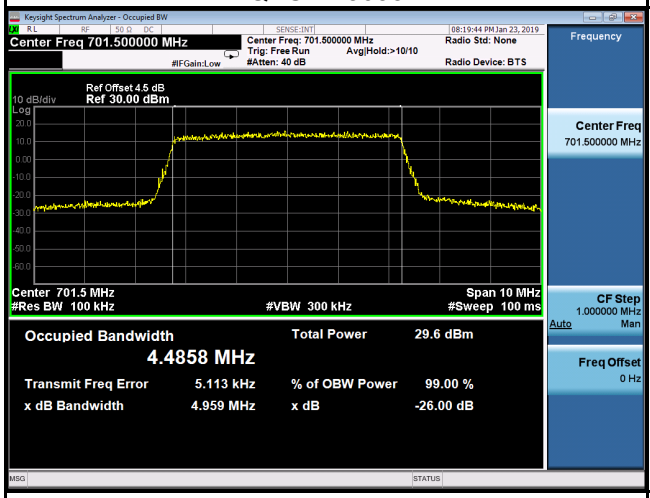
16QAM-23165



LTE Band 12_5M					
QPSK			16QAM		
Channel	Frequency (MHz)	99% Occupied Bandwidth (MHz)	Channel	Frequency (MHz)	99% Occupied Bandwidth (MHz)
23035	701.5	4.486	23035	701.5	4.486
23095	707.5	4.492	23095	707.5	4.489
23155	713.5	4.506	23155	713.5	4.497
Channel	Frequency (MHz)	26dB Bandwidth (MHz)	Channel	Frequency (MHz)	26dB Bandwidth (MHz)
23035	701.5	4.959	23035	701.5	4.976
23095	707.5	4.967	23095	707.5	4.966
23155	713.5	4.983	23155	713.5	4.965

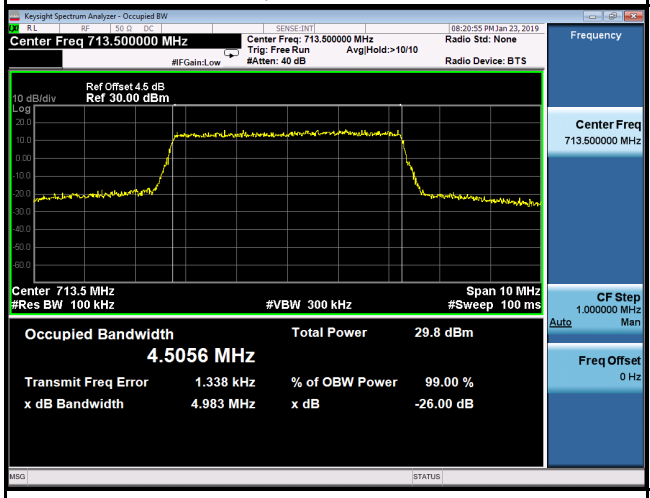
Spectrum Plot

QPSK-23035



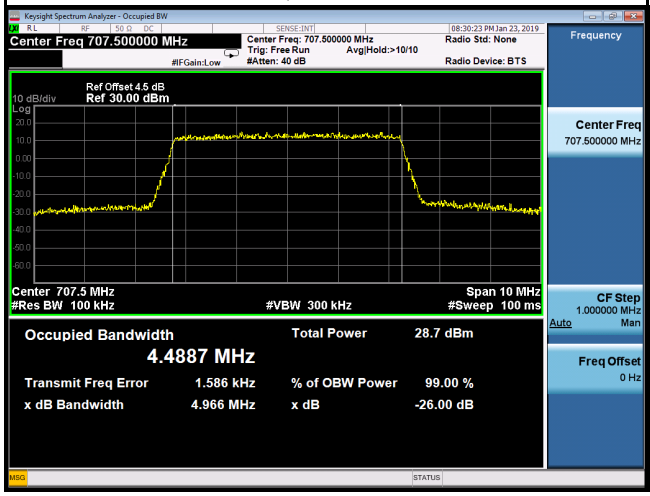
QPSK-23095

QPSK-23155

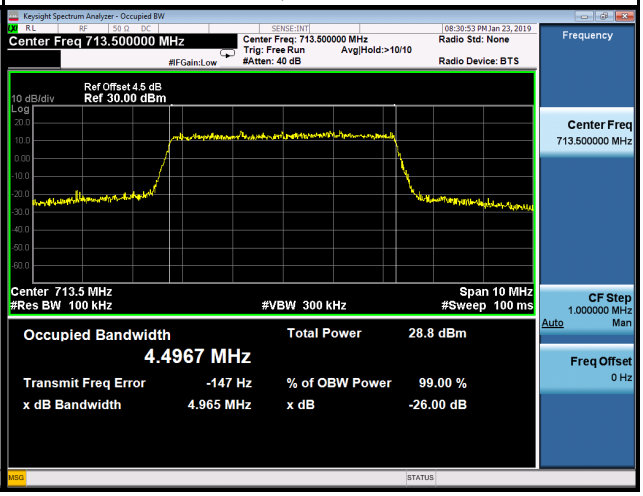


16QAM-23035

16QAM-23095



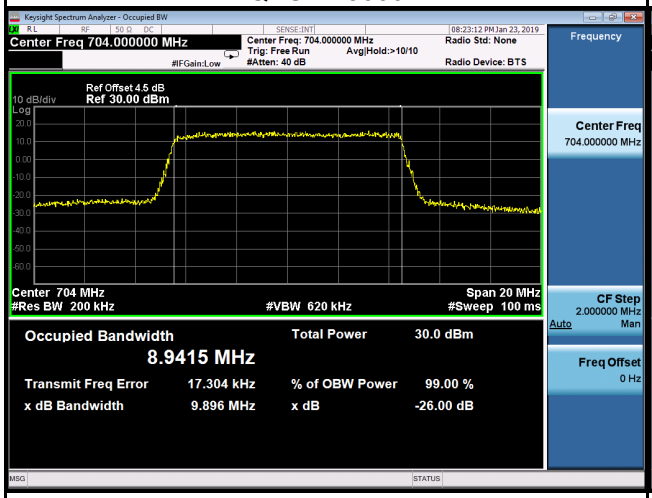
16QAM-23155



LTE Band 12_10M					
QPSK			16QAM		
Channel	Frequency (MHz)	99% Occupied Bandwidth (MHz)	Channel	Frequency (MHz)	99% Occupied Bandwidth (MHz)
23060	704.0	8.942	23060	704.0	8.945
23095	707.5	8.959	23095	707.5	8.940
23130	711.0	8.981	23130	711.0	8.976
Channel	Frequency (MHz)	26dB Bandwidth (MHz)	Channel	Frequency (MHz)	26dB Bandwidth (MHz)
23060	704.0	9.896	23060	704.0	9.789
23095	707.5	9.853	23095	707.5	9.861
23130	711.0	9.989	23130	711.0	9.846

