FCC TEST REPORT

(PART 27)

Applicant:	Corporativo Lanix S.A. de C.V.
Address:	Carretera Internacional Hermosillo-Nogales KM 8.5, 83160, Hermosillo, Sonora, México

Manufacturer or Supplier:	Corporativo Lanix S.A. de C.V.
Address:	Carretera Internacional Hermosillo-Nogales KM 8.5, 83160, Hermosillo, Sonora, México
Product:	LTE MODEM
Brand Name:	Lanix
Model Name:	B02
FCC ID:	ZC4B02
Date of tests:	Sep. 03, 2019 ~ Oct. 11, 2019

The tests have been carried out according to the requirements of the following standard:

☒ **FCC Part 27, Subpart C, L** ☒ **ANSI/TIA/EIA-603- D**
☒ **FCC Part 2** ☒ **ANSI/TIA/EIA-603-E** ☒ **ANSI C63.26-2015**

CONCLUSION: The submitted sample was found to COMPLY with the test requirement

Prepared by Alex Chen Engineer / Mobile Department	Approved by Luke Lu Manager / Mobile Department
 Date: Oct. 17, 2019	 Date: Oct. 17, 2019

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RELEASE CONTROL RECORD

ISSUE NO.	REASON FOR CHANGE	DATE ISSUED
RF190902W001-4	Original release	Oct. 17, 2019

1 SUMMARY OF TEST RESULTS

The EUT has been tested according to the following specifications:

APPLIED STANDARD: FCC Part 27 & Part 2		
STANDARD SECTION	**TEST TYPE AND LIMIT**	**RESULT**
2.1046 27.50(d)(4)	Maximum Peak Output Power	Compliance
2.1055 27.54	Frequency Stability	Compliance
2.1049 27.53(h)	Occupied Bandwidth	Compliance
27.50(d)(5)	Peak to average ratio	Compliance
27.53(h)	Band Edge Measurements	Compliance
2.1051 27.53(h)	Conducted Spurious Emissions	Compliance
2.1053 27.53(h)	Radiated Spurious Emissions	Compliance

1.1 MEASUREMENT UNCERTAINTY

Where relevant, the following measurement uncertainty levels have been estimated for tests performed on the EUT as specified in CISPR 16-4-2:

MEASUREMENT	UNCERTAINTY
Frequency Stability	±76.97Hz
Radiated emissions & Radiated Power (30MHz~1GMHz)	±4.98dB
Radiated emissions & Radiated Power (1GMHz ~6GMHz)	±4.70dB
Radiated emissions (6GMHz ~18GMHz)	±4.60dB
Radiated emissions (18GMHz ~40GMHz)	±4.12dB
Conducted emissions	±4.01dB
Occupied Channel Bandwidth	±43.58KHz
Conducted Output power	±2.06dB
Band Edge Measurements	±4.70dB
Peak to average ratio	±0.76dB

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

1.2 TEST SITE AND INSTRUMENTS

Equipment	Manufacturer	Model No.	Serial No.	Last Cal.	Next Cal.
MXE EMI Receiver	KEYSIGHT	N9038A-544	MY54450026	Feb. 26,19	Feb. 25,20
EXA Signal Analyzer	KEYSIGHT	N9010A-526	MY54510322	Feb. 26,19	Feb. 25,20
Bilog Antenna	ETS-LINDGREN	3143B	00161965	Feb. 26,19	Feb. 25,20
Horn Antenna (1GHz-18GHz)	ETS-LINDGREN	3117	00168692	Nov. 30, 18	Nov. 29, 19
Horn Antenna (18GHz-40GHz)	N/A	QWH-SL-18-40-K-SG/QMS-00361	15433	Nov. 21, 18	Nov. 20, 19
Radio Communication Analyzer	ANRITSU	MT8820C	6201465426	Feb. 26,19	Feb. 25,20
Signal Pre-Amplifier	EMSI	EMC 9135	980249	Jun. 24,19	Jun. 23,20
Signal Pre-Amplifier	EMSI	EMC 012645B	980257	Jun. 24,19	Jun. 23,20
Signal Pre-Amplifier	EMSI	EMC 184045B	980259	Jun. 24,19	Jun. 23,20
3m Semi-anechoic Chamber	ETS-LINDGREN	9m*6m*6m	Euroshieldpn-CT0001143-1216	Feb. 26,19	Feb. 25,20
Test Software	E3	V 9.160323	N/A	N/A	N/A
Test Software	ADT	ADT_Radiated_V7.6.15.9.2	N/A	N/A	N/A
10dB Attenuator	JFW/USA	50HF-010-SMA	1505	Jun. 24,19	Jun. 23,20
Power Meter	Anritsu	ML2495A	1506002	Feb. 26,19	Feb. 25,20
Power Sensor	Anritsu	MA2411B	1339352	Feb. 26,19	Feb. 25,20
Humid & Temp Programmable Tester	Juyi	ITH-120-45-CP-AR	IAA1504-001	Jun. 24,19	Jun. 23,20
MXG Analog Microvave Signal Generator	KEYSIGHT	N5183A	MY50143024	Feb. 26,19	Feb. 25,20
Power Divider	MCLI/USA	PS2-15	24880	Jul. 09,19	Jul. 08,20

NOTE: 1. The calibration interval of the above test instruments is 12 months or 24 months and the calibrations are traceable to CEPREI/CHINA, GRGT/CHINA and NIM/CHINA.

2. The test was performed in 3m Semi-anechoic Chamber and RF Oven Room.

3. The horn antenna is used only for the measurement of emission frequency above 1GHz if tested.

4. The FCC Site Registration No. is 525120; The Designation No. is CN1171.

2 GENERAL INFORMATION

2.1 GENERAL DESCRIPTION OF EUT

PRODUCT	LTE MODEM	
BRAND NAME	Lanix	
MODEL NAME	B02	
NOMINAL VOLTAGE	12(10.8-13.2)V (adapter or host equipment) V_{min}=10Vdc , V_{nor}=12Vdc , V_{max}=14Vdc	
MODULATION TECHNOLOGY	**LTE**	QPSK, 16QAM,
FREQUENCY RANGE	**LTE Band 4 Channel Bandwidth: 1.4MHz**	1710.7MHz ~ 1754.3MHz
	LTE Band 4 Channel Bandwidth: 3MHz	1711.5MHz ~ 1753.5MHz
	LTE Band 4 Channel Bandwidth: 5MHz	1712.5MHz ~ 1752.5MHz
	LTE Band 4 Channel Bandwidth: 10MHz	1715.0MHz ~ 1750.0MHz
	LTE Band 4 Channel Bandwidth: 15MHz	1717.5MHz ~ 1747.5MHz
	LTE Band 4 Channel Bandwidth: 20MHz	1720.0MHz ~ 1745.0MHz
	LTE Band 66 Channel Bandwidth: 1.4MHz	1710.7MHz ~ 1779.3MHz
	LTE Band 66 Channel Bandwidth: 3MHz	1711.5MHz ~ 1778.5MHz
	LTE Band 66 Channel Bandwidth: 5MHz	1712.5MHz ~ 1777.5MHz
	LTE Band 66 Channel Bandwidth: 10MHz	1715MHz ~ 1775MHz
	LTE Band 66 Channel Bandwidth: 15MHz	1717.5MHz ~ 1772.5MHz
	LTE Band 66 Channel Bandwidth: 20MHz	1720MHz ~ 1770MHz

EMISSION DESIGNATOR	**LTE Band 4 Channel Bandwidth: 1.4MHz**	QPSK: 1M09G7D
		16QAM: 1M09W7D
	LTE Band 4 Channel Bandwidth: 3MHz	QPSK: 2M69G7D
		16QAM: 2M68W7D
	LTE Band 4 Channel Bandwidth: 5MHz	QPSK: 4M47G7D
		16QAM: 4M47W7D
	LTE Band 4 Channel Bandwidth: 10MHz	QPSK: 8M97G7D
		16QAM: 8M96W7D
	LTE Band 4 Channel Bandwidth: 15MHz	QPSK: 13M5G7D
		16QAM: 13M5W7D
	LTE Band 4 Channel Bandwidth: 20MHz	QPSK: 17M9G7D
		16QAM: 18M0W7D
	LTE Band 66 Channel Bandwidth: 1.4MHz	QPSK: 1M10G7D
		16QAM: 1M10W7D
	LTE Band 66 Channel Bandwidth: 3MHz	QPSK: 2M70G7D
		16QAM: 2M69W7D
	LTE Band 66 Channel Bandwidth: 5MHz	QPSK: 4M49G7D
		16QAM: 4M48W7D
	LTE Band 66 Channel Bandwidth: 10MHz	QPSK: 8M97G7D
		16QAM: 8M96W7D
	LTE Band 66 Channel Bandwidth: 15MHz	QPSK: 13M5G7D
		16QAM: 13M5W7D
	LTE Band 66 Channel Bandwidth: 20MHz	QPSK: 18M0G7D
		16QAM: 18M0W7D

MAX. ERP/EIRP POWER	**LTE Band 4 Channel Bandwidth: 1.4MHz**	344mw
	LTE Band 4 Channel Bandwidth: 3MHz	333mw
	LTE Band 4 Channel Bandwidth: 5MHz	333mw
	LTE Band 4 Channel Bandwidth: 10MHz	333mw
	LTE Band 4 Channel Bandwidth: 15MHz	335mw
	LTE Band 4 Channel Bandwidth: 20MHz	336mw
	LTE Band 66 Channel Bandwidth: 1.4MHz	441mw
	LTE Band 66 Channel Bandwidth: 3MHz	413mw
	LTE Band 66 Channel Bandwidth: 5MHz	411mw
	LTE Band 66 Channel Bandwidth: 10MHz	411mw
	LTE Band 66 Channel Bandwidth: 15MHz	411mw
	LTE Band 66 Channel Bandwidth: 20MHz	415mw
ANTENNA TYPE	Fixed Internal Antenna with 2dBi gain for LTE Band 4 Fixed Internal Antenna with 3dBi gain for LTE Band 66	
HW VERSION	PS05I_1_21	
SW VERSION	PS05INT2_N21_AP_V003	
CABLE SUPPLIED	N/A	
ACCESSORY DEVICES	Refer to note as below	

NOTE:

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

2. For the test results, the EUT had been tested with all conditions. But only the worst case was shown in test report.

3. The EUT was powered by the following adapter:

ADAPTER	
BRAND:	LANIX
MODEL:	RD1201000-C55-91MG
NPUT:	AC 100-240V, 0.6mA
UTPUT:	DC 12(10.8-13.2)V, 1000mA

4. The EUT matched the following reticle:

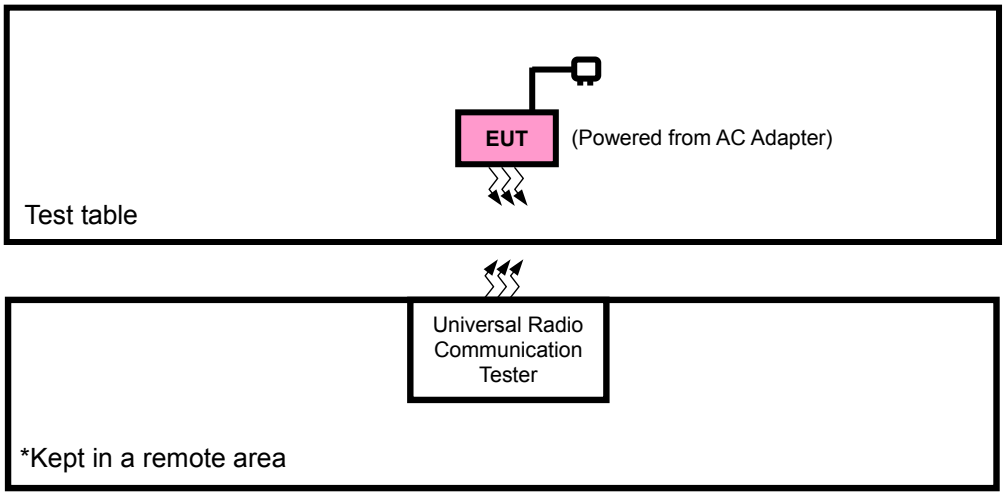
RETICLE	
RAND:	Huachen
ODEL:	HC-WX02
IGNAL LINE:	1.0 METER

5. The EUT incorporates a SISO function. Physically, the EUT provides one completed transmitter and one receiver.

MODULATION MODE	TX FUNCTION
LTE	1TX/1RX

2.2 CONFIGURATION OF SYSTEM UNDER TEST

FOR RADIATION EMISSION TEST



2.3 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.

