TEST REPORT

FCC Part 27

Report Reference No.:	**UNIA20111736ER-10**
FCC ID :	**2AI2O-OL737**

Compiled by (position+printed name+signature) . :	File administrators Bob liao
Supervised by (position+printed name+signature) . :	Technique principal Kahn yang
Approved by (position+printed name+signature) . :	Manager Liuze
Date of issue ..... :	Jun. 25, 2021

Testing Laboratory Name ..... :	**Shenzhen United Testing Technology Co., Ltd.**
Address..... :	2F, Annex Bldg, Jiahuangyuan Tech Park, #365 Baotian 1 Rd, Tiegang Community, Xixiang Str, Bao'an District, Shenzhen, China
Applicant's name ..... :	**Shenzhen Omni Intelligent Technology Co., Ltd.**
Address..... :	11th Floor Block 31, Lianchuang Technical Zone, Bulan Road, Longgang District, Shenzhen, P.R. China
Test specification ..... :	
Standard..... :	**FCC Part 27**

Test item description ..... :	Smart parking lock
Trade Mark ..... :	OMNI
Manufacturer ..... :	**Shenzhen Omni Intelligent Technology Co., Ltd.**
Model/Type reference..... :	OL737
Listed Models ..... :	N/A
Ratings ..... :	DC 6V
Modulation ..... :	QPSK, 16QAM
Hardware version ..... :	V2.0
Software version ..... :	V2.0
Frequency.....	LTE Band 12
Result ..... :	**PASS**

TEST REPORT

Test Report No. :	UNIA20111736ER-10	Jun. 25, 2021 Date of issue

Equipment under Test	:	Smart parking lock
Model /Type	:	OL737
Listed Models	:	N/A
Applicant	:	**Shenzhen Omni Intelligent Technology Co., Ltd.**
Address	:	11th Floor Block 31, Lianchuang Technical Zone, Bulan Road, Longgang District, Shenzhen, P.R. China
Manufacturer	:	**Shenzhen Omni Intelligent Technology Co., Ltd.**
Address	:	11th Floor Block 31, Lianchuang Technical Zone, Bulan Road, Longgang District, Shenzhen, P.R. China

Test result	Pass

The test report merely corresponds to the test sample.
It is not permitted to copy extracts of these test result without the written permission of the test laboratory.

Revison History

Revision	Issue Date	description	Revised By
V1.0	Jun. 25, 2021	Initial Issue	Kahn yang

Contents

1 SUMMARY

1.1 TEST STANDARDS

The tests were performed according to following standards:
FCC Part 27 : MISCELLANEOUS WIRELESS COMMUNICATIONS SERVICES
TIA/EIA 603 D June 2010:Land Mobile FM or PM Communications Equipment Measurement and Performance Standards.
47 CFR FCC Part 15 Subpart B: - Unintentional Radiators
FCC Part 2: FREQUENCY ALLOCA-TIONS AND RADIO TREATY MAT-TERS; GENERAL RULES AND REG-ULATIONS
KDB971168 D01 v03r01: MEASUREMENT GUIDANCE FOR CERTIFICATION OF LICENSED DIGITAL TRANSMITTERS

1.2 Test Description

Test Item	FCC /IC Rule No.	Result
RF Output Power	Part 2.1046 Part 27.50(c)(10)	Pass
Peak-to-Average Ratio	Part 2.1046	Pass
99% & -26 dB Occupied Bandwidth	Part 2.1049	Pass
Spurious Emissions at Antenna Terminal	Part 2.1051 Part 27.53(g)	Pass
Field Strength of Spurious Radiation	Part 2.1053 Part 27.53(g)	Pass
Out of band emission, Band Edge	Part 2.1051 Part 27.53(g)	Pass
Frequency stability	Part 2.1055 Part 27.54	Pass

1.3 Test Facility

1.3.1 Address of the test laboratory

Shenzhen United Testing Technology Co., Ltd.
2F, Annex Bldg, Jiahuangyuan Tech Park, #365 Baotian 1 Rd, Tiegang Community, Xixiang Str, Bao'an District, Shenzhen, China

1.4 Statement of the measurement uncertainty

The data and results referenced in this document are true and accurate. The reader is cautioned that there may be errors within the calibration limits of the equipment and facilities. The measurement uncertainty was calculated for all measurements listed in this test report acc. to CISPR 16 - 4 „Specification for radio disturbance and immunity measuring apparatus and methods – Part 4: Uncertainty in EMC Measurements“ and is documented in the Shenzhen United Testing Technology Co., Ltd.. quality system acc. to DIN EN ISO/IEC 17025. Furthermore, component and process variability of devices similar to that tested may result in additional deviation. The manufacturer has the sole responsibility of continued compliance of the device.