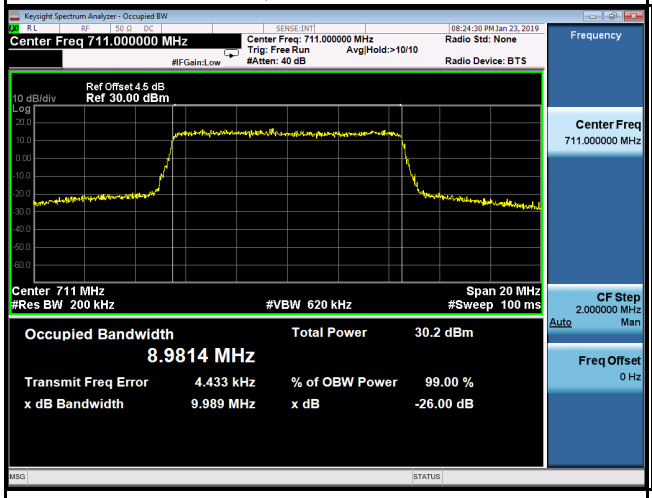
Spectrum Plot

QPSK-23060



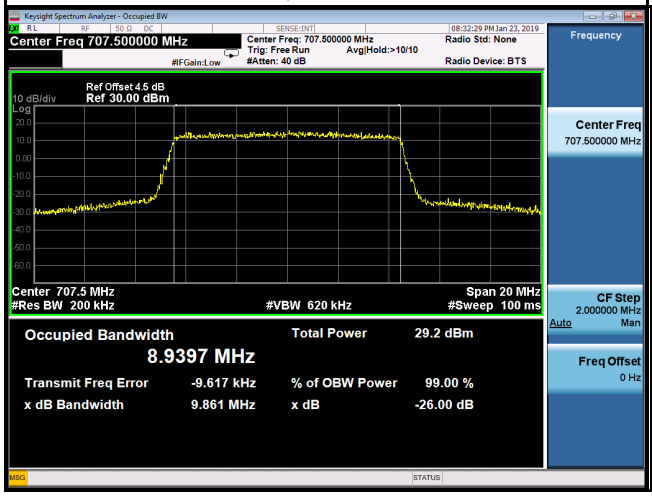
QPSK-23095

QPSK-23130

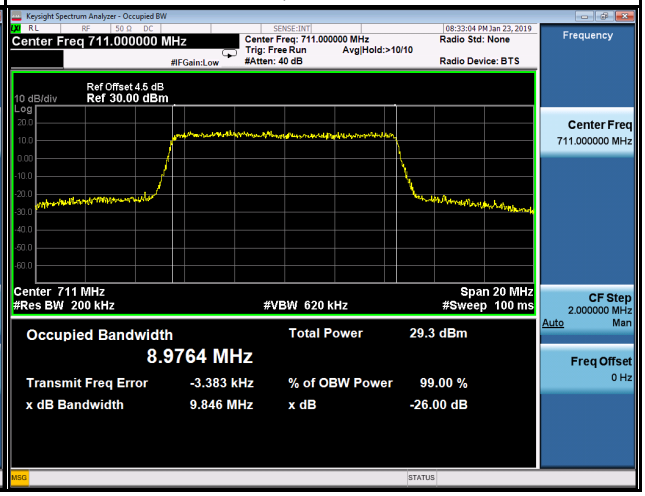


16QAM-23060

16QAM-23095



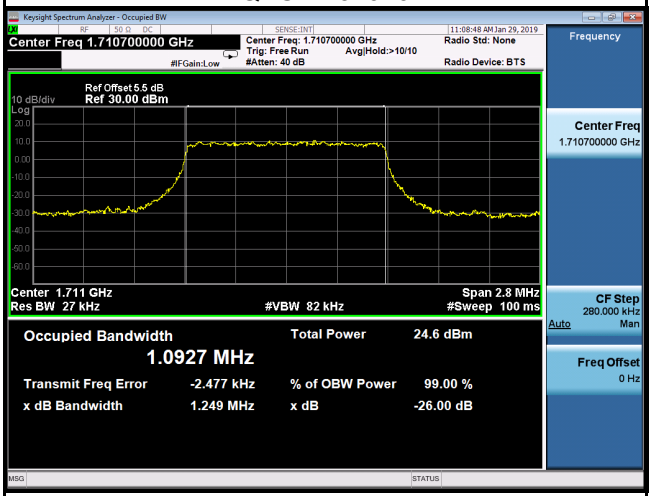
16QAM-23130



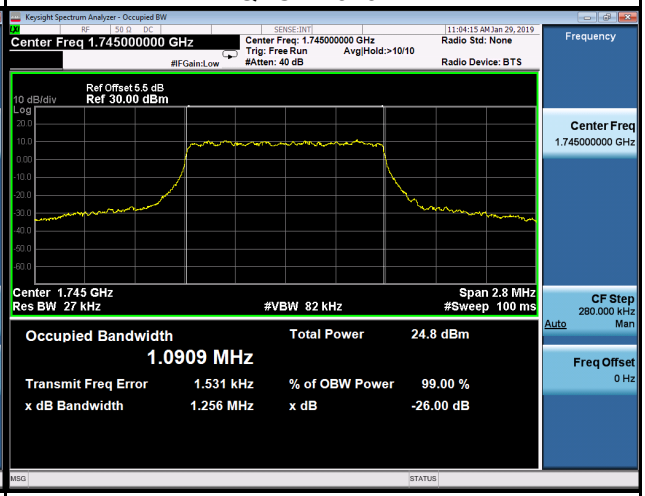
LTE Band 66_1.4M					
QPSK			16QAM		
Channel	Frequency (MHz)	99% Occupied Bandwidth (MHz)	Channel	Frequency (MHz)	99% Occupied Bandwidth (MHz)
131979	1710.7	1.093	131979	1710.7	1.090
132322	1745.0	1.091	132322	1745.0	1.095
132665	1779.3	1.094	132665	1779.3	1.088
Channel	Frequency (MHz)	26dB Bandwidth (MHz)	Channel	Frequency (MHz)	26dB Bandwidth (MHz)
131979	1710.7	1.249	131979	1710.7	1.262
132322	1745.0	1.256	132322	1745.0	1.260
132665	1779.3	1.261	132665	1779.3	1.257