NO.	PRODUCT	BRAND	MODEL NO.	SERIAL NO.	FCC ID
1	Adapter	JINGSAI	CLS-050200	N/A	N/A
2	DC source	LONG WEI	PS-6403D	010934269	N/A

NO.	SIGNAL CABLE DESCRIPTION OF THE ABOVE SUPPORT UNITS
1	Unshielded, Detachable 1.8m
2	DC Line: Unshielded, Detachable 1.0m

2.4 DESCRIPTION OF TEST MODES

Pre-Scan has been conducted to determine the worst-case mode from all possible combinations between available modulations, data rates, XYZ axis and antenna ports The worst case in radiated emission was found when positioned on X-plane for WCDMA /LTE. Following channel(s) was (were) selected for the final test as listed below:

EUT CONFIGURE MODE	DESCRIPTION
A	**EUT + Adapter + USB Cable with LTE link**
B	EUT + Battery with **LTE link**

LTE BAND 4

TEST ITEM	AVAILABLE CHANNEL	TESTED CHANNEL	CHANNEL BANDWIDTH	MODULATION	MODE
EIRP	19957 to 20393	19957, 20175, 20393	1.4MHz	QPSK, 16QAM,	1 RB / 0 RB Offset
	19965 to 20385	19965, 20175, 20385	3MHz	QPSK, 16QAM,	1 RB / 0 RB Offset
	19975 to 20375	19975, 20175, 20375	5MHz	QPSK, 16QAM,	1 RB / 0 RB Offset
	20000 to 20350	20000, 20175, 20350	10MHz	QPSK, 16QAM,	1 RB / 0 RB Offset
	20025 to 20325	20025, 20175, 20325	15MHz	QPSK, 16QAM,	1 RB / 0 RB Offset
	20050 to 20300	20050, 20175, 20300	20MHz	QPSK, 16QAM,	1 RB / 0 RB Offset
FREQUENCY STABILITY	19957 to 20393	19957, 20393	1.4MHz	QPSK	1 RB / 0 RB Offset
	19965 to 20385	19965, 20385	3MHz	QPSK	1 RB / 0 RB Offset
	19975 to 20375	19975, 20375	5MHz	QPSK	1 RB / 0 RB Offset
	20000 to 20350	20000, 20350	10MHz	QPSK	1 RB / 0 RB Offset
	20025 to 20325	20025, 20325	15MHz	QPSK	1 RB / 0 RB Offset
	20050 to 20300	20050, 20300	20MHz	QPSK	1 RB / 0 RB Offset
OCCUPIED BANDWIDTH	19957 to 20393	19957, 20175, 20393	1.4MHz	QPSK, 16QAM,	6 RB / 0 RB Offset
	19965 to 20385	19965, 20175, 20385	3MHz	QPSK, 16QAM,	15 RB / 0 RB Offset
	19975 to 20375	19975, 20175, 20375	5MHz	QPSK, 16QAM,	25 RB / 0 RB Offset
	20000 to 20350	20000, 20175, 20350	10MHz	QPSK, 16QAM,	50 RB / 0 RB Offset
	20025 to 20325	20025, 20175, 20325	15MHz	QPSK, 16QAM,	75 RB / 0 RB Offset
	20050 to 20300	20050, 20175, 20300	20MHz	QPSK, 16QAM,	100 RB / 0 RB Offset
PEAK TO AVERAGE RATIO	19957 to 20393	19957, 20175, 20393	1.4MHz	QPSK, 16QAM,	1 RB / 0 RB Offset
	19965 to 20385	19965, 20175, 20385	3MHz	QPSK, 16QAM,	1 RB / 0 RB Offset
	19975 to 20375	19975, 20175, 20375	5MHz	QPSK, 16QAM,	1 RB / 0 RB Offset
	20000 to 20350	20000, 20175, 20350	10MHz	QPSK, 16QAM,	1 RB / 0 RB Offset
	20025 to 20325	20025, 20175, 20325	15MHz	QPSK, 16QAM,	1 RB / 0 RB Offset
	20050 to 20300	20050, 20175, 20300	20MHz	QPSK, 16QAM,	1 RB / 0 RB Offset
BAND EDGE	19957 to 20393	19957	1.4MHz	QPSK, 16QAM,	1 RB / 0 RB Offset
					6 RB / 0 RB Offset
		20393	1.4MHz	QPSK, 16QAM,	1 RB / 5 RB Offset
					6 RB / 0 RB Offset
	19965 to 20385	19965	3MHz	QPSK, 16QAM,	1 RB / 0 RB Offset
					15 RB / 0 RB Offset
		20385	3MHz	QPSK, 16QAM,	1 RB / 14 RB Offset
					15 RB / 0 RB Offset
	19975 to 20375	19975	5MHz	QPSK, 16QAM,	1 RB / 0 RB Offset
					25 RB / 0 RB Offset
		20375	5MHz	QPSK, 16QAM,	1 RB / 24 RB Offset
					25 RB / 0 RB Offset
	20000 to 20350	20000	10MHz	QPSK, 16QAM,	1 RB / 0 RB Offset
					50 RB / 0 RB Offset
		20350	10MHz	QPSK, 16QAM,	1 RB / 49 RB Offset
					50 RB / 0 RB Offset

BAND EDGE	20025 to 20325	20025	15MHz	QPSK, 16QAM,	1 RB / 0 RB Offset
					75 RB / 0 RB Offset
		20325	15MHz	QPSK, 16QAM,	1 RB / 74 RB Offset
					75 RB / 0 RB Offset
	20050 to 20300	20050	20MHz	QPSK, 16QAM,	1 RB / 0 RB Offset
					100 RB / 0 RB Offset
		20300	20MHz	QPSK, 16QAM,	1 RB / 99 RB Offset
					100 RB / 0 RB Offset
CONDCUDETED EMISSION	19957 to 20393	19957, 20175, 20393	1.4MHz	QPSK	1 RB / 0 RB Offset
	19965 to 20385	19965, 20175, 20385	3MHz	QPSK	1 RB / 0 RB Offset
	19975 to 20375	19975, 20175, 20375	5MHz	QPSK	1 RB / 0 RB Offset
	20000 to 20350	20000, 20175, 20350	10MHz	QPSK	1 RB / 0 RB Offset
	20025 to 20325	20025, 20175, 20325	15MHz	QPSK	1 RB / 0 RB Offset
	20050 to 20300	20050, 20175, 20300	20MHz	QPSK	1 RB / 0 RB Offset
RADIATED EMISSION	19957 to 20393	20175	1.4MHz	QPSK	1 RB / 0 RB Offset
	19965 to 20385	20175	3MHz	QPSK	1 RB / 0 RB Offset
	19975 to 20375	20175	5MHz	QPSK	1 RB / 0 RB Offset
	20000 to 20350	20000, 20175, 20350	10MHz	QPSK	1 RB / 0 RB Offset
	20025 to 20325	20175	15MHz	QPSK	1 RB / 0 RB Offset
	20050 to 20300	20175	20MHz	QPSK	1 RB / 0 RB Offset

Note: This device was tested under all bandwidths, RB configurations and modulations. The worst case was found in QPSK modulation.

LTE BAND 66

TEST ITEM	AVAILABLE CHANNEL	TESTED CHANNEL	CHANNEL BANDWIDTH	MODULATION	MODE
EIRP	131979 to 132665	131979, 132322, 132665	1.4MHz	QPSK, 16QAM,	1 RB / 0 RB Offset
	131987 to 132657	131987, 132322, 132657	3MHz	QPSK, 16QAM,	1 RB / 0 RB Offset
	131997 to 132647	131997, 132322, 132647	5MHz	QPSK, 16QAM,	1 RB / 0 RB Offset
	132022 to 132622	132022, 132322, 132622	10MHz	QPSK, 16QAM,	1 RB / 0 RB Offset
	132047 to 132597	132047, 132322, 132597	15MHz	QPSK, 16QAM,	1 RB / 0 RB Offset
	132072 to 132572	132072, 132322, 132572	20MHz	QPSK, 16QAM,	1 RB / 0 RB Offset
FREQUENCY STABILITY	131979 to 132665	131979, 132665	1.4MHz	QPSK	1 RB / 0 RB Offset
	131987 to 132657	131987, 132657	3MHz	QPSK	1 RB / 0 RB Offset
	131997 to 132647	131997, 132647	5MHz	QPSK	1 RB / 0 RB Offset
	132022 to 132622	132022, 132622	10MHz	QPSK	1 RB / 0 RB Offset
	132047 to 132597	132047, 132597	15MHz	QPSK	1 RB / 0 RB Offset
	132072 to 132572	132072, 132572	20MHz	QPSK	1 RB / 0 RB Offset
OCCUPIED BANDWIDTH	131979 to 132665	131979, 132322, 132665	1.4MHz	QPSK, 16QAM,	6 RB / 0 RB Offset
	131987 to 132657	131987, 132322, 132657	3MHz	QPSK, 16QAM,	15 RB / 0 RB Offset
	131997 to 132647	131997, 132322, 132647	5MHz	QPSK, 16QAM,	25 RB / 0 RB Offset
	132022 to 132622	132022, 132322, 132622	10MHz	QPSK, 16QAM,	50 RB / 0 RB Offset
	132047 to 132597	132047, 132322, 132597	15MHz	QPSK, 16QAM,	75 RB / 0 RB Offset
	132072 to 132572	132072, 132322, 132572	20MHz	QPSK, 16QAM,	100 RB / 0 RB Offset
PEAK TO AVERAGE RATIO	131979 to 132665	131979, 132322, 132665	1.4MHz	QPSK, 16QAM,	1 RB / 0 RB Offset
	131987 to 132657	131987, 132322, 132657	3MHz	QPSK, 16QAM,	1 RB / 0 RB Offset
	131997 to 132647	131997, 132322, 132647	5MHz	QPSK, 16QAM,	1 RB / 0 RB Offset
	132022 to 132622	132022, 132322, 132622	10MHz	QPSK, 16QAM,	1 RB / 0 RB Offset
	132047 to 132597	132047, 132322, 132597	15MHz	QPSK, 16QAM,	1 RB / 0 RB Offset
	132072 to 132572	132072, 132322, 132572	20MHz	QPSK, 16QAM,	1 RB / 0 RB Offset
BAND EDGE	131979 to 132665	131979	1.4MHz	QPSK, 16QAM,	1 RB / 0 RB Offset
					6 RB / 0 RB Offset
		132665	1.4MHz	QPSK, 16QAM,	1 RB / 5 RB Offset
					6 RB / 0 RB Offset

	131987 to 132657	131987	3MHz	QPSK, 16QAM,	1 RB / 0 RB Offset
					15 RB / 0 RB Offset
		132657	3MHz	QPSK, 16QAM,	1 RB / 14 RB Offset
					15 RB / 0 RB Offset
	131997 to 132647	131997	5MHz	QPSK, 16QAM,	1 RB / 0 RB Offset
					25 RB / 0 RB Offset
		132647	5MHz	QPSK, 16QAM,	1 RB / 24 RB Offset
					25 RB / 0 RB Offset
	132022 to 132622	132022	10MHz	QPSK, 16QAM,	1 RB / 0 RB Offset
					50 RB / 0 RB Offset
		132622	10MHz	QPSK, 16QAM,	1 RB / 49 RB Offset
					50 RB / 0 RB Offset
	132047 to 132597	132047	15MHz	QPSK, 16QAM,	1 RB / 0 RB Offset
					75 RB / 0 RB Offset
		132597	15MHz	QPSK, 16QAM,	1 RB / 74 RB Offset
					75 RB / 0 RB Offset
	132072 to 132572	132072	20MHz	QPSK, 16QAM,	1 RB / 0 RB Offset
					100 RB / 0 RB Offset
		132572	20MHz	QPSK, 16QAM,	1 RB / 99 RB Offset
					100 RB / 0 RB Offset
CONDCUDETED EMISSION	131979 to 132665	131979, 132322, 132665	1.4MHz	QPSK	1 RB / 0 RB Offset
	131987 to 132657	131987, 132322, 132657	3MHz	QPSK	1 RB / 0 RB Offset
	131997 to 132647	131997, 132322, 132647	5MHz	QPSK	1 RB / 0 RB Offset
	132022 to 132622	132022, 132322, 132622	10MHz	QPSK	1 RB / 0 RB Offset
	132047 to 132597	132047, 132322, 132597	15MHz	QPSK	1 RB / 0 RB Offset
	132072 to 132572	132072, 132322, 132572	20MHz	QPSK	1 RB / 0 RB Offset
RADIATED EMISSION	131979 to 132665	131979, 132322, 132665	1.4MHz	QPSK	1 RB / 0 RB Offset
	131987 to 132657	132322	3MHz	QPSK	1 RB / 0 RB Offset
	131997 to 132647	132322	5MHz	QPSK	1 RB / 0 RB Offset
	132022 to 132622	132322	10MHz	QPSK	1 RB / 0 RB Offset
	132047 to 132597	132322	15MHz	QPSK	1 RB / 0 RB Offset
	132072 to 132572	132322	20MHz	QPSK	1 RB / 0 RB Offset

Note: This device was tested under all bandwidths, RB configurations and modulations. The worst case was found in QPSK modulation.

TEST CONDITION:

TEST ITEM	ENVIRONMENTAL CONDITIONS	INPUT POWER	TESTED BY
EIRP	23deg. C, 70%RH	12Vdc from adapter	Star Le
FREQUENCY STABILITY	23deg. C, 70%RH	DC 10V/12V/14V	Big Wang
OCCUPIED BANDWIDTH	23deg. C, 70%RH	12Vdc from adapter	Big Wang
PEAK TO AVERAGE RATIO	23deg. C, 70%RH	12Vdc from adapter	Big Wang
BAND EDGE	23deg. C, 70%RH	12Vdc from adapter	Big Wang
CONDCUDETED EMISSION	23deg. C, 70%RH	12Vdc from adapter	Big Wang
RADIATED EMISSION	23deg. C, 70%RH	12Vdc from adapter	Star Le

2.5 GENERAL DESCRIPTION OF APPLIED STANDARDS

The EUT is a RF product. According to the specifications of the manufacturer, it must comply with the requirements of the following standards:

FCC 47 CFR Part 2

FCC 47 CFR Part 27

KDB 971168 D01 Power Meas License Digital Systems v03r01

ANSI/TIA/EIA-603-D

ANSI/TIA/EIA-603-E

ANSI C63.26-2015

NOTE: All test items have been performed and recorded as per the above standards.

3 TEST TYPES AND RESULTS

3.1 OUTPUT POWER MEASUREMENT

3.1.1 LIMITS OF OUTPUT POWER MEASUREMENT

Fixed, mobile, and portable (hand-held) stations operating in the 1710–1755 MHz band are limited to 1 watt EIRP.

3.1.2 TEST PROCEDURES

EIRP MEASUREMENT:

Per KDB 971168 D01 Power Meas License Digital Systems v03r01 or subclause 5.2.5.5 of ANSI C63.26-2015, the relevant equation for determing the ERP or EIRP from the conducted RF output power measured using the guidance provided above is:

ERP or EIRP = P_{Meas} + G_T – L_C

Where:

ERP or EIRP = effective radiated power or equivalent isotropically radiated power, respectively

(expressed in the same units as P_{Meas}, typically dBW or dBm);

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

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

L_C = signal attenuation in the connecting cable between the transmitter and antenna, in dB.