Hereafter the best measurement capability for Shenzhen United Testing Technology Co., Ltd.

Test	Range	Measurement Uncertainty	Notes
Radiated Emission	30~1000MHz	4.10dB	(1)
Radiated Emission	Above 1GHz	4.32dB	(1)
Conducted Disturbance	0.15~30MHz	3.20dB	(1)

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

2 GENERAL INFORMATION

2.1 Environmental conditions

During the measurement the environmental conditions were within the listed ranges:

Normal Temperature:	25℃
Relative Humidity:	55 %
Air Pressure:	101 kPa

2.2 Description of Test Modes

The EUT has been tested under typical operating condition. The CMW500 used to control the EUT staying in continuous transmitting and receiving mode for testing. Regards to the frequency band operation: the lowest, middle and highest frequency of channel were selected to perform the test, then shown on this report.

Note:

1. For the ERP/EIRP and radiated emission test, every axis (X, Y, Z) was verified, and show the worst resulton this report.
2. Test method and refer to 3GPP TS136521.

2.3 Test frequency list

TX Channel Bandwidth	Frequency (MHz)	Channel
1.4 MHz	699.7	19957
	707.5	20175
	715.3	20393
3 MHz	700.5	19965
	707.5	20175
	714.5	20385
5 MHz	701.5	19975
	707.5	20175
	713.5	20375
10 MHz	704.0	20000
	707.5	20175
	711.0	20350

2.4 Equipments Used during the Test

Item	Equipment	Manufacturer	Model No.	Serial No.	Calibrated until
Conduction Emissions Measurement					
1	Conducted Emission Test Software	EZ-EMC	Ver.CCS-3A1-CE	N/A	N/A
2	AMN	Schwarzbeck	NNLK8121	8121370	2021.10.12
3	AAN	TESEQ	T8-Cat6	38888	2021.10.12
4	Pulse Limiter	CYBRTEK	EM5010	E115010056	2022.05.17
5	EMI Test Receiver	Rohde&Schwarz	ESCI	101210	2021.10.12
Radiated Emissions Measurement					
1	Radiated Emission Test Software	EZ-EMC	Ver.CCS-03A1	N/A	N/A
2	Horn Antenna	Sunol	DRH-118	A101415	2021.10.18
3	Broadband Hybrid Antenna	Sunol	JB1	A090215	2022.03.01
4	PREAMP	HP	8449B	3008A00160	2021.10.18
5	PREAMP	HP	8447D	2944A07999	2022.05.17
6	EMI TEST RECEIVER	Rohde&Schwarz	ESR3	101891	2021.10.12
7	VECTOR Signal Generator	Rohde&Schwarz	SMU200A	101521	2021.10.12
8	Signal Generator	Agilent	E4421B	MY4335105	2021.11.11
9	MXA Signal Analyzer	Agilent	N9020A	MY50510140	2021.10.12
10	MXA Signal Analyzer	Keysight	N9020A	MY51110104	2021.10.12
11	RF Power sensor	DARE	RPR3006W	15I00041SNO88	2022.05.17
12	RF Power sensor	DARE	RPR3006W	15I00041SNO89	2022.05.17
13	RF power divider	Anritsu	K241B	992289	2021.10.12
14	Wideband radio communication tester	Rohde&Schwarz	CMW500	154987	2021.10.12
15	Active Loop Antenna	Com-Power	AL-130R	10160009	2022.05.17
16	Broadband Hybrid Antennas	Schwarzbeck	VULB9163	VULB9163#958	2022.05.17
17	Horn Antenna	Schwarzbeck	BBHA9120D	9120D-1680	2022.05.17
18	Horn Antenna	A-INFOMW	LB-180400-KF	J211060660	2021.11.04
19	Microwave Broadband Preamplifier	Schwarzbeck	BBV 9721	100472	2022.05.17
20	Signal Generator	Agilent	N5183A	MY47420153	2022.05.17
21	Spctrum Analyzer	Rohde&Schwarz	FSP 40	100501	2022.05.17
22	Power Meter	KEYSIGHT	N1911A	MY50520168	2022.05.17
23	Frequency Meter	VICTOR	VC2000	997406086	2022.05.17
24	DC Power Source	HYELEC	HY5020E	055161818	2022.05.17

2.5 Modifications

No modifications were implemented to meet testing criteria.