Spectrum Plot

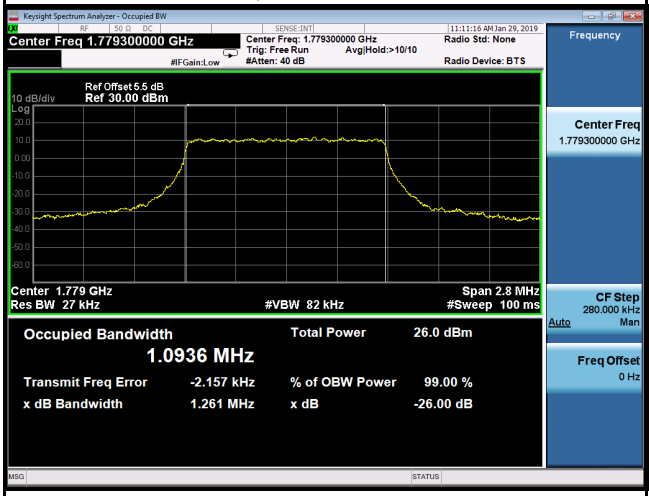
QPSK-131979



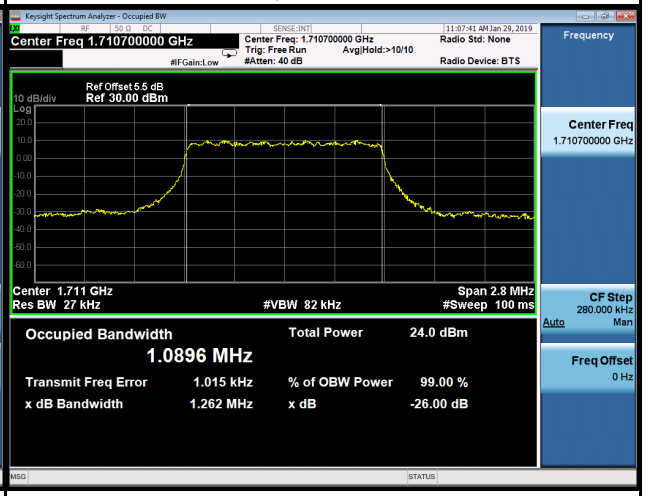
QPSK-132322



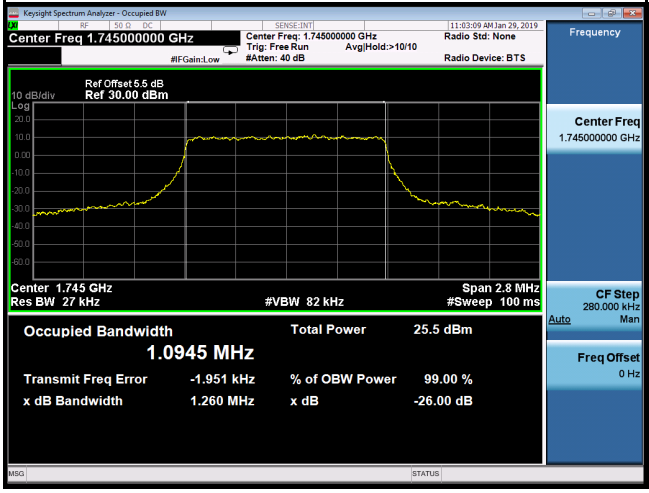
QPSK-132665



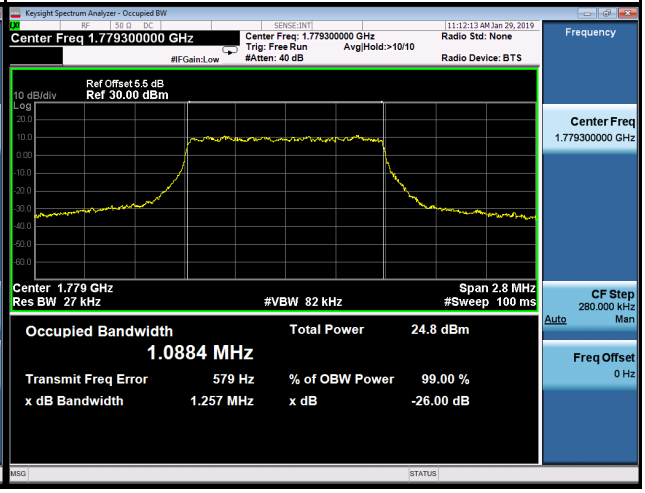
16QAM-131979



16QAM-132322



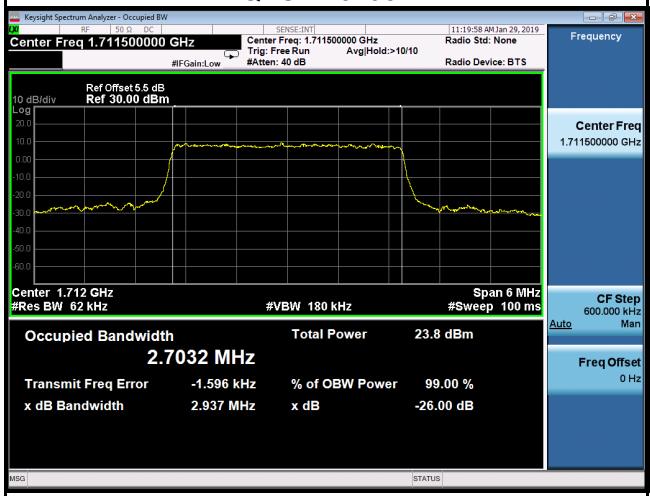
16QAM-132665



LTE Band 66_3M					
QPSK			16QAM		
Channel	Frequency (MHz)	99% Occupied Bandwidth (MHz)	Channel	Frequency (MHz)	99% Occupied Bandwidth (MHz)
131987	1711.5	2.703	131987	1711.5	2.706
132322	1745.0	2.703	132322	1745.0	2.707
132657	1778.5	2.703	132657	1778.5	2.707
Channel	Frequency (MHz)	26dB Bandwidth (MHz)	Channel	Frequency (MHz)	26dB Bandwidth (MHz)
131987	1711.5	2.937	131987	1711.5	2.933
132322	1745.0	2.943	132322	1745.0	2.943
132657	1778.5	2.935	132657	1778.5	2.938