CONDUCTED POWER MEASUREMENT:

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

3.1.3 TEST SETUP

CONDUCTED POWER MEASUREMENT:

3.1.4 TEST RESULTS

AVERAGE CONDUCTED OUTPUT POWER (dBm)

BAND 4

Band/BW	Modulation	RB Size	RB Offset	Low CH 19957 Frequency 1710.7MHz	Mid CH 20175 Frequency 1732.5MHz	High CH 20393 Frequency 1754.3MHz	MPR
4/ 1.4	QPSK	1	0	23.18	22.97	23.06	0
		1	2	23.01	22.73	22.87	0
		1	5	23.04	22.74	22.86	0
		3	0	23.28	23.01	23.17	0
		3	1	23.34	23.08	23.12	0
		3	3	23.36	23.08	23.20	0
		6	0	22.37	22.07	22.21	1
	16QAM	1	0	23.18	22.91	23.03	1
		1	2	23.20	22.89	23.05	1
		1	5	23.20	22.92	23.09	1
		3	0	22.74	22.48	22.58	1
		3	1	22.60	22.42	22.48	1
		3	3	22.67	22.41	22.55	1
		6	0	21.61	21.40	21.47	2

Band/BW	Modulation	RB Size	RB Offset	Low CH 19965 Frequency 1711.5MHz	Mid CH 20175 Frequency 1732.5MHz	High CH 20385 Frequency 1753.5MHz	MPR
4/ 3	QPSK	1	0	23.20	22.99	23.05	0
		1	7	22.97	22.74	22.87	0
		1	14	23.00	22.74	22.86	0
		8	0	22.27	22.04	22.17	1
		8	3	22.27	22.08	22.14	1
		8	7	22.33	22.15	22.24	1
		15	0	22.34	22.08	22.15	1
	16QAM	1	0	23.15	22.97	23.06	1
		1	7	23.17	22.92	23.03	1
		1	14	23.23	22.92	23.09	1
		8	0	21.70	21.49	21.58	2
		8	3	21.65	21.37	21.51	2
		8	7	21.69	21.39	21.51	2
		15	0	21.61	21.34	21.50	2

Band/BW	Modulation	RB Size	RB Offset	Low CH 19975 Frequency 1712.5MHz	Mid CH 20175 Frequency 1732.5MHz	High CH 20375 Frequency 1752.5MHz	MPR
4/ 5	QPSK	1	0	23.21	22.94	23.06	0
		1	12	23.02	22.71	22.87	0
		1	24	23.01	22.73	22.90	0
		12	0	22.30	22.04	22.14	1
		12	6	22.27	22.09	22.15	1
		12	13	22.37	22.11	22.25	1
		25	0	22.32	22.11	22.18	1
	16QAM	1	0	23.16	22.93	23.06	1
		1	12	23.14	22.95	23.02	1
		1	24	23.23	22.92	23.08	1
		12	0	21.70	21.47	21.55	2
		12	6	21.62	21.41	21.47	2
		12	13	21.64	21.41	21.54	2
		25	0	21.61	21.35	21.47	2

Band/BW	Modulation	RB Size	RB Offset	Low CH 20000 Frequency 1715 MHz	Mid CH 20175 Frequency 1732.5MHz	High CH 20350 Frequency 1750 MHz	MPR
4/ 10	QPSK	1	0	23.18	22.97	23.06	0
		1	24	23.02	22.71	22.88	0
		1	49	22.98	22.77	22.86	0
		25	0	22.31	22.03	22.17	1
		25	12	22.33	22.03	22.15	1
		25	25	22.35	22.08	22.24	1
		50	0	22.37	22.11	22.15	1
	16QAM	1	0	23.16	22.90	23.02	1
		1	24	23.19	22.91	23.05	1
		1	49	23.23	22.93	23.05	1
		25	0	21.72	21.45	21.61	2
		25	12	21.66	21.35	21.52	2
		25	25	21.63	21.42	21.51	2
		50	0	21.65	21.34	21.51	2

Band/BW	Modulation	RB Size	RB Offset	Low CH 20025 Frequency 1717.5MHz	Mid CH 20175 Frequency 1732.5MHz	High CH 20325 Frequency 1747.5MHz	MPR
4/ 15	QPSK	1	0	23.25	22.97	23.03	0
		1	37	23.00	22.76	22.83	0
		1	74	23.04	22.80	22.87	0
		36	0	22.28	22.04	22.18	1
		36	19	22.34	22.08	22.15	1
		36	39	22.33	22.09	22.24	1
		75	0	22.37	22.09	22.20	1
	16QAM	1	0	23.20	22.97	23.02	1
		1	37	23.18	22.92	23.05	1
		1	74	23.19	22.98	23.07	1
		36	0	21.76	21.45	21.62	2
		36	19	21.60	21.39	21.48	2
		36	39	21.68	21.40	21.54	2
		75	0	21.66	21.37	21.44	2

Band/BW	Modulation	RB Size	RB Offset	Low CH 20050 Frequency 1720 MHz	Mid CH 20175 Frequency 1732.5MHz	High CH 20300 Frequency 1745 MHz	MPR
4/ 20	QPSK	1	0	**23.26**	23.01	23.11	0
		1	50	23.04	22.79	22.89	0
		1	99	23.06	22.81	22.91	0
		50	0	22.34	22.09	22.19	1
		50	25	22.35	22.10	22.20	1
		50	50	22.41	22.16	22.26	1
		100	0	22.38	22.13	22.23	1
	16QAM	1	0	23.23	22.98	23.08	1
		1	50	23.22	22.97	23.07	1
		1	99	23.25	23.00	23.10	1
		50	0	21.78	21.53	21.63	2
		50	25	21.68	21.43	21.53	2
		50	50	21.71	21.46	21.56	2
		100	0	21.67	21.42	21.52	2

BAND 66

Band/BW	Modulation	RB Size	RB Offset	Low CH 131979 Frequency 1710.7MHz	Mid CH 132422 Frequency 1755 MHz	High CH 132665 Frequency 1779.3MHz	MPR
66/ 1.4	QPSK	1	0	23.02	23.14	23.04	0
		1	2	23.01	23.06	23.01	0
		1	5	22.83	22.86	22.79	0
		3	0	23.38	23.44	23.41	0
		3	1	23.28	23.35	23.20	0
		3	3	23.15	23.20	23.13	0
		6	0	22.32	22.35	22.30	1
	16QAM	1	0	22.96	23.02	22.95	1
		1	2	23.00	23.02	22.99	1
		1	5	22.95	23.00	22.98	1
		3	0	22.87	22.94	22.85	1
		3	1	22.73	22.88	22.75	1
		3	3	22.62	22.69	22.64	1
		6	0	21.74	21.86	21.74	2

Band/BW	Modulation	RB Size	RB Offset	Low CH 131987 Frequency 1711.5MHz	Mid CH 132422 Frequency 1755 MHz	High CH 132657 Frequency 1778.5MHz	MPR
66/ 3	QPSK	1	0	23.04	23.16	23.03	0
		1	7	22.97	23.07	23.01	0
		1	14	22.79	22.86	22.79	0
		8	0	22.37	22.47	22.41	1
		8	3	22.21	22.35	22.22	1
		8	7	22.12	22.27	22.17	1
		15	0	22.29	22.36	22.24	1
	16QAM	1	0	22.93	23.08	22.98	1
		1	7	22.97	23.05	22.97	1
		1	14	22.98	23.00	22.98	1
		8	0	21.83	21.95	21.85	2
		8	3	21.78	21.83	21.78	2
		8	7	21.64	21.67	21.60	2
		15	0	21.74	21.80	21.77	2

Band/BW	Modulation	RB Size	RB Offset	Low CH 131997 Frequency 1712.5MHz	Mid CH 132422 Frequency 1755 MHz	High CH 132647 Frequency 1777.5MHz	MPR
66/ 5	QPSK	1	0	23.05	23.11	23.04	0
		1	12	23.02	23.04	23.01	0
		1	24	22.80	22.85	22.83	0
		12	0	22.40	22.47	22.38	1
		12	6	22.21	22.36	22.23	1
		12	13	22.16	22.23	22.18	1
		25	0	22.27	22.39	22.27	1
	16QAM	1	0	22.94	23.04	22.98	1
		1	12	22.94	23.08	22.96	1
		1	24	22.98	23.00	22.97	1
		12	0	21.83	21.93	21.82	2
		12	6	21.75	21.87	21.74	2
		12	13	21.59	21.69	21.63	2
		25	0	21.74	21.81	21.74	2

Band/BW	Modulation	RB Size	RB Offset	Low CH 132022 Frequency 1715 MHz	Mid CH 132422 Frequency 1755 MHz	High CH 132622 Frequency 1775 MHz	MPR
66/ 10	QPSK	1	0	23.02	23.14	23.04	0
		1	24	23.02	23.04	23.02	0
		1	49	22.77	22.89	22.79	0
		25	0	22.41	22.46	22.41	1
		25	12	22.27	22.30	22.23	1
		25	25	22.14	22.20	22.17	1
		50	0	22.32	22.39	22.24	1
	16QAM	1	0	22.94	23.01	22.94	1
		1	24	22.99	23.04	22.99	1
		1	49	22.98	23.01	22.94	1
		25	0	21.85	21.91	21.88	2
		25	12	21.79	21.81	21.79	2
		25	25	21.58	21.70	21.60	2
		50	0	21.78	21.80	21.78	2

Band/BW	Modulation	RB Size	RB Offset	Low CH 132047 Frequency 1717.5MHz	Mid CH 132422 Frequency 1755 MHz	High CH 132597 Frequency 1772.5MHz	MPR
66/ 15	QPSK	1	0	23.09	23.14	23.01	0
		1	37	23.00	23.09	22.97	0
		1	74	22.83	22.92	22.80	0
		36	0	22.38	22.47	22.42	1
		36	19	22.28	22.35	22.23	1
		36	39	22.12	22.21	22.17	1
		75	0	22.32	22.37	22.29	1
	16QAM	1	0	22.98	23.08	22.94	1
		1	37	22.98	23.05	22.99	1
		1	74	22.94	23.06	22.96	1
		36	0	21.89	21.91	21.89	2
		36	19	21.73	21.85	21.75	2
		36	39	21.63	21.68	21.63	2
		75	0	21.79	21.83	21.71	2

Band/BW	Modulation	RB Size	RB Offset	Low CH 132072 Frequency 1720 MHz	Mid CH 132422 Frequency 1755 MHz	High CH 132572 Frequency 1770 MHz	MPR
66/ 20	QPSK	1	0	23.10	**23.18**	23.09	0
		1	50	23.04	23.12	23.03	0
		1	99	22.85	22.93	22.84	0
		50	0	22.44	22.52	22.43	1
		50	25	22.29	22.37	22.28	1
		50	50	22.20	22.28	22.19	1
		100	0	22.33	22.41	22.32	1
	16QAM	1	0	23.01	23.09	23.00	1
		1	50	23.02	23.10	23.01	1
		1	99	23.00	23.08	22.99	1
		50	0	21.91	21.99	21.90	2
		50	25	21.81	21.89	21.80	2
		50	50	21.66	21.74	21.65	2
		100	0	21.80	21.88	21.79	2

EIRP

LTE BAND 4

CHANNEL BANDWIDTH: 1.4MHz QPSK

Channel	Frequency (MHz)	Conducted Power (dBm)	G_T-L_C (dB)	EIRP (dBm)	EIRP (mW)	Limit (W)
19957	1710.7	23.36	2.00	25.36	**343.56**	1
20175	1732.5	23.08	2.00	25.08	322.11	1
20393	1754.3	23.20	2.00	25.20	331.13	1

CHANNEL BANDWIDTH: 1.4MHz 16QAM

Channel	Frequency (MHz)	Conducted Power (dBm)	G_T-L_C (dB)	EIRP (dBm)	EIRP (mW)	Limit (W)
19957	1710.7	23.20	2.00	25.20	331.13	1
20175	1732.5	22.92	2.00	24.92	310.46	1
20393	1754.3	23.09	2.00	25.09	322.85	1

LTE BAND 4

CHANNEL BANDWIDTH: 3MHz QPSK

Channel	Frequency (MHz)	Conducted Power (dBm)	G_T-L_C (dB)	EIRP (dBm)	EIRP (mW)	Limit (W)
19965	1711.5	23.20	2.00	25.20	331.13	1
20175	1732.5	22.99	2.00	24.99	315.5	1
20385	1753.5	23.05	2.00	25.05	319.89	1

CHANNEL BANDWIDTH: 3MHz 16QAM

Channel	Frequency (MHz)	Conducted Power (dBm)	G_T-L_C (dB)	EIRP (dBm)	EIRP (mW)	Limit (W)
19965	1711.5	23.23	2.00	25.23	**333.43**	1
20175	1732.5	22.97	2.00	24.97	314.05	1
20385	1753.5	23.09	2.00	25.09	322.85	1

LTE BAND 4

CHANNEL BANDWIDTH: 5MHz QPSK

Channel	Frequency (MHz)	Conducted Power (dBm)	G_T-L_C (dB)	EIRP (dBm)	EIRP (mW)	Limit (W)
19975	1712.5	23.21	2.00	25.21	331.89	1
20175	1732.5	22.94	2.00	24.94	311.89	1
20375	1752.5	23.06	2.00	25.06	320.63	1

CHANNEL BANDWIDTH: 5MHz 16QAM

Channel	Frequency (MHz)	Conducted Power (dBm)	G_T-L_C (dB)	EIRP (dBm)	EIRP (mW)	Limit (W)
19975	1712.5	23.23	2.00	25.23	**333.43**	1
20175	1732.5	22.95	2.00	24.95	312.61	1
20375	1752.5	23.08	2.00	25.08	322.11	1

LTE BAND 4

CHANNEL BANDWIDTH: 10MHz QPSK

Channel	Frequency (MHz)	Conducted Power (dBm)	G_T-L_C (dB)	EIRP (dBm)	EIRP (mW)	Limit (W)
18650	1715.0	23.18	2.00	25.18	329.61	1
18900	1732.5	22.94	2.00	24.94	311.89	1
19150	1750.0	23.06	2.00	25.06	320.63	1

CHANNEL BANDWIDTH: 10MHz 16QAM

Channel	Frequency (MHz)	Conducted Power (dBm)	G_T-L_C (dB)	EIRP (dBm)	EIRP (mW)	Limit (W)
20000	1715.0	23.23	2.00	25.23	**333.43**	1
20175	1732.5	22.95	2.00	24.95	312.61	1
20350	1750.0	23.05	2.00	25.05	319.89	1

LTE BAND 4

CHANNEL BANDWIDTH: 15MHz QPSK

Channel	Frequency (MHz)	Conducted Power (dBm)	G_T-L_C (dB)	EIRP (dBm)	EIRP (mW)	Limit (W)
20025	1717.5	23.25	2.00	25.25	**334.97**	1
20175	1732.5	22.97	2.00	24.97	314.05	1
20325	1747.5	23.03	2.00	25.03	318.42	1