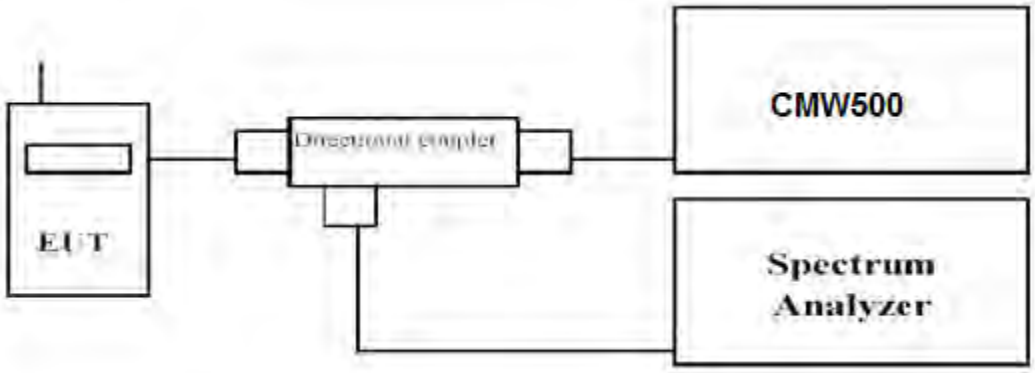
2.6 Output Power

LIMIT

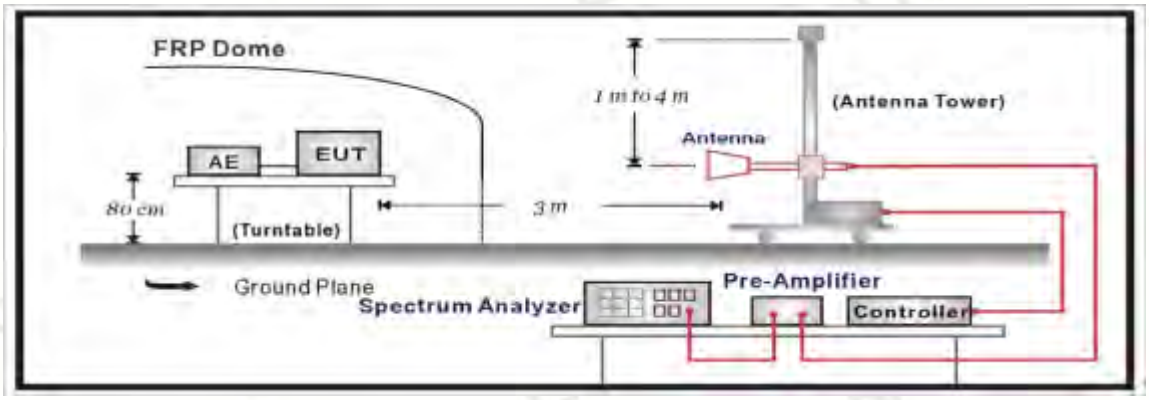
Portable stations (hand-held devices) in the 600 MHz uplink band and the 698-746 MHz band, and fixed and mobile stations in the 600 MHz uplink band are FCC limited to 3 watts ERP."IC limited to 5 watts ERP."

TEST CONFIGURATION

Conducted Power Measurement



Radiated Power Measurement:



TEST PROCEDURE

The EUT was setup according to EIA/TIA 603D

Conducted Power Measurement:

a) Place the EUT on a bench and set it in transmitting mode.
b) Connect a low loss RF cable from the antenna port to a spectrum analyzer and CMW500 by a Directional Couple.
c) EUT Communicate with CMW500, then select a channel for testing.
d) Add a correction factor to the display of spectrum, and then test.