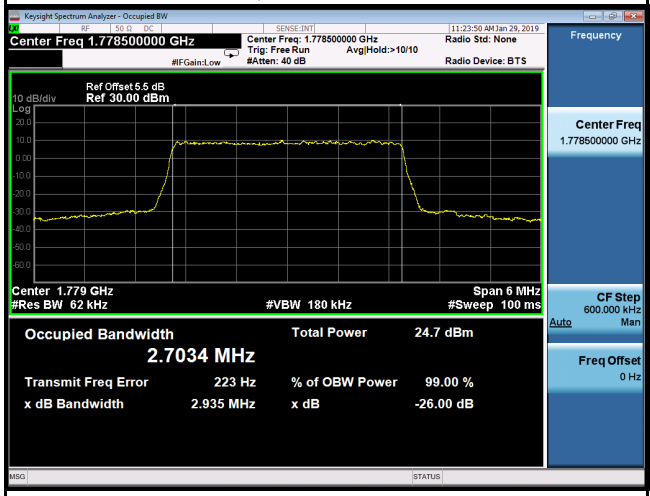
Spectrum Plot

QPSK-131987

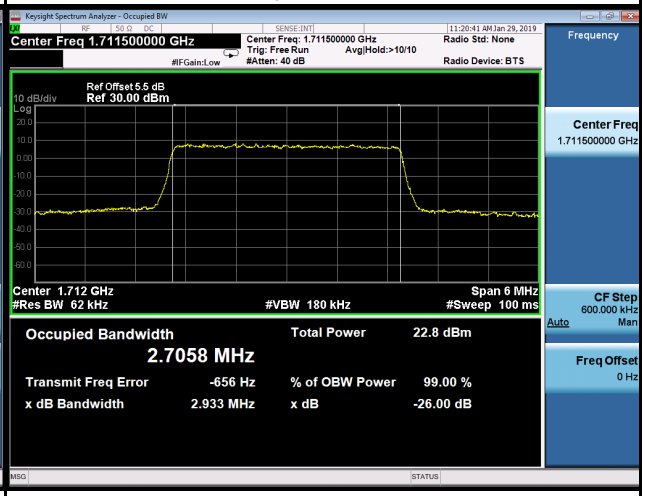


QPSK-132322

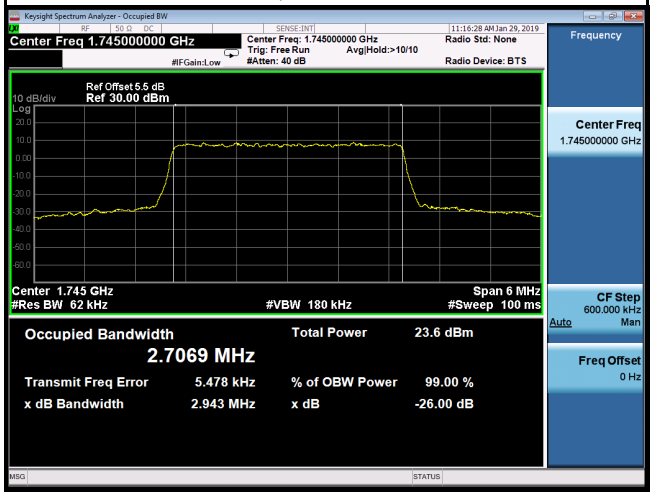
QPSK-132657



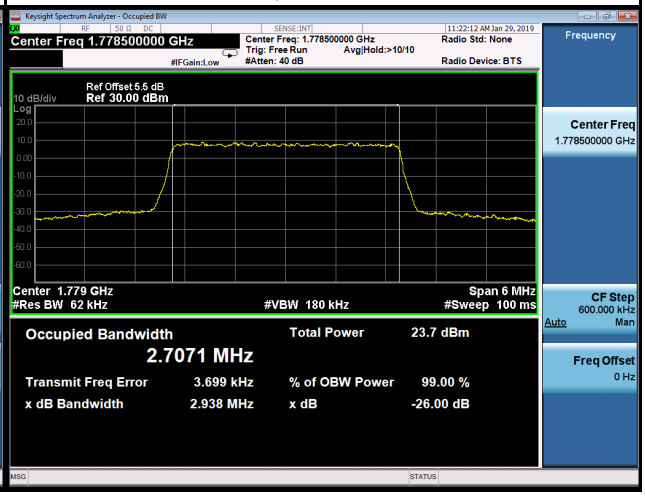
16QAM-131987



16QAM-132322



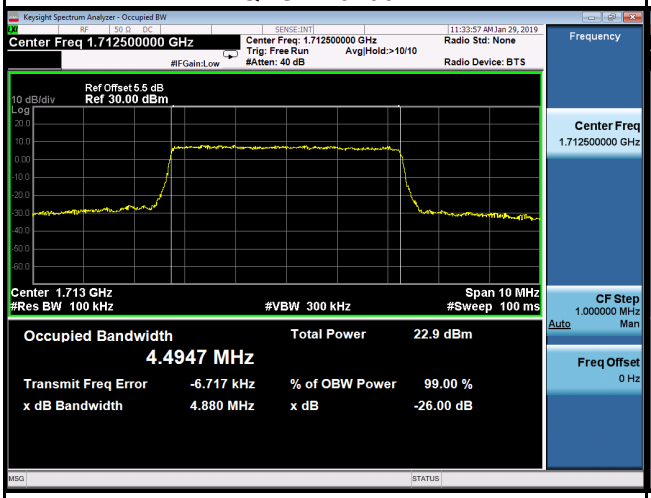
16QAM-132657



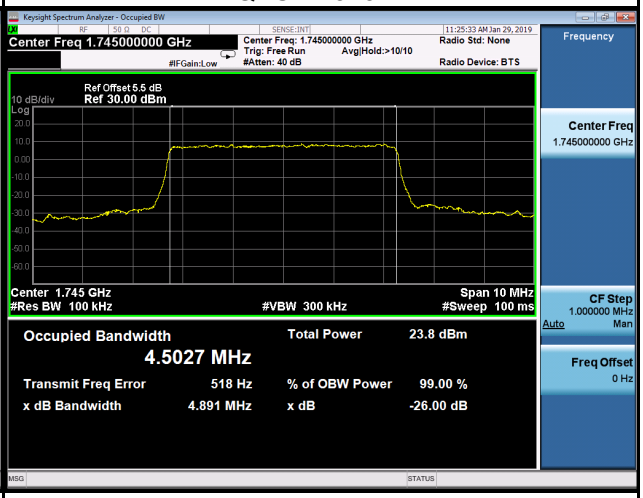
LTE Band 66_5M					
QPSK			16QAM		
Channel	Frequency (MHz)	99% Occupied Bandwidth (MHz)	Channel	Frequency (MHz)	99% Occupied Bandwidth (MHz)
131997	1712.5	4.495	131997	1712.5	4.494
132322	1745.0	4.503	132322	1745.0	4.495
132647	1777.5	4.501	132647	1777.5	4.490
Channel	Frequency (MHz)	26dB Bandwidth (MHz)	Channel	Frequency (MHz)	26dB Bandwidth (MHz)
131997	1712.5	4.880	131997	1712.5	4.865
132322	1745.0	4.891	132322	1745.0	4.851
132647	1777.5	4.891	132647	1777.5	4.856