CHANNEL BANDWIDTH: 15MHz 16QAM

Channel	Frequency (MHz)	Conducted Power (dBm)	G_T-L_C (dB)	EIRP (dBm)	EIRP (mW)	Limit (W)
20025	1717.5	23.20	2.00	25.20	331.13	2
20175	1732.5	22.98	2.00	24.98	314.77	2
20325	1747.5	23.07	2.00	25.07	321.37	2

LTE BAND 4

CHANNEL BANDWIDTH: 20MHz QPSK

Channel	Frequency (MHz)	Conducted Power (dBm)	G_T-L_C (dB)	EIRP (dBm)	EIRP (mW)	Limit (W)
20050	1720.0	23.26	2.00	25.26	**335.74**	2
20175	1732.5	23.01	2.00	25.01	316.96	2
20300	1745.0	23.11	2.00	25.11	324.34	2

CHANNEL BANDWIDTH: 20MHz 16QAM

Channel	Frequency (MHz)	Conducted Power (dBm)	G_T-L_C (dB)	EIRP (dBm)	EIRP (mW)	Limit (W)
20050	1720.0	23.25	2.00	25.25	334.97	2
20175	1732.5	23.00	2.00	25.00	316.23	2
20300	1745.0	23.10	2.00	25.10	323.59	2

LTE BAND 66

CHANNEL BANDWIDTH: 1.4MHz QPSK

Channel	Frequency (MHz)	Conducted Power (dBm)	G_T-L_C (dB)	EIRP (dBm)	EIRP (mW)	Limit (W)
131979	1710.7	23.02	3.00	26.02	399.94	1
132322	1745.0	23.44	3.00	26.44	**440.55**	1
132665	1779.3	23.04	3.00	26.04	401.79	1

CHANNEL BANDWIDTH: 1.4MHz 16QAM

Channel	Frequency (MHz)	Conducted Power (dBm)	G_T-L_C (dB)	EIRP (dBm)	EIRP (mW)	Limit (W)
131979	1710.7	23.00	3.00	26.00	398.11	1
132322	1745.0	23.02	3.00	26.02	399.94	1
132665	1779.3	22.99	3.00	25.99	397.19	1

LTE BAND 66

CHANNEL BANDWIDTH: 3MHz QPSK

Channel	Frequency (MHz)	Conducted Power (dBm)	G_T-L_C (dB)	EIRP (dBm)	EIRP (mW)	Limit (W)
131987	1711.5	23.04	3.00	26.04	401.79	1
132322	1745.0	23.16	3.00	26.16	**413.05**	1
132657	1778.5	23.03	3.00	26.03	400.87	1

CHANNEL BANDWIDTH: 3MHz 16QAM

Channel	Frequency (MHz)	Conducted Power (dBm)	G_T-L_C (dB)	EIRP (dBm)	EIRP (mW)	Limit (W)
131987	1711.5	22.98	3.00	25.98	396.28	1
132322	1745.0	23.08	3.00	26.08	405.51	1
132657	1778.5	22.98	3.00	25.98	396.28	1

LTE BAND 66

CHANNEL BANDWIDTH: 5MHz QPSK

Channel	Frequency (MHz)	Conducted Power (dBm)	G_T-L_C (dB)	EIRP (dBm)	EIRP (mW)	Limit (W)
131997	1712.5	23.09	3.00	26.09	406.44	1
132322	1745.0	23.14	3.00	26.14	**411.15**	1
132647	1777.5	23.01	3.00	26.01	399.02	1

CHANNEL BANDWIDTH: 5MHz 16QAM

Channel	Frequency (MHz)	Conducted Power (dBm)	G_T-L_C (dB)	EIRP (dBm)	EIRP (mW)	Limit (W)
131997	1712.5	22.98	3.00	25.98	396.28	1
132322	1745.0	23.04	3.00	26.04	401.79	1
132647	1777.5	22.99	3.00	25.99	397.19	1

LTE BAND 66

CHANNEL BANDWIDTH: 10MHz QPSK

Channel	Frequency (MHz)	Conducted Power (dBm)	G_T-L_C (dB)	EIRP (dBm)	EIRP (mW)	Limit (W)
132022	1715.0	23.02	3.00	26.02	399.94	1
132322	1745.0	23.14	3.00	26.14	**411.15**	1
132622	1775.0	23.04	3.00	26.04	401.79	1

CHANNEL BANDWIDTH: 10MHz 16QAM

Channel	Frequency (MHz)	Conducted Power (dBm)	G_T-L_C (dB)	EIRP (dBm)	EIRP (mW)	Limit (W)
132022	1715.0	22.99	3.00	25.99	397.19	1
132322	1745.0	23.04	3.00	26.04	401.79	1
132622	1775.0	22.99	3.00	25.99	397.19	1

LTE BAND 66

CHANNEL BANDWIDTH: 15MHz QPSK

Channel	Frequency (MHz)	Conducted Power (dBm)	G_T-L_C (dB)	EIRP (dBm)	EIRP (mW)	Limit (W)
132047	1717.5	23.09	3.00	26.09	406.44	1
132322	1745.0	23.14	3.00	26.14	**411.15**	1
132597	1772.5	23.01	3.00	26.01	399.02	1

CHANNEL BANDWIDTH: 15MHz 16QAM

Channel	Frequency (MHz)	Conducted Power (dBm)	G_T-L_C (dB)	EIRP (dBm)	EIRP (mW)	Limit (W)
132047	1717.5	22.98	3.00	25.98	396.28	1
132322	1745.0	23.08	3.00	26.08	405.51	1
132597	1772.5	22.94	3.00	25.94	392.64	1

LTE BAND 66

CHANNEL BANDWIDTH: 20MHz QPSK

Channel	Frequency (MHz)	Conducted Power (dBm)	G_T-L_C (dB)	EIRP (dBm)	EIRP (mW)	Limit (W)
132072	1720.0	23.10	3.00	26.10	407.38	1
132322	1745.0	23.18	3.00	26.18	**414.95**	1
132572	1770.0	23.09	3.00	26.09	406.44	1

CHANNEL BANDWIDTH: 20MHz 16QAM

Channel	Frequency (MHz)	Conducted Power (dBm)	G_T-L_C (dB)	EIRP (dBm)	EIRP (mW)	Limit (W)
132072	1720.0	23.02	3.00	26.02	399.94	1
132322	1745.0	23.10	3.00	26.10	407.38	1
132572	1770.0	23.01	3.00	26.01	399.02	1

3.2 FREQUENCY STABILITY MEASUREMENT

3.2.1 LIMITS OF FREQUENCY STABILIITY MEASUREMENT

The frequency stability shall be sufficient to ensure that the fundamental emissions stay within the authorized bands of operation.

3.2.2 TEST PROCEDURE

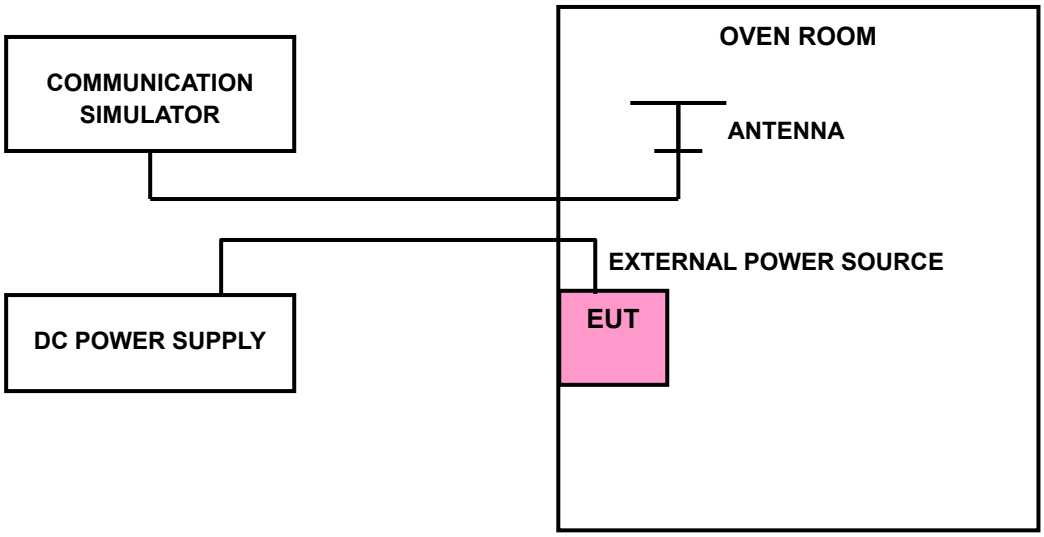
a. Device is placed at the oven room. The oven room could control the temperatures and humidity. Power warm up is at least 15 min and power applied should perform before recording frequency error.

b. 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.

c. The temperature range step is 10 degrees in this test items. All temperature levels shall be hold the ±0.5℃ 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.

NOTE: The frequency error was recorded frequency error from the communication simulator.

3.2.3 TEST SETUP



3.2.4 TEST RESULTS

LTE BAND 4

FREQUENCY ERROR VS. VOLTAGE

VOLTAGE (Volts)	1.4MHz		LIMIT (ppm)
	FREQUENCY ERROR (ppm)		
	Low Channel	High Channel	
V_{nor}	0.0020	0.0025	2.5
V_{min}	-0.0031	-0.0030	2.5
V_{max}	0.0022	0.0020	2.5

NOTE: The applicant defined the normal working voltage of the battery is from V_{min} to Vdc.

FREQUENCY ERROR vs. TEMPERATURE.

TEMP. (℃)	1.4MHz		LIMIT (ppm)
	FREQUENCY ERROR (ppm)		
	Low Channel	High Channel	
-30	-0.0119	-0.0113	2.5
-20	-0.0103	-0.0109	2.5
-10	-0.0083	-0.0080	2.5
0	-0.0078	-0.0075	2.5
10	-0.0054	-0.0046	2.5
20	-0.0043	-0.0038	2.5
30	-0.0030	-0.0040	2.5
40	-0.0021	-0.0017	2.5
50	-0.0005	-0.0002	2.5

FREQUENCY ERROR VS. VOLTAGE

VOLTAGE (Volts)	3MHz		LIMIT (ppm)
	FREQUENCY ERROR (ppm)		
	Low Channel	High Channel	
V_{nor}	0.0021	0.0020	2.5
V_{min}	-0.0021	-0.0025	2.5
V_{max}	0.0018	0.0017	2.5

NOTE: The applicant defined the normal working voltage of the battery is from V_{min} to Vdc.

FREQUENCY ERROR vs. TEMPERATURE.

TEMP. (℃)	3MHz		LIMIT (ppm)
	FREQUENCY ERROR (ppm)		
	Low Channel	High Channel	
-30	-0.0118	-0.0118	2.5
-20	-0.0104	-0.0098	2.5
-10	-0.0084	-0.0079	2.5
0	-0.0073	-0.0074	2.5
10	-0.0049	-0.0054	2.5
20	-0.0045	-0.0042	2.5
30	-0.0033	-0.0031	2.5
40	-0.0015	-0.0019	2.5
50	-0.0006	-0.0004	2.5

FREQUENCY ERROR VS. VOLTAGE

VOLTAGE (Volts)	5MHz		LIMIT (ppm)
	FREQUENCY ERROR (ppm)		
	Low Channel	High Channel	
V_{nor}	0.0021	0.0024	2.5
V_{min}	-0.0023	-0.0030	2.5
V_{max}	0.0021	0.0021	2.5

NOTE: The applicant defined the normal working voltage of the battery is from V_{min} to Vdc.

FREQUENCY ERROR vs. TEMPERATURE.

TEMP. (℃)	5MHz		LIMIT (ppm)
	FREQUENCY ERROR (ppm)		
	Low Channel	High Channel	
-30	-0.0120	-0.0113	2.5
-20	-0.0099	-0.0110	2.5
-10	-0.0084	-0.0083	2.5
0	-0.0076	-0.0075	2.5
10	-0.0053	-0.0053	2.5
20	-0.0042	-0.0042	2.5
30	-0.0025	-0.0031	2.5
40	-0.0021	-0.0019	2.5
50	-0.0004	-0.0006	2.5

FREQUENCY ERROR VS. VOLTAGE

VOLTAGE (Volts)	10MHz		LIMIT (ppm)
	FREQUENCY ERROR (ppm)		
	Low Channel	High Channel	
V_{nor}	0.0025	0.0024	2.5
V_{min}	-0.0031	-0.0030	2.5
V_{max}	0.0026	0.0026	2.5

NOTE: The applicant defined the normal working voltage of the battery is from V_{min} to Vdc.

FREQUENCY ERROR vs. TEMPERATURE.

TEMP. (℃)	10MHz		LIMIT (ppm)
	FREQUENCY ERROR (ppm)		
	Low Channel	High Channel	
-30	-0.0118	-0.0119	2.5
-20	-0.0109	-0.0102	2.5
-10	-0.0084	-0.0080	2.5
0	-0.0076	-0.0076	2.5
10	-0.0045	-0.0046	2.5
20	-0.0041	-0.0039	2.5
30	-0.0041	-0.0028	2.5
40	-0.0022	-0.0018	2.5
50	-0.0005	-0.0003	2.5

FREQUENCY ERROR VS. VOLTAGE

VOLTAGE (Volts)	15MHz		LIMIT (ppm)
	FREQUENCY ERROR (ppm)		
	Low Channel	High Channel	
V_{nor}	0.0024	0.0025	2.5
V_{min}	-0.0031	-0.0030	2.5
V_{max}	0.0025	0.0025	2.5

NOTE: The applicant defined the normal working voltage of the battery is from V_{min} to Vdc.

FREQUENCY ERROR vs. TEMPERATURE.

TEMP. (℃)	15MHz		LIMIT (ppm)
	FREQUENCY ERROR (ppm)		
	Low Channel	High Channel	
-30	-0.0121	-0.0118	2.5
-20	-0.0099	-0.0098	2.5
-10	-0.0083	-0.0081	2.5
0	-0.0076	-0.0073	2.5
10	-0.0047	-0.0047	2.5
20	-0.0039	-0.0042	2.5
30	-0.0032	-0.0041	2.5
40	-0.0020	-0.0020	2.5
50	-0.0002	-0.0003	2.5

FREQUENCY ERROR VS. VOLTAGE

VOLTAGE (Volts)	20MHz		LIMIT (ppm)
	FREQUENCY ERROR (ppm)		
	Low Channel	High Channel	
V_{nor}	0.0024	0.0023	2.5
V_{min}	-0.0031	-0.0030	2.5
V_{max}	0.0025	0.0026	2.5

NOTE: The applicant defined the normal working voltage of the battery is from V_{min} to Vdc.