Radiated Power Measurement:

a. The EUT shall be placed at the specified height on a support, and in the position closest to normal use as declared by provider.
b. The test antenna shall be oriented initially for vertical polarization and shall be chosen to correspond to thefrequency of the transmitter
c. The output of the test antenna shall be connected to the measuring receiver.
d. The transmitter shall be switched on and the measuring receiver shall be tuned to the frequency of the transmitter under test.
e. The test antenna shall be raised and lowered through the specified range of height until a maximum signal level is detected by the measuring receiver.
f. The transmitter shall then be rotated through 360° in the horizontal plane, until the maximum signal level is detected by the measuring receiver.

g. The test antenna shall be raised and lowered again through the specified range of height until a maximum signal level is detected by the measuring receiver.
h. The maximum signal level detected by the measuring receiver shall be noted.
i. The transmitter shall be replaced by a substitution antenna.
j. The substitution antenna shall be orientated for vertical polarization and the length of the substitution antenna shall be adjusted to correspond to the frequency of the transmitter.
k. The substitution antenna shall be connected to a calibrated signal generator.
l. If necessary, the input attenuator setting of the measuring receiver shall be adjusted in order to increase the sensitivity of the measuring receiver.
m. The test antenna shall be raised and lowered through the specified range of height to ensure that the maximum signal is received.
n. The input signal to the substitution antenna shall be adjusted to the level that produces a level detected by the measuring receiver, that is equal to the level noted while the transmitter radiated power was measured, corrected for the change of input attenuator setting of the measuring receiver.
o. The measurement shall be repeated with the test antenna and the substitution antenna orientated for horizontal polarization.
p. The measure of the effective radiated power is the larger of the two levels recorded at the input to the substitution antenna, corrected for gain of the substitution antenna if necessary.
q. Test site anechoic chamber refer to ANSI C63.4.

TEST RESULTS

Conducted Measurement:

LTE FDD Band 12				
TX Channel Bandwidth	RB Size/Offset	Frequency (MHz)	Average Power [dBm]	
			QPSK	16QAM
1.4 MHz	1 RB low	699.7	22.78	23.38
		707.5	23.78	22.58
		715.3	23.46	22.58
	1 RB high	699.7	23.43	22.66
		707.5	23.51	22.49
		715.3	22.59	23.48
	50% RB mid	699.7	23.78	23.70
		707.5	23.73	23.81
		715.3	23.64	22.58
	100% RB	699.7	23.52	22.58
		707.5	23.40	22.72
		715.3	23.48	22.59
3 MHz	1 RB low	700.5	22.54	22.60
		707.5	23.58	22.58
		714.5	23.68	22.66
	1 RB high	700.5	23.86	21.70
		707.5	23.63	21.68
		714.5	23.61	21.62
	50% RB mid	700.5	23.63	21.52
		707.5	22.64	22.67
		714.5	21.14	22.61
	100% RB	700.5	22.74	22.31
		707.5	22.61	21.57
		714.5	22.36	21.39
5 MHz	1 RB low	701.5	21.88	21.57
		707.5	22.44	21.48
		713.5	21.66	22.52
	1 RB high	701.5	22.72	22.51
		707.5	22.78	22.73
		713.5	22.76	21.48
	50% RB mid	701.5	22.32	21.48
		707.5	22.31	21.73
		713.5	21.98	21.55

	100% RB	701.5	21.33	23.48
		707.5	22.43	23.59
		713.5	22.90	23.46
10 MHz	1 RB low	704.0	22.72	22.49
		707.5	22.46	22.48
		711.0	22.44	22.59
	1 RB high	704.0	22.37	22.47
		707.5	21.72	23.42
		711.0	23.39	23.59
	50% RB mid	704.0	23.37	23.52
		707.5	23.47	22.53
		711.0	22.57	22.53
	100% RB	704.0	22.56	22.61
		707.5	22.75	22.53
		711.0	22.53	23.62

Radiated Measurement:

Remark:

1. *We were tested all RB Configuration refer 3GPP TS136 521 for each Channel Bandwidth of LTE FDD Band 12; recorded worst case for each Channel Bandwidth of LTE FDD Band 12.*
2. *EIRP=P_{Mea}(dBm)-P_{cl}(dB)+P_{Ag}(dB)+G_a(dBi)*
3. *ERP = EIRP – 2.15dBi as EIRP by subtracting the gain of the dipole.*

LTE FDD Band 12_Channel Bandwidth 1.4MHz_QPSK

Frequency (MHz)	P_{Mea} (dBm)	P_{cl} (dB)	G_a Antenna Gain(dB)	Correction (dB)	P_{Ag} (dB)	ERP (dBm)	FCC Limit (dBm)	Margin (dBm)	Polarization
699.7	-18.03	2.38	8.23	2.15	36.7	22.37	34.77	12.4	V
707.5	-18.56	2.4	8.29	2.15	36.7	21.88	34.77	12.89	V
715.3	-18.13	2.43	8.28	2.15	36.7	22.27	34.77	12.5	V
699.7	-18.35	2.38	8.23	2.15	36.7	22.05	34.77	12.72	H
707.5	-18.16	2.4	8.29	2.15	36.7	22.28	34.77	12.49	H
715.3	-18.66	2.43	8.28	2.15	36.7	21.74	34.77	13.03	H