Spectrum Plot

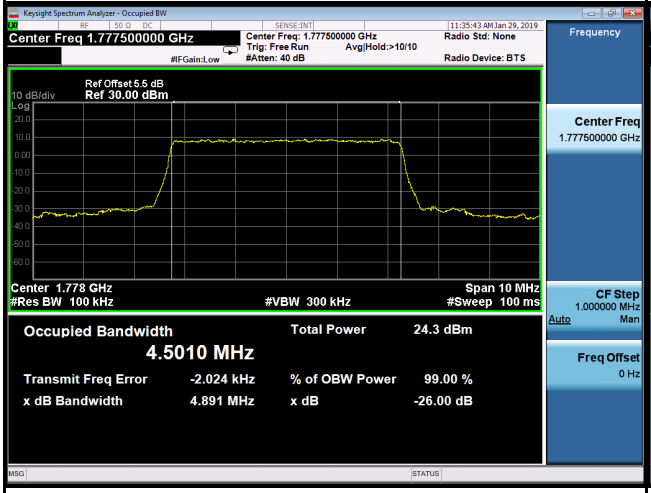
QPSK-131997



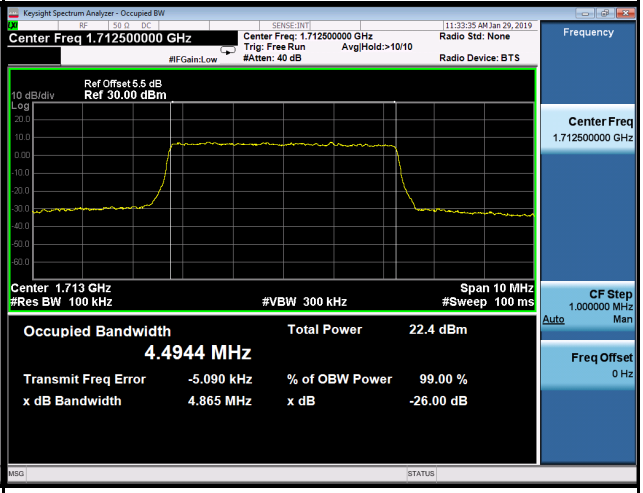
QPSK-132322



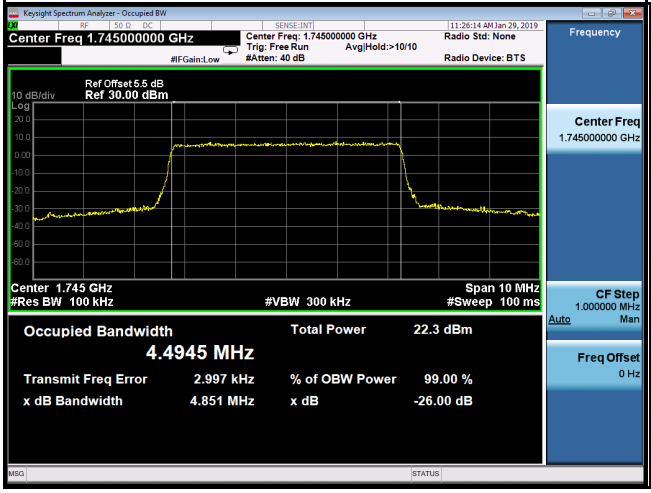
QPSK-132647



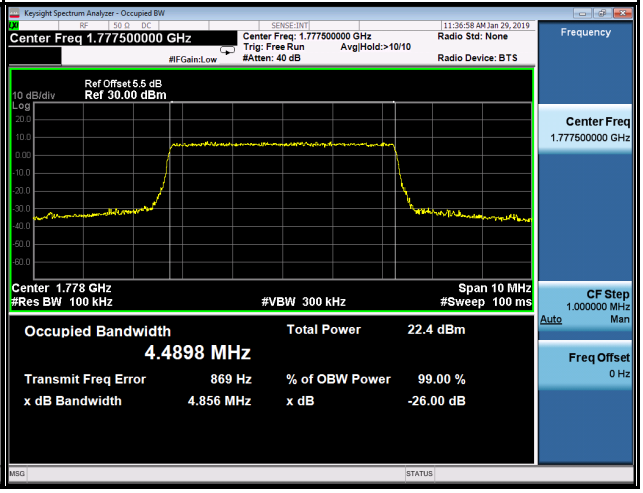
16QAM-131997



16QAM-132322



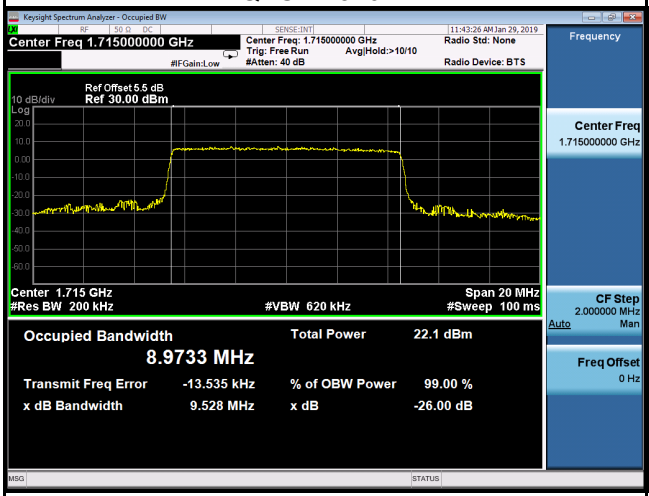
16QAM-132647



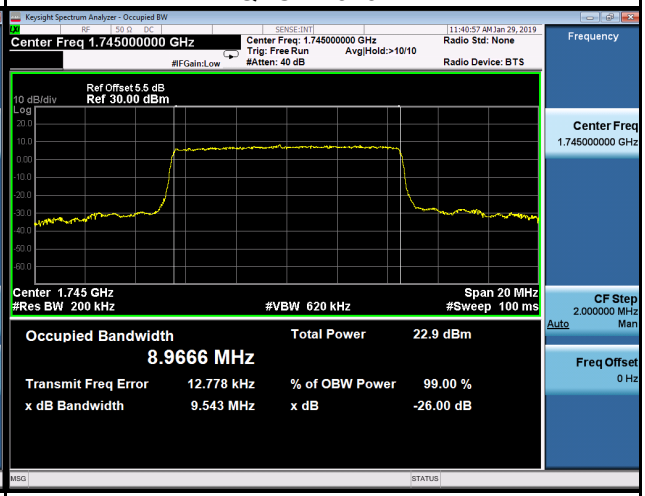
LTE Band 66_10M					
QPSK			16QAM		
Channel	Frequency (MHz)	99% Occupied Bandwidth (MHz)	Channel	Frequency (MHz)	99% Occupied Bandwidth (MHz)
132022	1715.0	8.973	132022	1715.0	8.971
132322	1745.0	8.967	132322	1745.0	8.968
132622	1775.0	8.973	132622	1775.0	8.973
Channel	Frequency (MHz)	26dB Bandwidth (MHz)	Channel	Frequency (MHz)	26dB Bandwidth (MHz)
132022	1715.0	9.528	132022	1715.0	9.536
132322	1745.0	9.543	132322	1745.0	9.558
132622	1775.0	9.529	132622	1775.0	9.519