FREQUENCY ERROR vs. TEMPERATURE.

TEMP. (℃)	20MHz		LIMIT (ppm)
	FREQUENCY ERROR (ppm)		
	Low Channel	High Channel	
-30	-0.0118	-0.0115	2.5
-20	-0.0111	-0.0099	2.5
-10	-0.0081	-0.0082	2.5
0	-0.0074	-0.0076	2.5
10	-0.0046	-0.0044	2.5
20	-0.0043	-0.0040	2.5
30	-0.0041	-0.0041	2.5
40	-0.0016	-0.0021	2.5
50	-0.0002	-0.0003	2.5

LTE BAND 66

FREQUENCY ERROR VS. VOLTAGE

VOLTAGE (Volts)	1.4MHz		LIMIT (ppm)
	FREQUENCY ERROR (ppm)		
	Low Channel	High Channel	
V_{nor}	0.0020	0.0025	2.5
V_{min}	-0.0031	-0.0030	2.5
V_{max}	0.0021	0.0020	2.5

NOTE: The applicant defined the normal working voltage of the battery is from V_{min} to Vdc.

FREQUENCY ERROR vs. TEMPERATURE.

TEMP. (℃)	1.4MHz		LIMIT (ppm)
	FREQUENCY ERROR (ppm)		
	Low Channel	High Channel	
-30	-0.0115	-0.0119	2.5
-20	-0.0107	-0.0109	2.5
-10	-0.0083	-0.0081	2.5
0	-0.0077	-0.0075	2.5
10	-0.0051	-0.0045	2.5
20	-0.0044	-0.0041	2.5
30	-0.0043	-0.0040	2.5
40	-0.0015	-0.0018	2.5
50	-0.0003	-0.0004	2.5

FREQUENCY ERROR VS. VOLTAGE

VOLTAGE (Volts)	3MHz		LIMIT (ppm)
	FREQUENCY ERROR (ppm)		
	Low Channel	High Channel	
V_{nor}	0.0021	0.0021	2.5
V_{min}	-0.0022	-0.0025	2.5
V_{max}	0.0019	0.0018	2.5

NOTE: The applicant defined the normal working voltage of the battery is from V_{min} to Vdc.

FREQUENCY ERROR vs. TEMPERATURE.

TEMP. (℃)	3MHz		LIMIT (ppm)
	FREQUENCY ERROR (ppm)		
	Low Channel	High Channel	
-30	-0.0114	-0.0112	2.5
-20	-0.0109	-0.0100	2.5
-10	-0.0085	-0.0083	2.5
0	-0.0074	-0.0074	2.5
10	-0.0046	-0.0054	2.5
20	-0.0038	-0.0039	2.5
30	-0.0035	-0.0036	2.5
40	-0.0020	-0.0022	2.5
50	-0.0003	-0.0002	2.5

FREQUENCY ERROR VS. VOLTAGE

VOLTAGE (Volts)	5MHz		LIMIT (ppm)
	FREQUENCY ERROR (ppm)		
	Low Channel	High Channel	
V_{nor}	0.0021	0.0025	2.5
V_{min}	-0.0023	-0.0030	2.5
V_{max}	0.0021	0.0021	2.5

NOTE: The applicant defined the normal working voltage of the battery is from V_{min} to Vdc.

FREQUENCY ERROR vs. TEMPERATURE.

TEMP. (℃)	5MHz		LIMIT (ppm)
	FREQUENCY ERROR (ppm)		
	Low Channel	High Channel	
-30	-0.0118	-0.0118	2.5
-20	-0.0103	-0.0108	2.5
-10	-0.0085	-0.0083	2.5
0	-0.0078	-0.0072	2.5
10	-0.0056	-0.0055	2.5
20	-0.0043	-0.0042	2.5
30	-0.0032	-0.0039	2.5
40	-0.0015	-0.0018	2.5
50	-0.0005	-0.0001	2.5

FREQUENCY ERROR VS. VOLTAGE

VOLTAGE (Volts)	10MHz		LIMIT (ppm)
	FREQUENCY ERROR (ppm)		
	Low Channel	High Channel	
V_{nor}	0.0024	0.0025	2.5
V_{min}	-0.0031	-0.0030	2.5
V_{max}	0.0025	0.0023	2.5

NOTE: The applicant defined the normal working voltage of the battery is from V_{min} to Vdc.

FREQUENCY ERROR vs. TEMPERATURE.

TEMP. (℃)	10MHz		LIMIT (ppm)
	FREQUENCY ERROR (ppm)		
	Low Channel	High Channel	
-30	-0.0118	-0.0114	2.5
-20	-0.0101	-0.0109	2.5
-10	-0.0086	-0.0083	2.5
0	-0.0074	-0.0074	2.5
10	-0.0048	-0.0045	2.5
20	-0.0043	-0.0039	2.5
30	-0.0031	-0.0025	2.5
40	-0.0017	-0.0023	2.5
50	-0.0004	-0.0004	2.5

FREQUENCY ERROR VS. VOLTAGE

VOLTAGE (Volts)	15MHz		LIMIT (ppm)
	FREQUENCY ERROR (ppm)		
	Low Channel	High Channel	
V_{nor}	0.0026	0.0024	2.5
V_{min}	-0.0030	-0.0030	2.5
V_{max}	0.0025	0.0025	2.5

NOTE: The applicant defined the normal working voltage of the battery is from V_{min} to Vdc.

FREQUENCY ERROR vs. TEMPERATURE.

TEMP. (℃)	15MHz		LIMIT (ppm)
	FREQUENCY ERROR (ppm)		
	Low Channel	High Channel	
-30	-0.0117	-0.0112	2.5
-20	-0.0102	-0.0103	2.5
-10	-0.0086	-0.0083	2.5
0	-0.0077	-0.0073	2.5
10	-0.0053	-0.0050	2.5
20	-0.0043	-0.0043	2.5
30	-0.0035	-0.0029	2.5
40	-0.0019	-0.0018	2.5
50	-0.0004	-0.0003	2.5

FREQUENCY ERROR VS. VOLTAGE

VOLTAGE (Volts)	20MHz		LIMIT (ppm)
	FREQUENCY ERROR (ppm)		
	Low Channel	High Channel	
V_{nor}	0.0024	0.0024	2.5
V_{min}	-0.0031	-0.0030	2.5
V_{max}	0.0025	0.0026	2.5

NOTE: The applicant defined the normal working voltage of the battery is from V_{min} to Vdc.

FREQUENCY ERROR vs. TEMPERATURE.

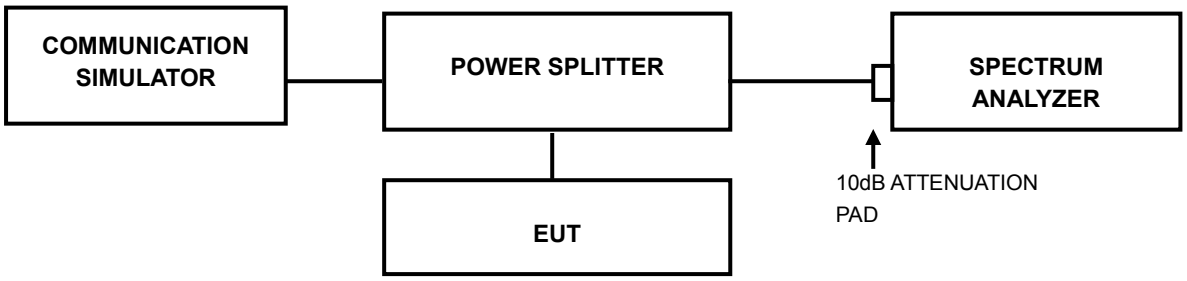
TEMP. (℃)	20MHz		LIMIT (ppm)
	FREQUENCY ERROR (ppm)		
	Low Channel	High Channel	
-30	-0.0117	-0.0120	2.5
-20	-0.0107	-0.0096	2.5
-10	-0.0084	-0.0082	2.5
0	-0.0074	-0.0076	2.5
10	-0.0051	-0.0049	2.5
20	-0.0038	-0.0038	2.5
30	-0.0037	-0.0031	2.5
40	-0.0022	-0.0019	2.5
50	-0.0004	-0.0002	2.5

3.3 OCCUPIED BANDWIDTH MEASUREMENT

3.3.1 LIMITS OF OCCUPIED BANDWIDTH MEASUREMENT

The width of a frequency band such that, below the lower and above the upper frequency limits, the mean powers emitted are each equal to a specified percentage 0.5 %of the total mean power of a given emission.

3.3.2 TEST SETUP



3.3.3 TEST PROCEDURES

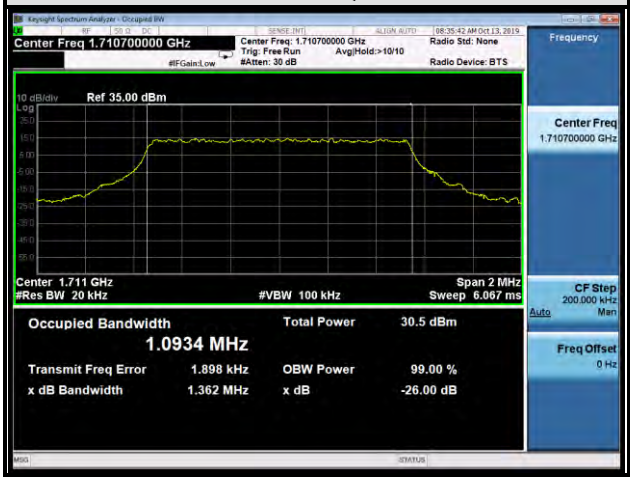
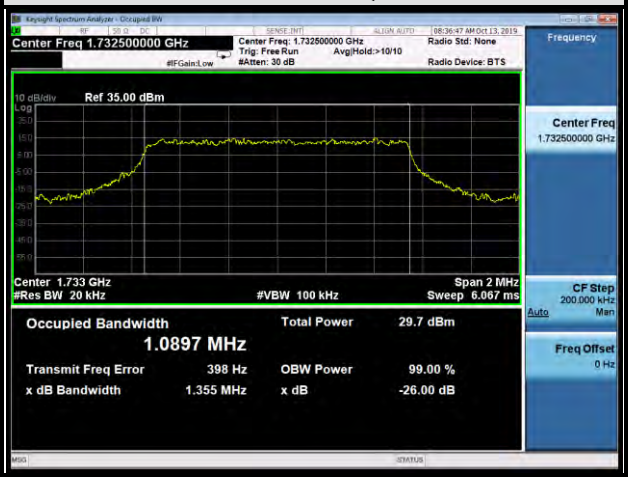
a. The conducted occupied bandwidth used the power splitter via EUT RF power connector between simulation base station and spectrum analyzer.

b. Use OBW measurement function of Spectrum analyzer to measure 99 % occupied bandwidth.

3.3.4 TEST RESULTS

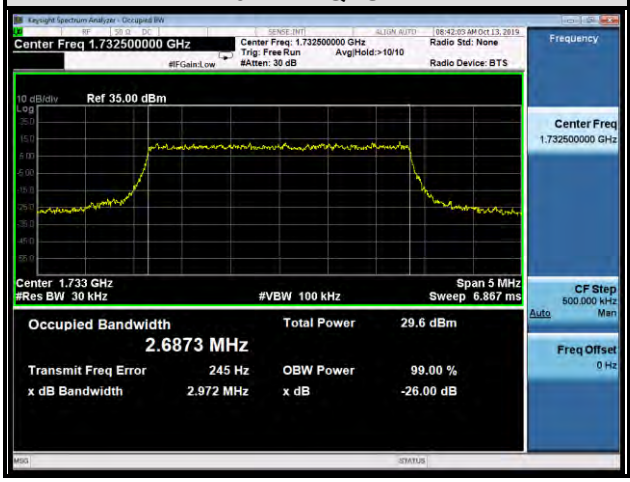
LTE BAND 4

CHANNEL BANDWIDTH: 1.4MHz			
CHANNEL	Frequency (MHz)	99% OCCUPIED Bandwidth (MHz)	
		QPSK	16QAM
19957	1710.7	1.09	1.08
20175	1732.5	1.09	1.09
20393	1754.3	1.09	1.09
CHANNEL	Frequency (MHz)	26dB OCCUPIED Bandwidth (MHz)	
		QPSK	16QAM
19957	1710.7	1.36	1.32
20175	1732.5	1.32	1.36
20393	1754.3	1.36	1.37

SPECTRUM PLOT OF WORST VALUE	
1.4MHz / QPSK	1.4MHz / 16QAM
	

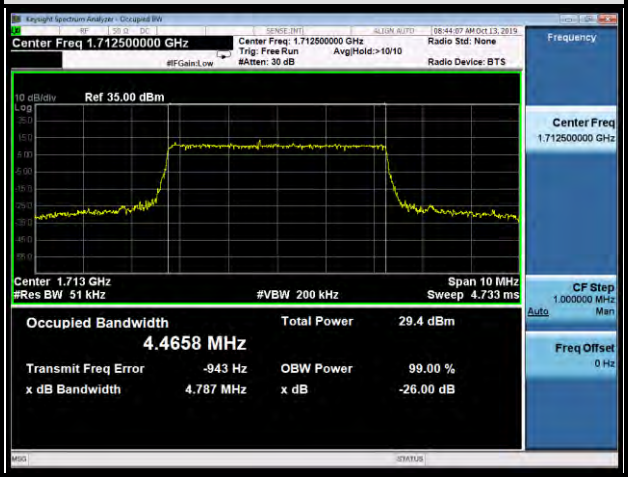
LTE BAND 4

CHANNEL BANDWIDTH: 3MHz			
CHANNEL	Frequency (MHz)	99% OCCUPIED Bandwidth (MHz)	
		QPSK	16QAM
19965	1711.5	2.68	2.68
20175	1732.5	2.69	2.68
20385	1753.5	2.69	2.68
CHANNEL	Frequency (MHz)	26dB OCCUPIED Bandwidth (MHz)	
		QPSK	16QAM
19965	1711.5	2.98	3.01
20175	1732.5	2.97	2.96
20385	1753.5	2.96	3.01