LTE FDD Band 12_Channel Bandwidth 3MHz_QPSK

Frequency (MHz)	P_{Mea} (dBm)	P_{cl} (dB)	G_a Antenna Gain(dB)	Correction (dB)	P_{Ag} (dB)	ERP (dBm)	FCC Limit (dBm)	Margin (dBm)	Polarization
700.5	-18.12	2.38	8.23	2.15	36.7	22.28	34.77	12.49	V
707.5	-17.87	2.4	8.29	2.15	36.7	22.57	34.77	12.2	V
714.5	-18.73	2.43	8.28	2.15	36.7	21.67	34.77	13.1	V
700.5	-18.38	2.38	8.23	2.15	36.7	22.02	34.77	12.75	H
707.5	-18.42	2.4	8.29	2.15	36.7	22.02	34.77	12.75	H
714.5	-18.77	2.43	8.28	2.15	36.7	21.63	34.77	13.14	H

LTE FDD Band 12_Channel Bandwidth 5MHz_QPSK

Frequency (MHz)	P_{Mea} (dBm)	P_{cl} (dB)	G_a Antenna Gain(dB)	Correction (dB)	P_{Ag} (dB)	ERP (dBm)	FCC Limit (dBm)	Margin (dBm)	Polarization
701.5	-17.94	2.38	8.23	2.15	36.7	22.46	34.77	12.31	V
707.5	-18.56	2.4	8.29	2.15	36.7	21.88	34.77	12.89	V
713.5	-18.17	2.43	8.28	2.15	36.7	22.23	34.77	12.54	V
701.5	-17.69	2.38	8.23	2.15	36.7	22.71	34.77	12.06	H
707.5	-18.5	2.4	8.29	2.15	36.7	21.94	34.77	12.83	H
713.5	-18.48	2.43	8.28	2.15	36.7	21.92	34.77	12.85	H

LTE FDD Band 12_Channel Bandwidth 10MHz_QPSK

Frequency (MHz)	P_{Mea} (dBm)	P_{cl} (dB)	G_a Antenna Gain(dB)	Correction (dB)	P_{Ag} (dB)	ERP (dBm)	FCC Limit (dBm)	Margin (dBm)	Polarization
704.0	-18.24	2.38	8.23	2.15	36.7	22.16	34.77	12.61	V
707.5	-17.76	2.4	8.29	2.15	36.7	22.68	34.77	12.09	V
711.0	-18.19	2.43	8.28	2.15	36.7	22.21	34.77	12.56	V
704.0	-18.28	2.38	8.23	2.15	36.7	22.12	34.77	12.65	H
707.5	-18.21	2.4	8.29	2.15	36.7	22.23	34.77	12.54	H
711.0	-18.63	2.43	8.28	2.15	36.7	21.77	34.77	13	H

LTE FDD Band 12_Channel Bandwidth 1.4MHz_16QAM

Frequency (MHz)	P_{Mea} (dBm)	P_{cl} (dB)	G_a Antenna Gain(dB)	Correction (dB)	P_{Ag} (dB)	ERP (dBm)	FCC Limit (dBm)	Margin (dBm)	Polarization
699.7	-17.87	2.38	8.23	2.15	36.7	22.53	34.77	12.24	V
707.5	-18.71	2.4	8.29	2.15	36.7	21.73	34.77	13.04	V
715.3	-18.35	2.43	8.28	2.15	36.7	22.05	34.77	12.72	V
699.7	-17.67	2.38	8.23	2.15	36.7	22.73	34.77	12.04	H
707.5	-18.1	2.4	8.29	2.15	36.7	22.34	34.77	12.43	H
715.3	-18.32	2.43	8.28	2.15	36.7	22.08	34.77	12.69	H