Spectrum Plot

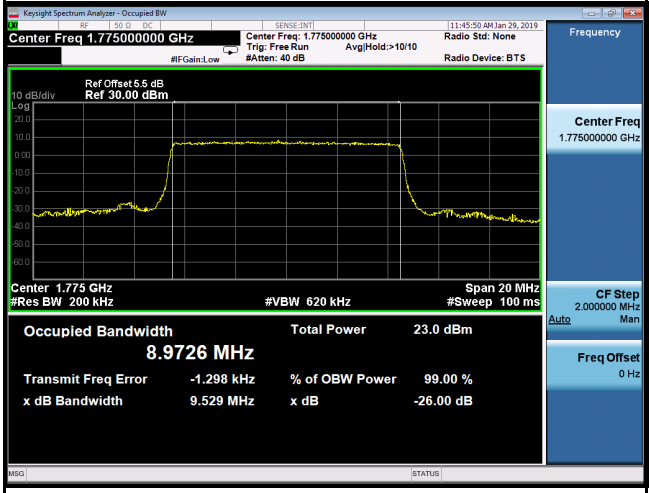
QPSK-132022



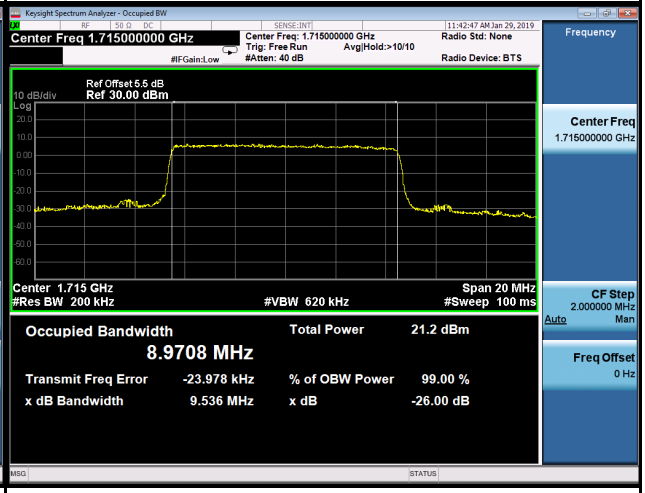
QPSK-132322



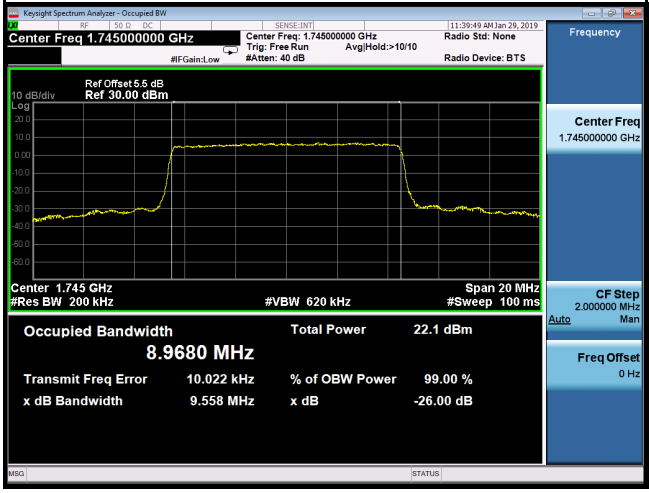
QPSK-132622



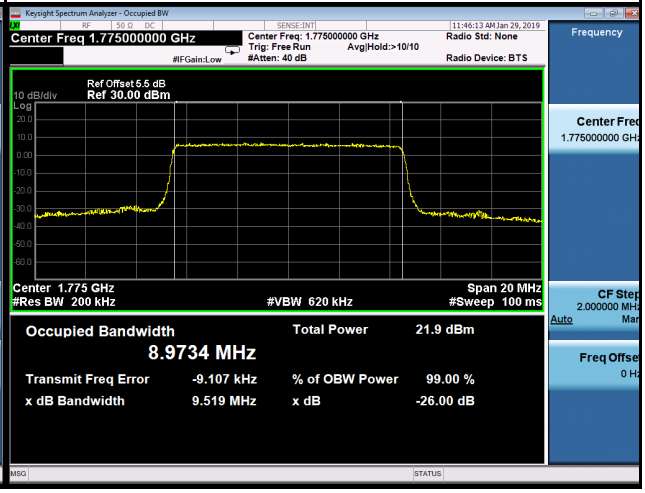
16QAM-132022



16QAM-132322



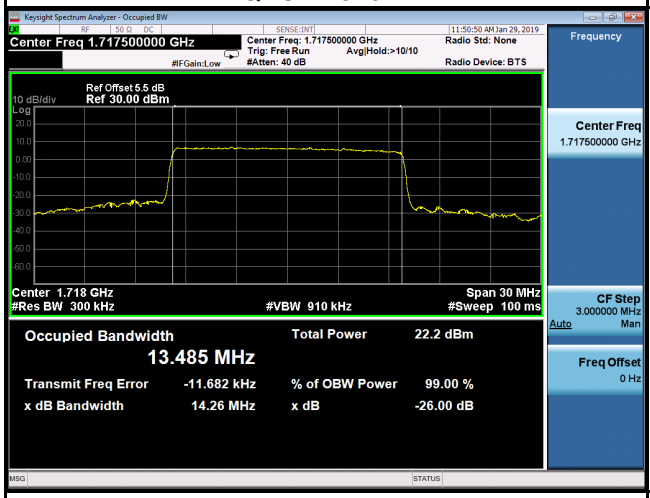
16QAM-132622



LTE Band 66_15M					
QPSK			16QAM		
Channel	Frequency (MHz)	99% Occupied Bandwidth (MHz)	Channel	Frequency (MHz)	99% Occupied Bandwidth (MHz)
132047	1717.5	13.485	132047	1717.5	13.454
132322	1745.0	13.455	132322	1745.0	13.447
132597	1772.5	13.495	132597	1772.5	13.489
Channel	Frequency (MHz)	26dB Bandwidth (MHz)	Channel	Frequency (MHz)	26dB Bandwidth (MHz)
132047	1717.5	14.260	132047	1717.5	14.290
132322	1745.0	14.240	132322	1745.0	14.280
132597	1772.5	14.470	132597	1772.5	14.350