SPECTRUM PLOT OF WORST VALUE	
3MHz / QPSK	3MHz / 16QAM
	

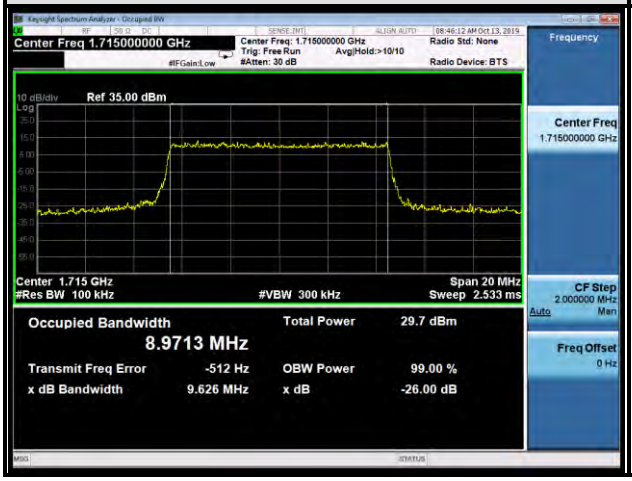
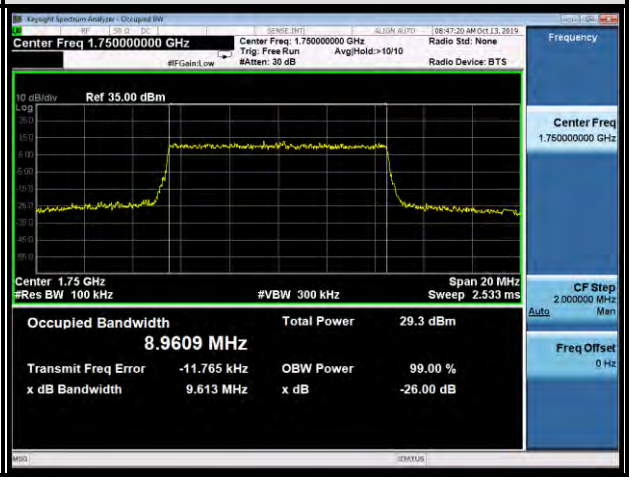
LTE BAND 4

CHANNEL BANDWIDTH: 5MHz			
CHANNEL	Frequency (MHz)	99% OCCUPIED Bandwidth (MHz)	
		QPSK	16QAM
19975	1712.5	4.46	4.47
20175	1732.5	4.47	4.47
20375	1752.5	4.46	4.47
CHANNEL	Frequency (MHz)	26dB OCCUPIED Bandwidth (MHz)	
		QPSK	16QAM
19975	1712.5	4.85	4.79
20175	1732.5	4.83	4.87
20375	1752.5	4.85	4.86

SPECTRUM PLOT OF WORST VALUE	
5MHz / QPSK	5MHz / 16QAM
	

LTE BAND 4

CHANNEL BANDWIDTH: 10MHz			
CHANNEL	Frequency (MHz)	99% OCCUPIED Bandwidth (MHz)	
		QPSK	16QAM
20000	1715	8.97	8.95
20175	1732.5	8.95	8.95
20350	1750	8.93	8.96
CHANNEL	Frequency (MHz)	26dB OCCUPIED Bandwidth (MHz)	
		QPSK	16QAM
20000	1715	9.63	9.53
20175	1732.5	9.60	9.62
20350	1750	9.55	9.61

SPECTRUM PLOT OF WORST VALUE	
10MHz / QPSK	10MHz / 16QAM
	

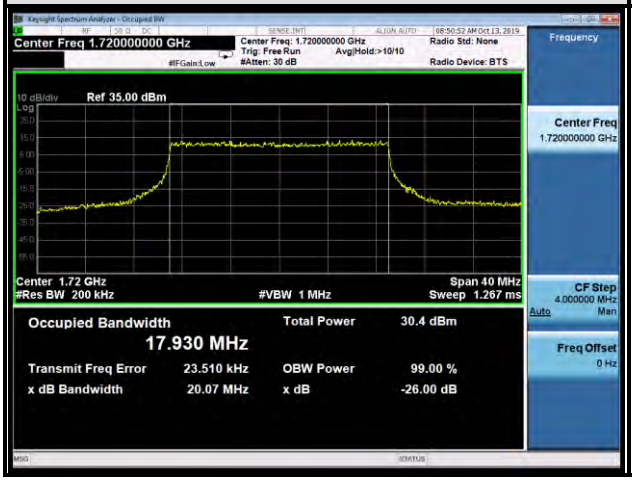
LTE BAND 4

CHANNEL BANDWIDTH: 15MHz			
CHANNEL	Frequency (MHz)	99% OCCUPIED Bandwidth (MHz)	
		QPSK	16QAM
20025	1717.5	13.46	13.44
20175	1732.5	13.44	13.46
20325	1747.5	13.44	13.44
CHANNEL	Frequency (MHz)	26dB OCCUPIED Bandwidth (MHz)	
		QPSK	16QAM
20025	1717.5	15.40	15.48
20175	1732.5	15.40	15.79
20325	1747.5	15.84	15.20

SPECTRUM PLOT OF WORST VALUE	
15MHz / QPSK	15MHz / 16QAM
	

LTE BAND 4

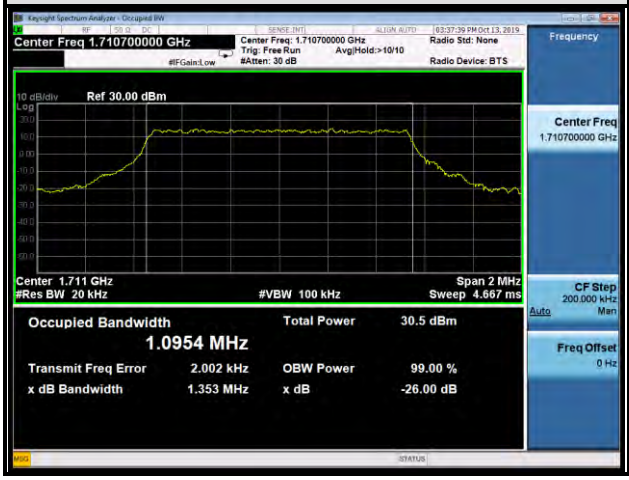
CHANNEL BANDWIDTH: 20MHz			
CHANNEL	Frequency (MHz)	99% OCCUPIED Bandwidth (MHz)	
		QPSK	16QAM
20050	1720	17.93	17.95
20175	1732.5	17.88	17.95
20300	1745	17.89	17.89
CHANNEL	Frequency (MHz)	26dB OCCUPIED Bandwidth (MHz)	
		QPSK	16QAM
20050	1720	20.07	20.67
20175	1732.5	20.20	20.59
20300	1745	20.93	20.35

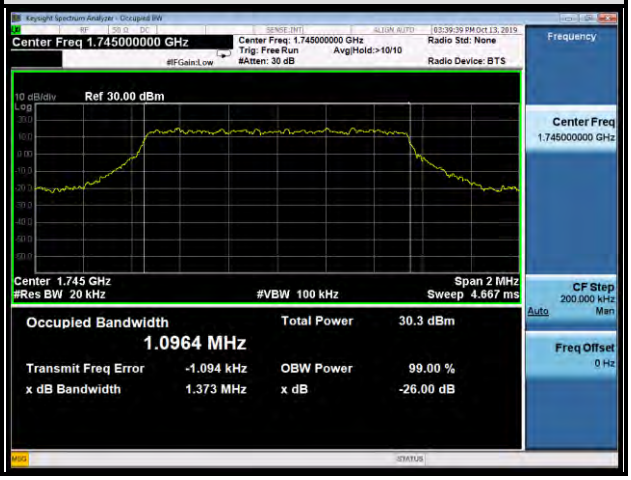
SPECTRUM PLOT OF WORST VALUE	
20MHz / QPSK	20MHz / 16QAM
	

LTE BAND 66

CHANNEL BANDWIDTH: 1.4MHz			
CHANNEL	Frequency (MHz)	99% OCCUPIED Bandwidth (MHz)	
		QPSK	16QAM
131979	1710.7	1.10	1.09
132322	1745	1.09	1.10
132665	1779.3	1.09	1.09
CHANNEL	Frequency (MHz)	26dB OCCUPIED Bandwidth (MHz)	
		QPSK	16QAM
131979	1710.7	1.35	1.33
132322	1745	1.35	1.37
132665	1779.3	1.35	1.33

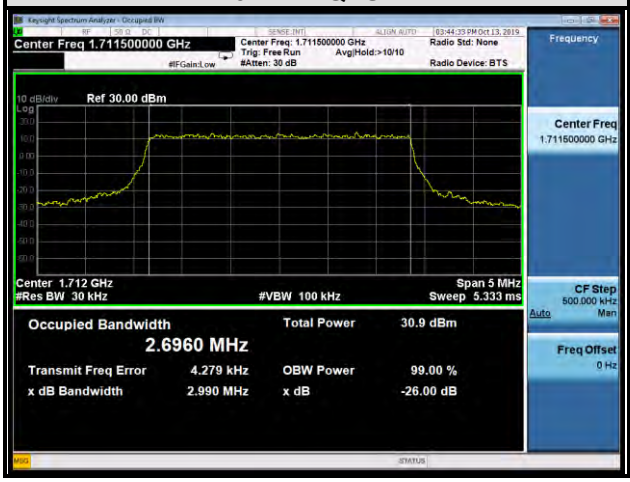
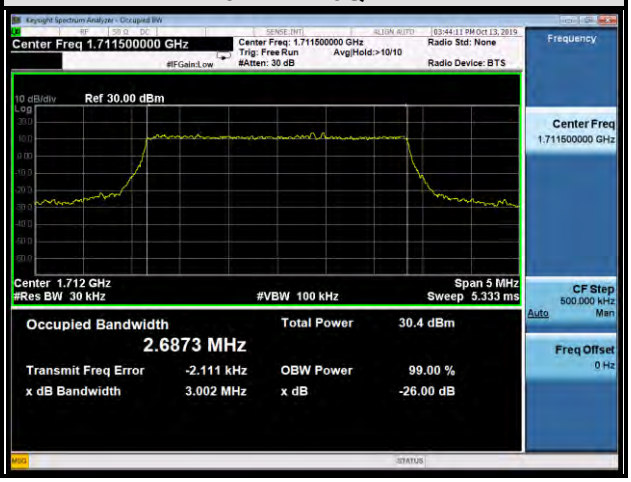
SPECTRUM PLOT OF WORST VALUE	
1.4MHz / QPSK	1.4MHz / 16QAM





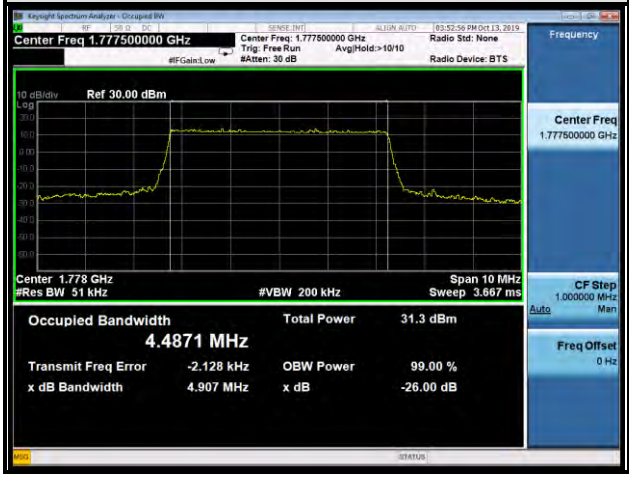
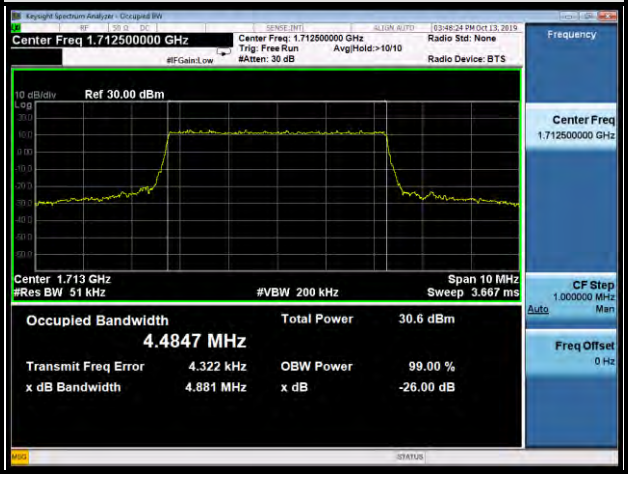
LTE BAND 66

CHANNEL BANDWIDTH: 3MHz			
CHANNEL	Frequency (MHz)	99% OCCUPIED Bandwidth (MHz)	
		QPSK	16QAM
131987	1711.5	2.70	2.69
132322	1745	2.69	2.69
132657	1778.5	2.69	2.69
CHANNEL	Frequency (MHz)	26dB OCCUPIED Bandwidth (MHz)	
		QPSK	16QAM
131987	1711.5	2.99	3.00
132322	1745	3.00	2.98
132657	1778.5	2.98	3.00

SPECTRUM PLOT OF WORST VALUE	
3MHz / QPSK	3MHz / 16QAM
	

LTE BAND 66

CHANNEL BANDWIDTH: 5MHz			
CHANNEL	Frequency (MHz)	99% OCCUPIED Bandwidth (MHz)	
		QPSK	16QAM
131997	1712.5	4.48	4.48
132322	1745	4.47	4.48
132647	1777.5	4.49	4.48
CHANNEL	Frequency (MHz)	26dB OCCUPIED Bandwidth (MHz)	
		QPSK	16QAM
131997	1712.5	4.86	4.88
132322	1745	4.82	4.93
132647	1777.5	4.91	4.83