LTE FDD Band 12_Channel Bandwidth 3MHz_16QAM

Frequency (MHz)	P_{Mea} (dBm)	P_{cl} (dB)	G_a Antenna Gain(dB)	Correction (dB)	P_{Ag} (dB)	ERP (dBm)	FCC Limit (dBm)	Margin (dBm)	Polarization
700.5	-18.15	2.38	8.23	2.15	36.7	22.25	34.77	12.52	V
707.5	-18.1	2.4	8.29	2.15	36.7	22.34	34.77	12.43	V
714.5	-18.6	2.43	8.28	2.15	36.7	21.8	34.77	12.97	V
700.5	-18.02	2.38	8.23	2.15	36.7	22.38	34.77	12.39	H
707.5	-17.98	2.4	8.29	2.15	36.7	22.46	34.77	12.31	H
714.5	-18.85	2.43	8.28	2.15	36.7	21.55	34.77	13.22	H

LTE FDD Band 12_Channel Bandwidth 5MHz_16QAM

Frequency (MHz)	P_{Mea} (dBm)	P_{cl} (dB)	G_a Antenna Gain(dB)	Correction (dB)	P_{Ag} (dB)	ERP (dBm)	FCC Limit (dBm)	Margin (dBm)	Polarization
701.5	-17.73	2.38	8.23	2.15	36.7	22.67	34.77	12.1	V
707.5	-18.57	2.4	8.29	2.15	36.7	21.87	34.77	12.9	V
713.5	-17.94	2.43	8.28	2.15	36.7	22.46	34.77	12.31	V
701.5	-17.56	2.38	8.23	2.15	36.7	22.84	34.77	11.93	H
707.5	-18.52	2.4	8.29	2.15	36.7	21.92	34.77	12.85	H
713.5	-18.12	2.43	8.28	2.15	36.7	22.28	34.77	12.49	H

LTE FDD Band 12_Channel Bandwidth 10MHz_16QAM

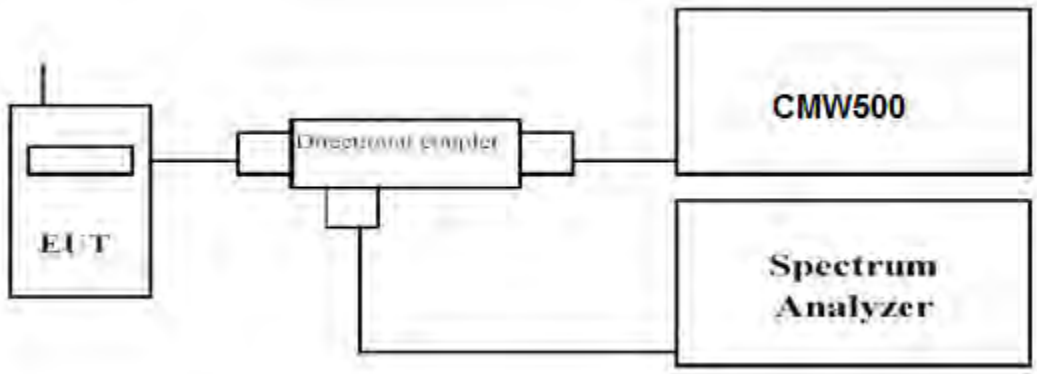
Frequency (MHz)	P_{Mea} (dBm)	P_{cl} (dB)	G_a Antenna Gain(dB)	Correction (dB)	P_{Ag} (dB)	ERP (dBm)	FCC Limit (dBm)	Margin (dBm)	Polarization
704.0	-18.26	2.38	8.23	2.15	36.7	22.14	34.77	12.63	V
707.5	-17.96	2.4	8.29	2.15	36.7	22.48	34.77	12.29	V
711.0	-18.16	2.43	8.28	2.15	36.7	22.24	34.77	12.53	V
704.0	-18.28	2.38	8.23	2.15	36.7	22.12	34.77	12.65	H
707.5	-17.76	2.4	8.29	2.15	36.7	22.68	34.77	12.09	H
711.0	-17.99	2.43	8.28	2.15	36.7	22.41	34.77	12.36	H

2.7 Peak-to-Average Ratio (PAR)

LIMIT

The Peak-to-Average Ratio (PAR) of the transmission may not exceed 13 dB.