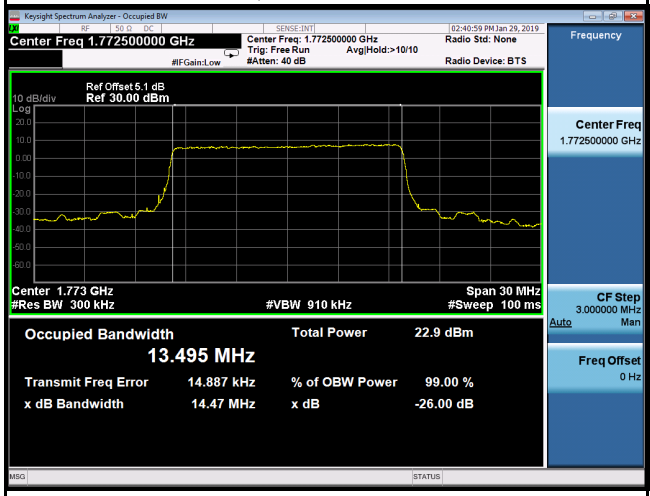
Spectrum Plot

QPSK-132047

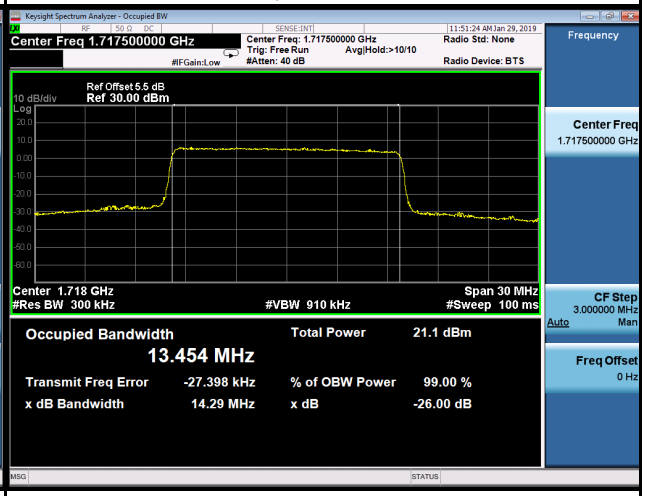


QPSK-132322

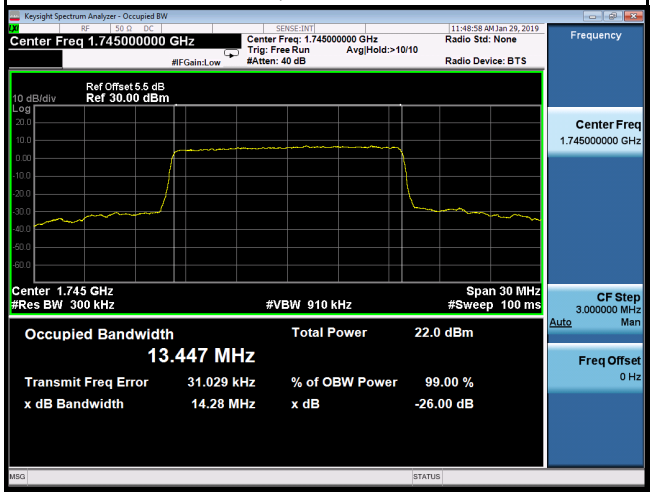
QPSK-132597



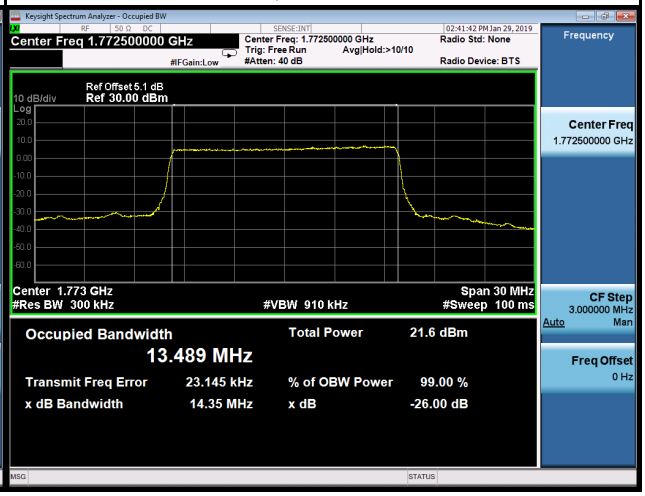
16QAM-132047



16QAM-132322



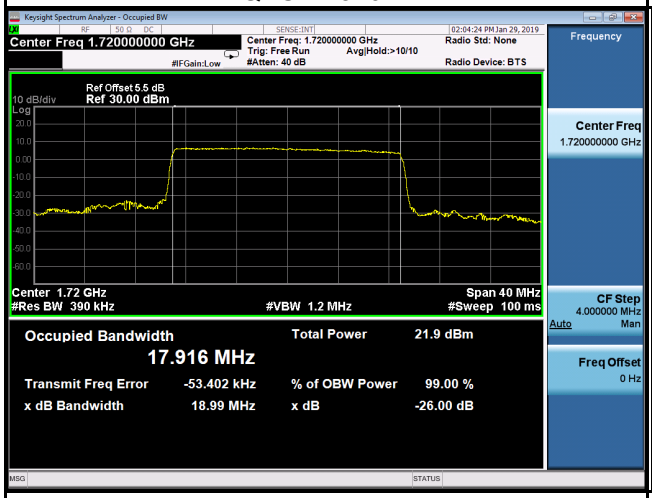
16QAM-132597



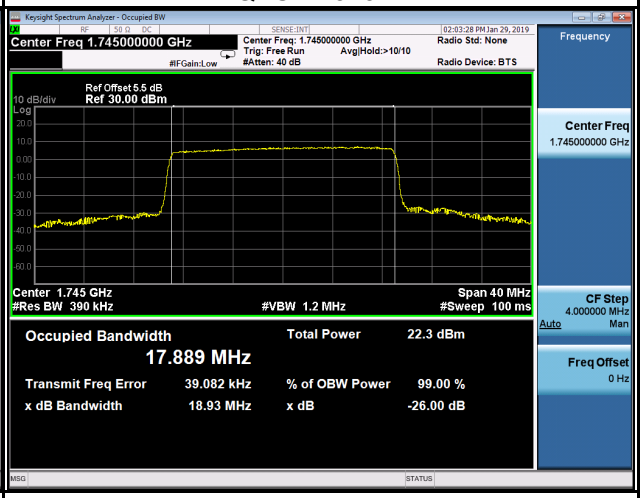
LTE Band 66_20M					
QPSK			16QAM		
Channel	Frequency (MHz)	99% Occupied Bandwidth (MHz)	Channel	Frequency (MHz)	99% Occupied Bandwidth (MHz)
132072	1720.0	17.916	132072	1720.0	17.926
132322	1745.0	17.889	132322	1745.0	17.901
132572	1770.0	17.901	132572	1770.0	17.914
Channel	Frequency (MHz)	26dB Bandwidth (MHz)	Channel	Frequency (MHz)	26dB Bandwidth (MHz)
132072	1720.0	18.990	132072	1720.0	18.930
132322	1745.0	18.930	132322	1745.0	18.940
132572	1770.0	18.940	132572	1770.0	18.970