SPECTRUM PLOT OF WORST VALUE	
5MHz / QPSK	5MHz / 16QAM
	

LTE BAND 66

CHANNEL BANDWIDTH: 10MHz			
CHANNEL	Frequency (MHz)	99% OCCUPIED Bandwidth (MHz)	
		QPSK	16QAM
132022	1715	8.97	8.96
132322	1745	8.96	8.96
132622	1775	8.97	8.96
CHANNEL	Frequency (MHz)	26dB OCCUPIED Bandwidth (MHz)	
		QPSK	16QAM
132022	1715	9.66	9.64
132322	1745	9.71	9.71
132622	1775	9.63	9.61

SPECTRUM PLOT OF WORST VALUE	
10MHz / QPSK	10MHz / 16QAM

LTE BAND 66

CHANNEL BANDWIDTH: 15MHz			
CHANNEL	Frequency (MHz)	99% OCCUPIED Bandwidth (MHz)	
		QPSK	16QAM
132047	1717.5	13.49	13.48
132322	1745	13.44	13.46
132597	1772.5	13.48	13.47
CHANNEL	Frequency (MHz)	26dB OCCUPIED Bandwidth (MHz)	
		QPSK	16QAM
132047	1717.5	15.79	15.61
132322	1745	15.40	15.91
132597	1772.5	15.58	15.37

SPECTRUM PLOT OF WORST VALUE	
15MHz / QPSK	15MHz / 16QAM
	

LTE BAND 66

CHANNEL BANDWIDTH: 20MHz			
CHANNEL	Frequency (MHz)	99% OCCUPIED Bandwidth (MHz)	
		QPSK	16QAM
132072	1720	17.95	18.01
132322	1745	17.96	17.95
132572	1770	17.92	17.93
CHANNEL	Frequency (MHz)	26dB OCCUPIED Bandwidth (MHz)	
		QPSK	16QAM
132072	1720	20.33	21.18
132322	1745	20.80	20.97
132572	1770	20.29	20.51

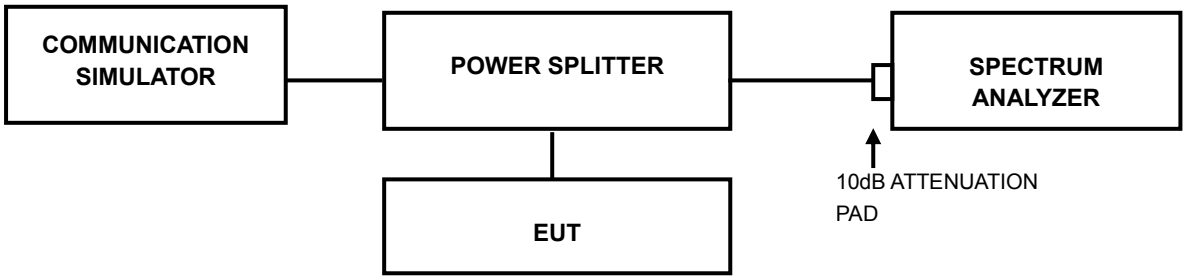
SPECTRUM PLOT OF WORST VALUE	
20MHz / QPSK	20MHz / 16QAM
	

3.4 PEAK TO AVERAGE RATIO

3.4.1 LIMITS OF PEAK TO AVERAGE RATIO MEASUREMENT

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

3.4.2 TEST SETUP



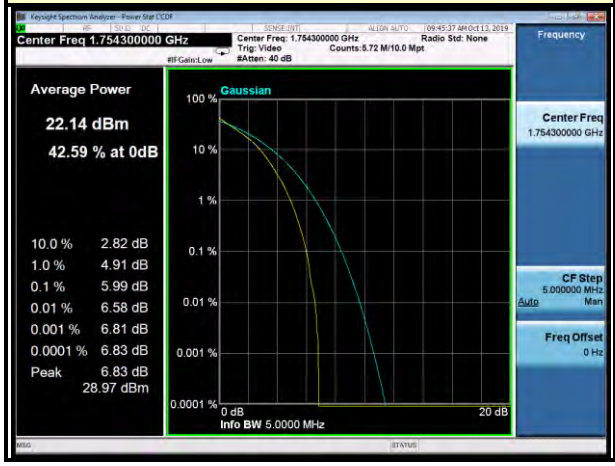
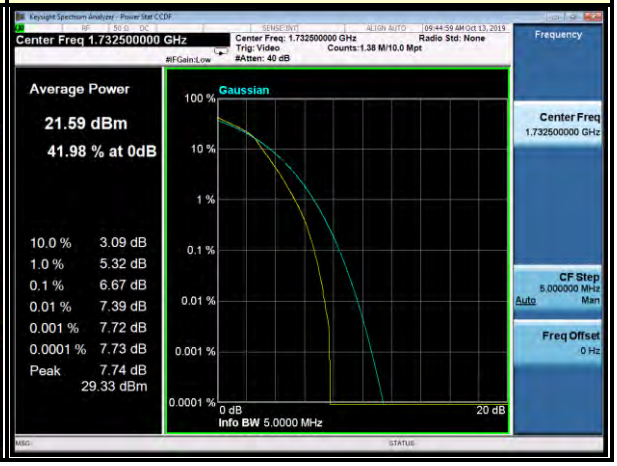
3.4.3 TEST PROCEDURES

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%.

3.4.4 TEST RESULTS

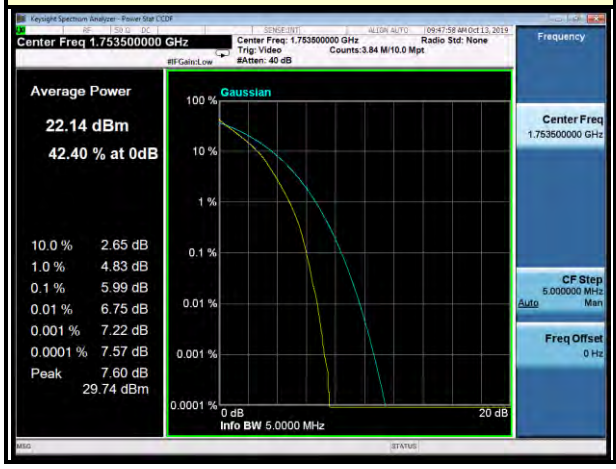
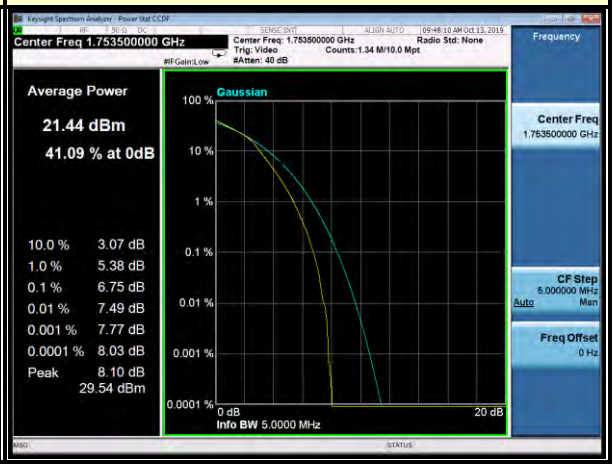
LTE BAND 4

CHANNEL BANDWIDTH: 1.4MHz			
CHANNEL	Frequency (MHz)	PEAK TO AVERAGE RATIO (dB)	
		QPSK	16QAM
19957	1710.7	5.67	6.21
20175	1732.5	5.86	6.67
20393	1754.3	5.99	6.56

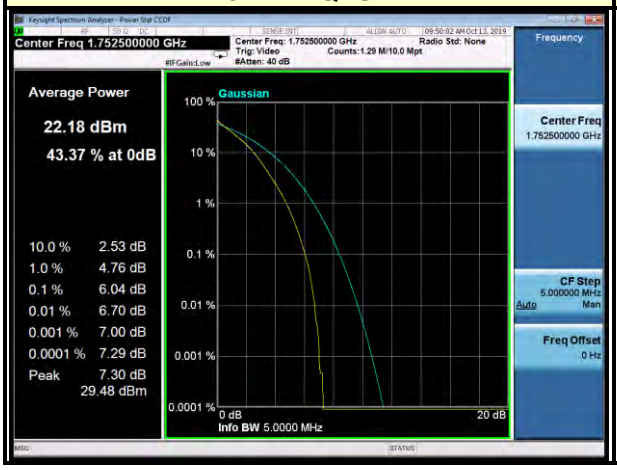
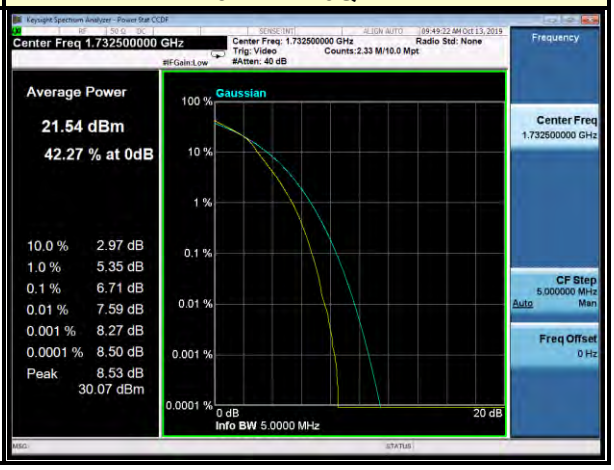
SPECTRUM PLOT OF WORST VALUE	
1.4MHz / QPSK	1.4MHz / 16QAM
	

LTE BAND 4

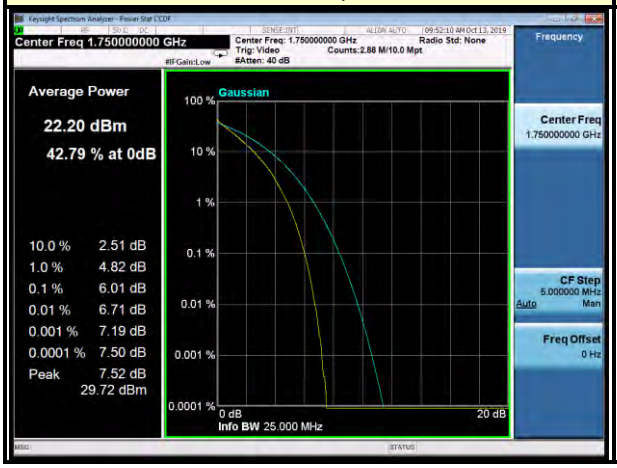
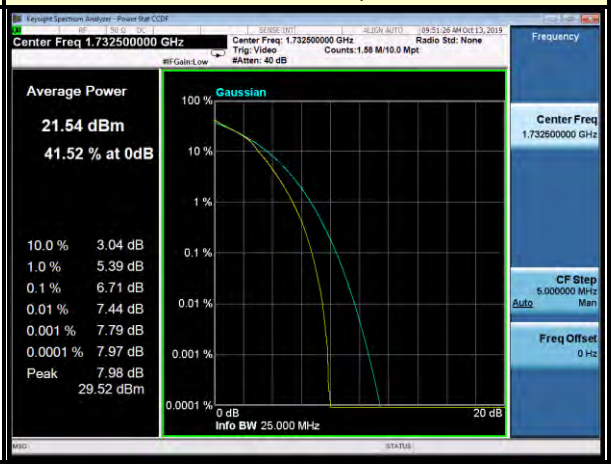
CHANNEL BANDWIDTH: 3MHz			
CHANNEL	Frequency (MHz)	PEAK TO AVERAGE RATIO (dB)	
		QPSK	16QAM
19965	1711.5	5.80	6.52
20175	1732.5	5.94	6.68
20385	1753.5	5.99	6.75

SPECTRUM PLOT OF WORST VALUE	
3MHz / QPSK	3MHz / 16QAM
	

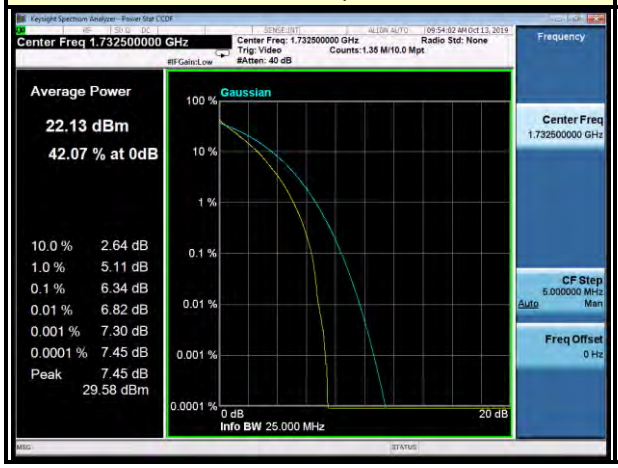
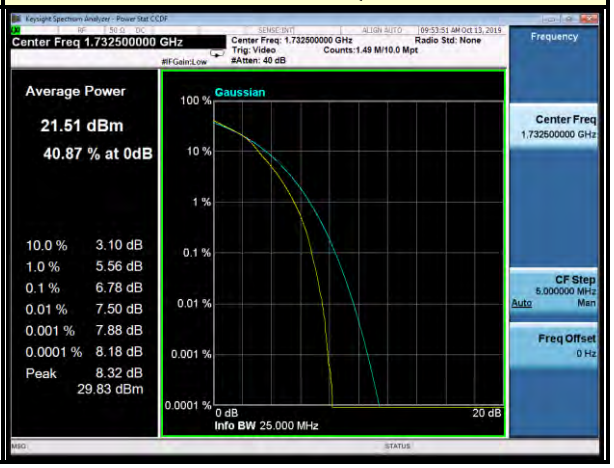
CHANNEL BANDWIDTH: 5MHz			
CHANNEL	Frequency (MHz)	PEAK TO AVERAGE RATIO (dB)	
		QPSK	16QAM
19975	1712.5	5.89	6.51
20175	1732.5	6.00	6.71
20375	1752.5	6.04	6.69