TEST CONFIGURATION



TEST PROCEDURE

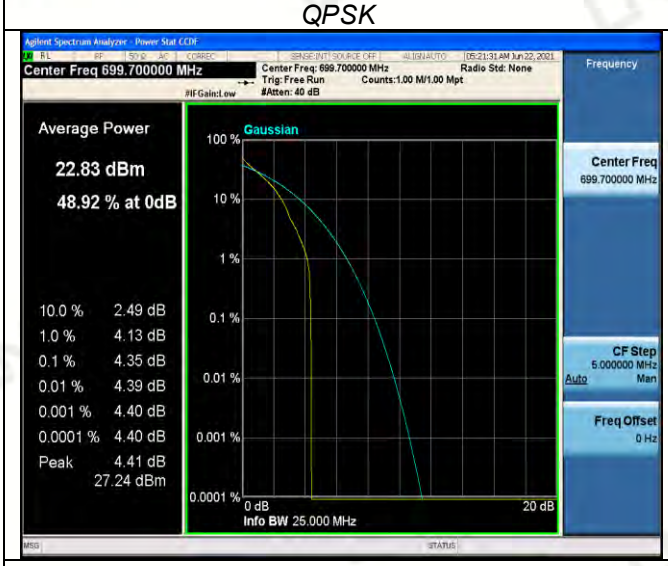
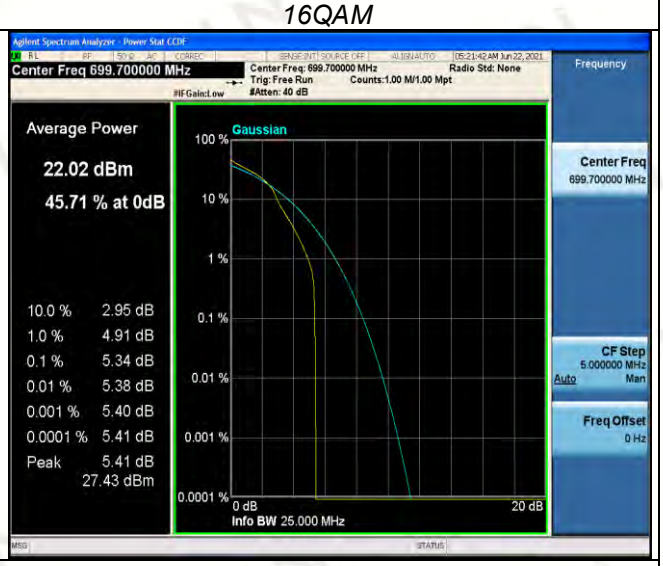
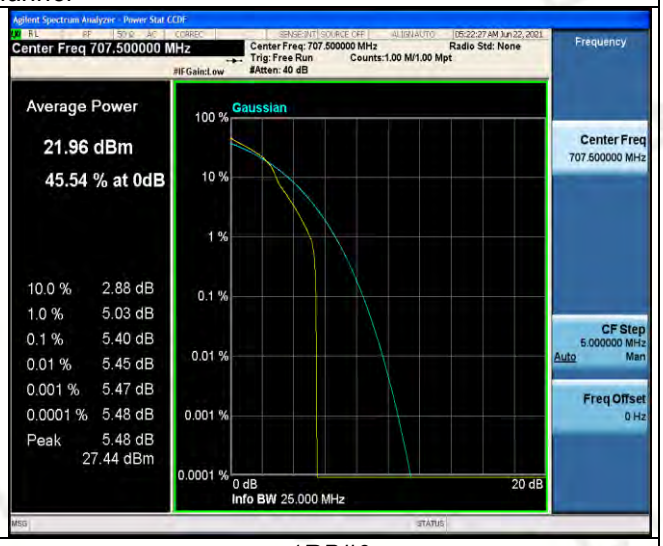
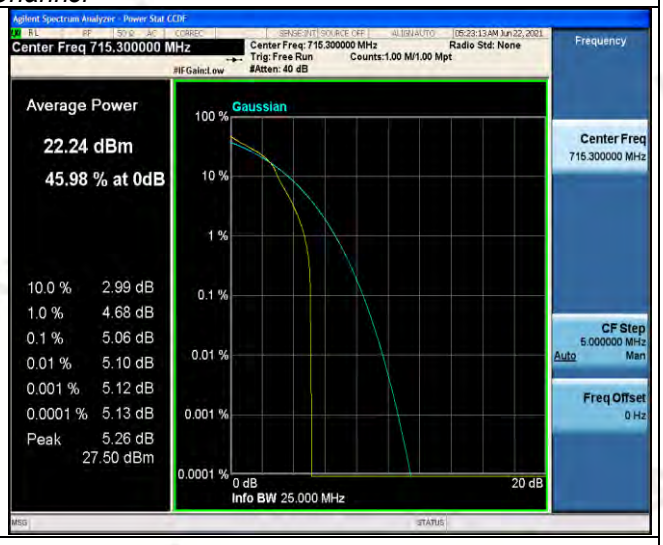
1. Refer to instrument's analyzer instruction manual for details on how to use the power statistics/CCDF function;
2. Set resolution/measurement bandwidth ≥ signal's occupied bandwidth;
3. Set the number of counts to a value that stabilizes the measured CCDF curve;
4. Set the measurement interval as follows:
   1). for continuous transmissions, set to 1 ms,
   2). for burst transmissions, employ an external trigger that is synchronized with the EUT burst timing sequence, or use the internal burst trigger with a trigger level that allows the burst to stabilize and set the measurement interval to a time that is less than or equal to the burst duration.
5. Record the maximum PAPR level associated with a probability of 0.1%.