Spectrum Plot

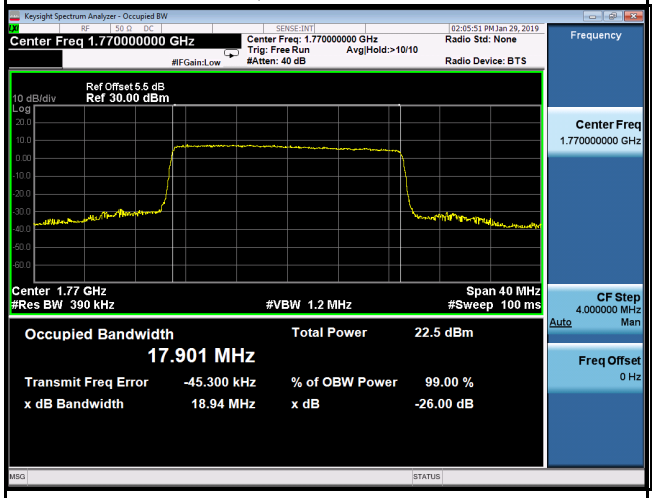
QPSK-132072



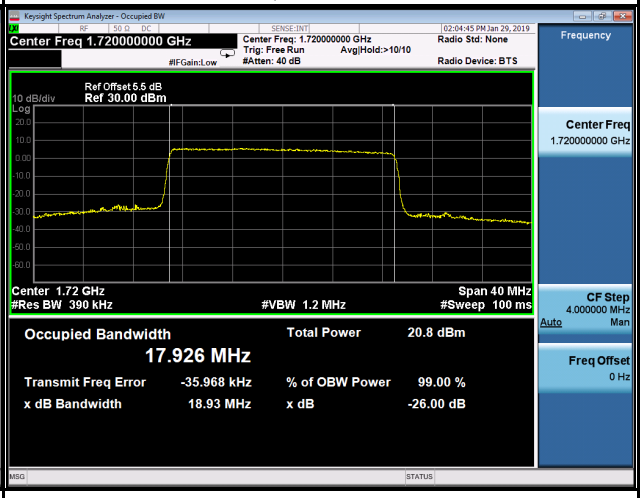
QPSK-132322



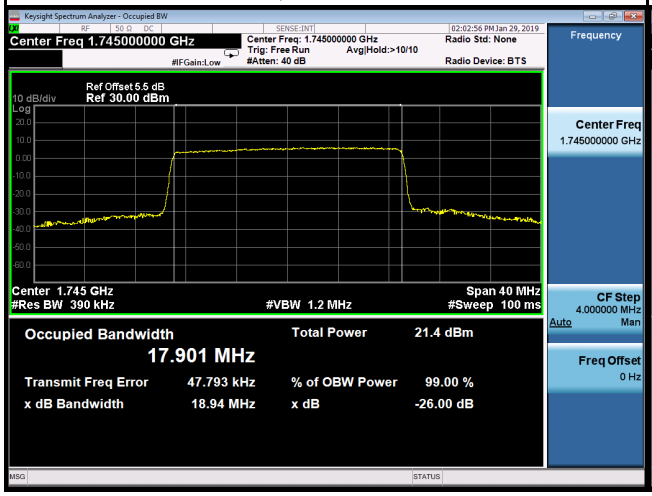
QPSK-132572



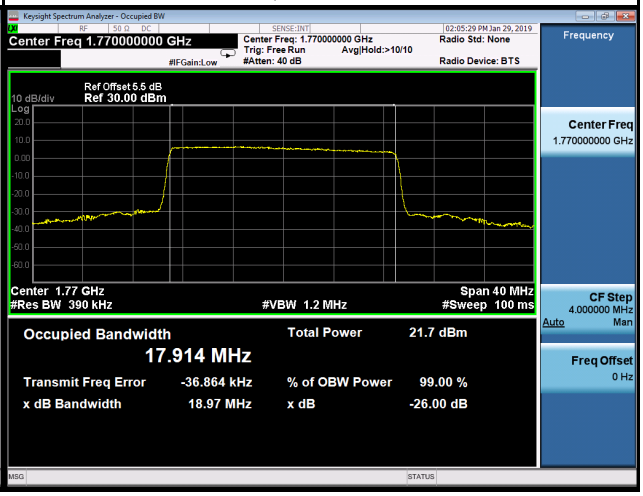
16QAM-132072



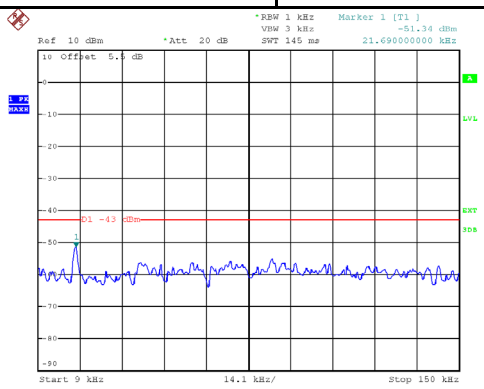
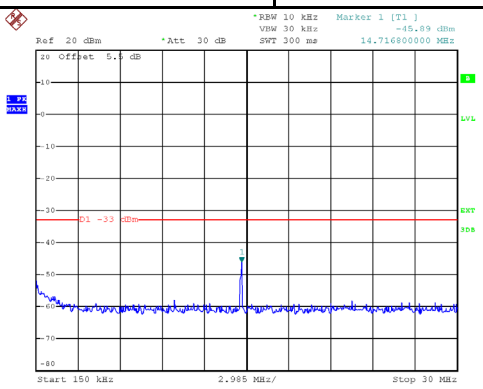
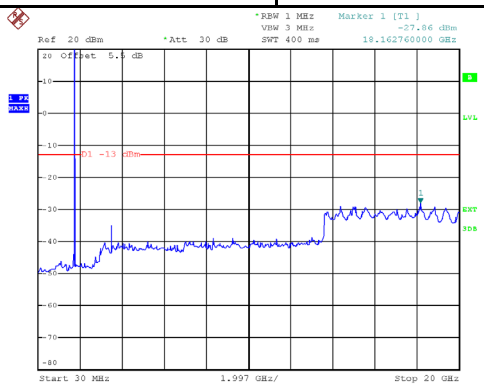
16QAM-132322

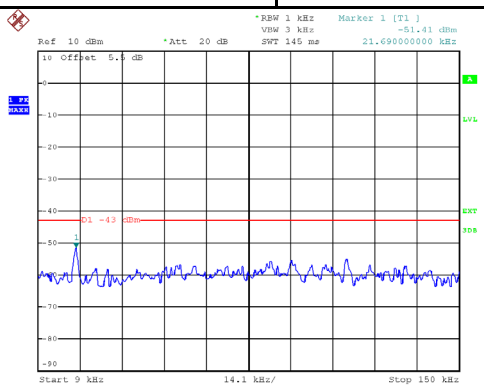
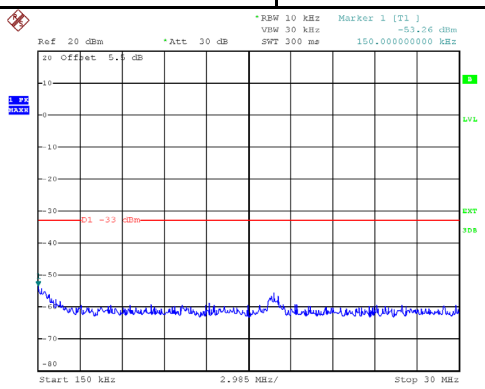
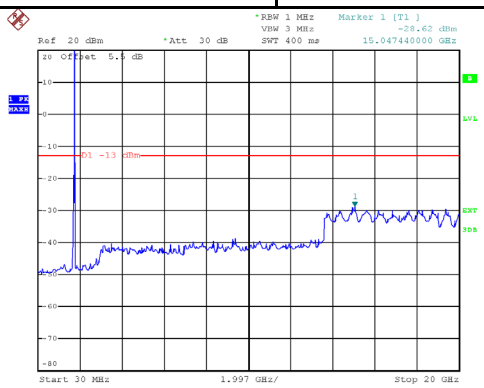


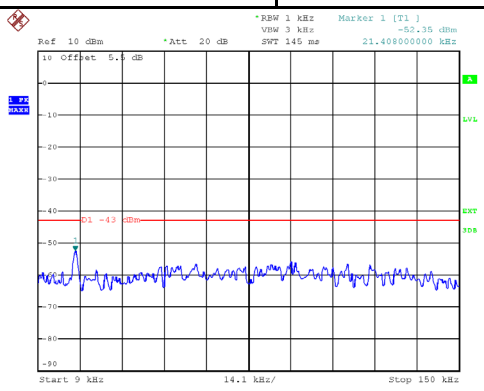
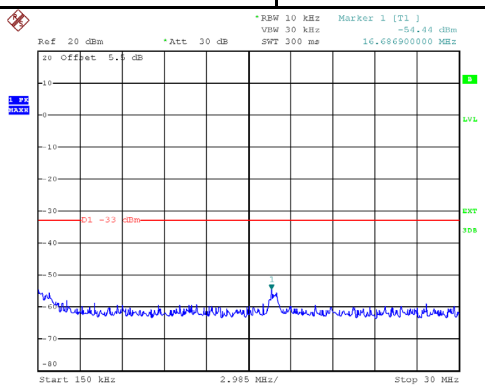
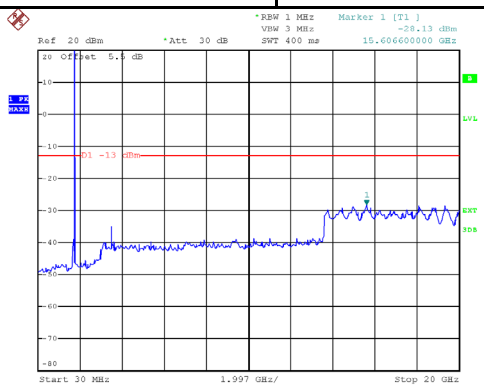
16QAM-132572



APPENDIX C - CONDUCTED EMISSIONS

LTE Band 4_1.4M			
Channel	Frequency(MHz)	Channel	Frequency(MHz)
20175	1732.5	20175	1732.5
			
Channel	Frequency(MHz)	-	-
20175	1732.5	-	-
		-	

LTE Band 4_5M			
Channel	Frequency(MHz)	Channel	Frequency(MHz)
20175	1732.5	20175	1732.5
			
Channel	Frequency(MHz)	-	-
20175	1732.5	-	-
		-	

LTE Band 4_20M			
Channel	Frequency(MHz)	Channel	Frequency(MHz)
20175	1732.5	20175	1732.5
			
Channel	Frequency(MHz)	-	-
20175	1732.5	-	-
		-	