SPECTRUM PLOT OF WORST VALUE	
5MHz / QPSK	5MHz / 16QAM
	

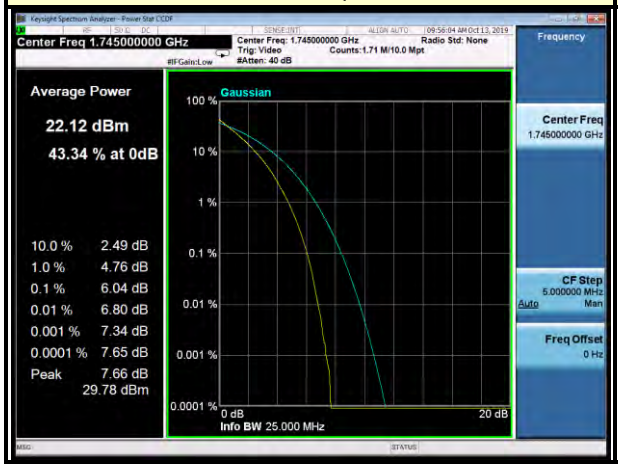
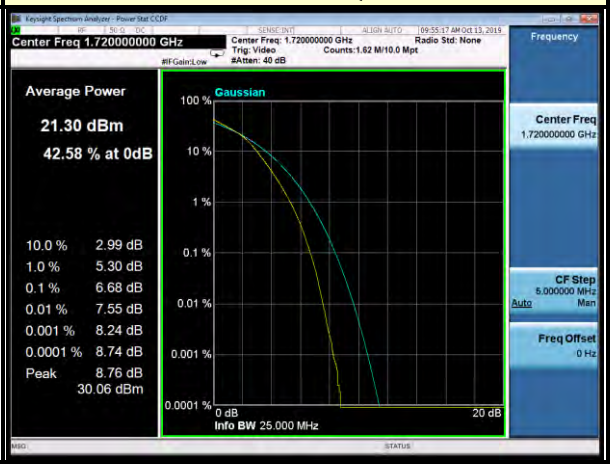
CHANNEL BANDWIDTH: 10MHz			
CHANNEL	Frequency (MHz)	PEAK TO AVERAGE RATIO (dB)	
		QPSK	16QAM
20000	1715	5.94	6.59
20175	1732.5	6.00	6.71
20350	1750	6.01	6.69

SPECTRUM PLOT OF WORST VALUE	
10MHz / QPSK	10MHz / 16QAM
	

CHANNEL BANDWIDTH: 15MHz			
CHANNEL	Frequency (MHz)	PEAK TO AVERAGE RATIO (dB)	
		QPSK	16QAM
20025	1717.5	6.32	6.72
20175	1732.5	6.34	6.78
20325	1747.5	6.33	6.74

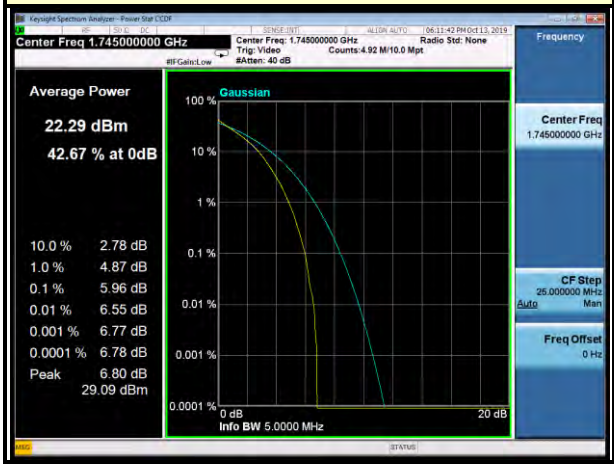
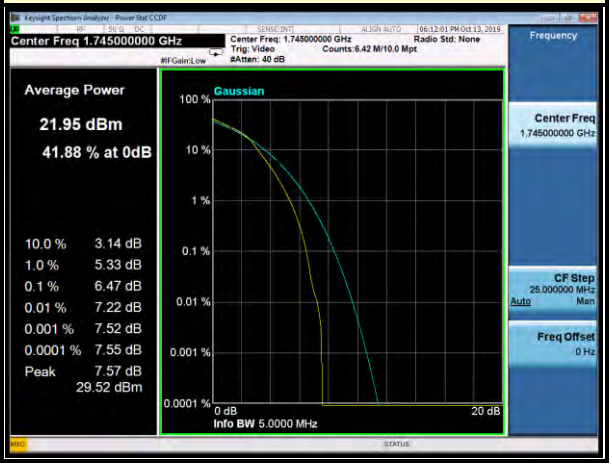
SPECTRUM PLOT OF WORST VALUE	
15MHz / QPSK	15MHz / 16QAM
	

CHANNEL BANDWIDTH: 20MHz			
CHANNEL	Frequency (MHz)	PEAK TO AVERAGE RATIO (dB)	
		QPSK	16QAM
20050	1720	5.97	6.68
20175	1732.5	5.98	6.67
20300	1745	6.04	6.67

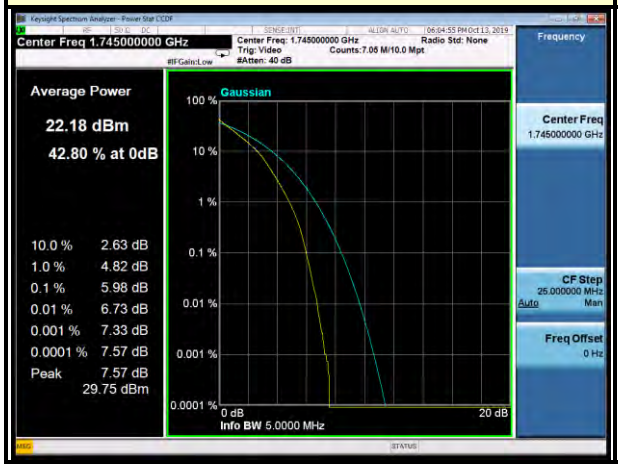
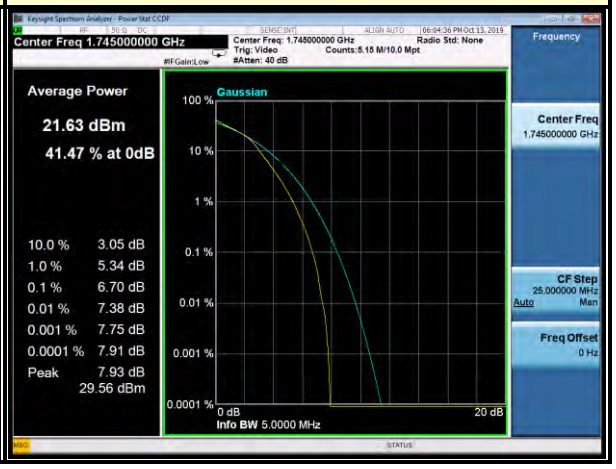
SPECTRUM PLOT OF WORST VALUE	
20MHz / QPSK	20MHz / 16QAM
	

LTE BAND 66

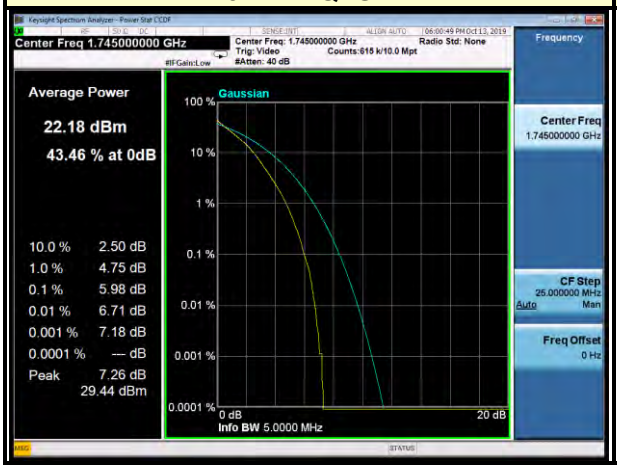
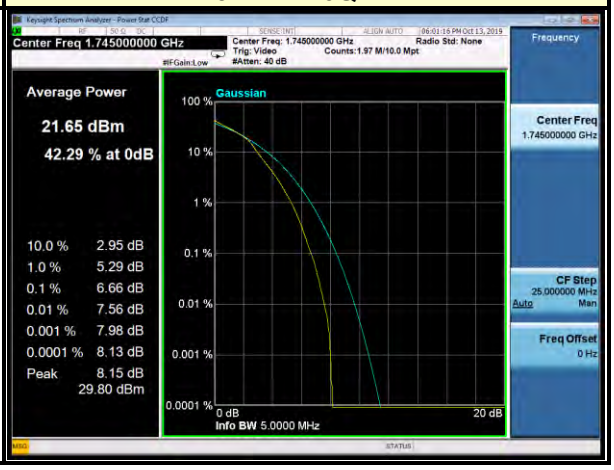
CHANNEL BANDWIDTH: 1.4MHz			
CHANNEL	Frequency (MHz)	PEAK TO AVERAGE RATIO (dB)	
		QPSK	16QAM
131979	1710.7	5.72	6.38
132322	1745	5.96	6.47
132665	1779.3	5.08	5.67

SPECTRUM PLOT OF WORST VALUE	
1.4MHz / QPSK	1.4MHz / 16QAM
	

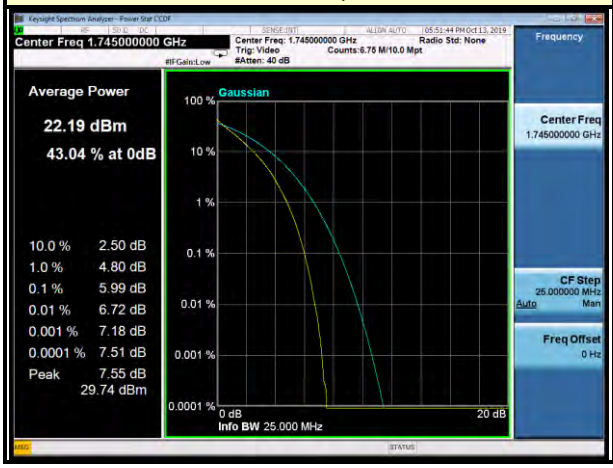
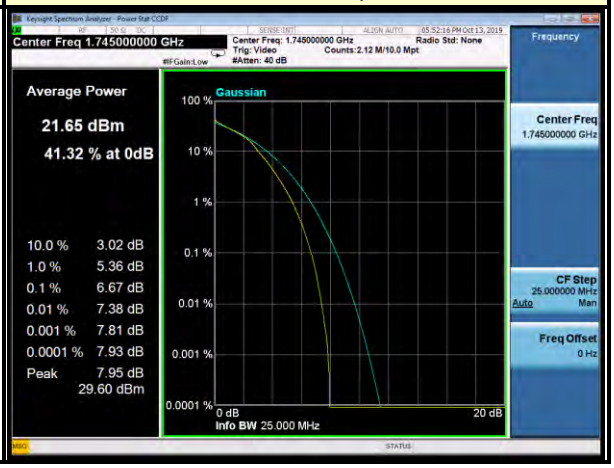
CHANNEL BANDWIDTH: 3MHz			
CHANNEL	Frequency (MHz)	PEAK TO AVERAGE RATIO (dB)	
		QPSK	16QAM
131987	1711.5	5.75	6.47
132322	1745	5.98	6.70
132657	1778.5	5.28	5.94

SPECTRUM PLOT OF WORST VALUE	
3MHz / QPSK	3MHz / 16QAM
	

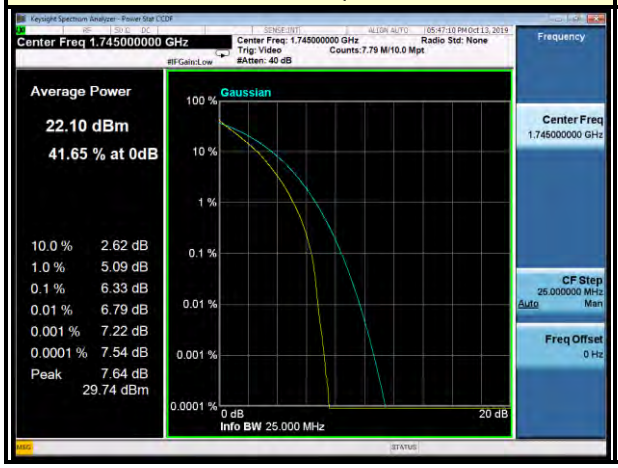
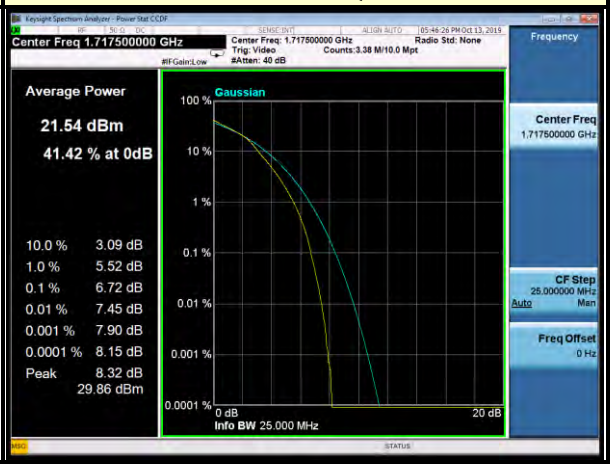
CHANNEL BANDWIDTH: 5MHz			
CHANNEL	Frequency (MHz)	PEAK TO AVERAGE RATIO (dB)	
		QPSK	16QAM
131997	1712.5	5.92	6.53
132322	1745	5.98	6.66
132647	1777.5	5.49	6.03

SPECTRUM PLOT OF WORST VALUE	
5MHz / QPSK	5MHz / 16QAM
	

CHANNEL BANDWIDTH: 10MHz			
CHANNEL	Frequency (MHz)	PEAK TO AVERAGE RATIO (dB)	
		QPSK	16QAM
132022	1715	5.95	6.64
132322	1745	5.99	6.67
132622	1775	5.27	5.86

SPECTRUM PLOT OF WORST VALUE	
10MHz / QPSK	10MHz / 16QAM
	

CHANNEL BANDWIDTH: 15MHz			
CHANNEL	Frequency (MHz)	PEAK TO AVERAGE RATIO (dB)	
		QPSK	16QAM
132047	1717.5	6.30	6.72
132322	1745	6.33	6.72
132597	1772.5	5.75	6.15

SPECTRUM PLOT OF WORST VALUE	
15MHz / QPSK	15MHz / 16QAM
	

CHANNEL BANDWIDTH: 20MHz			
CHANNEL	Frequency (MHz)	PEAK TO AVERAGE RATIO (dB)	
		QPSK	16QAM
132072	1720	5.99	6.68
132322	1745	5.98	6.66
132572	1770	5.69	6.27

SPECTRUM PLOT OF WORST VALUE	
20MHz / QPSK	20MHz / 16QAM