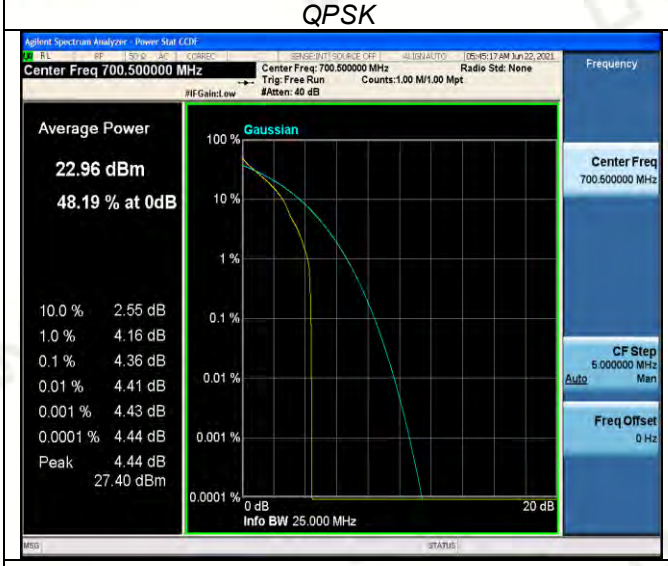
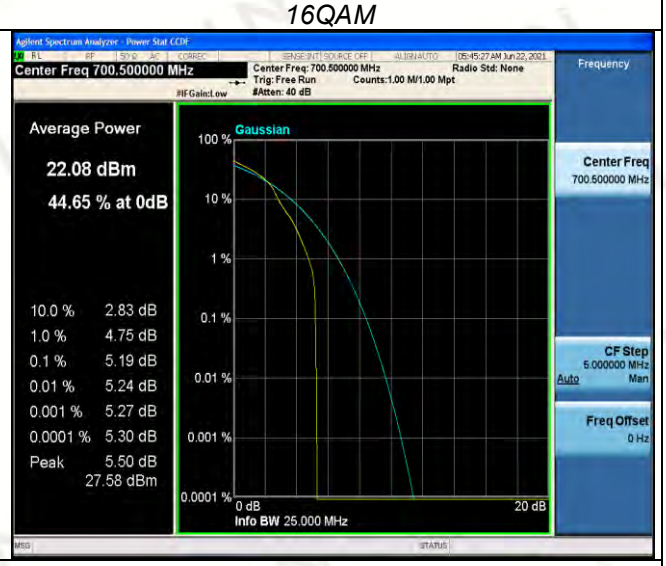
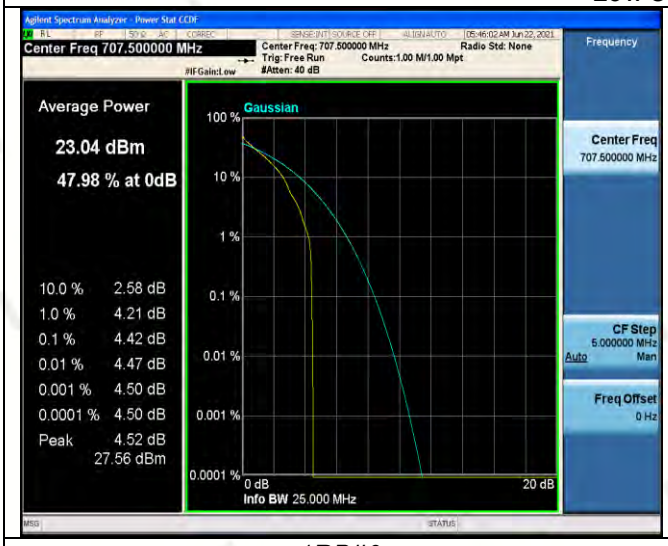
TEST RESULTS

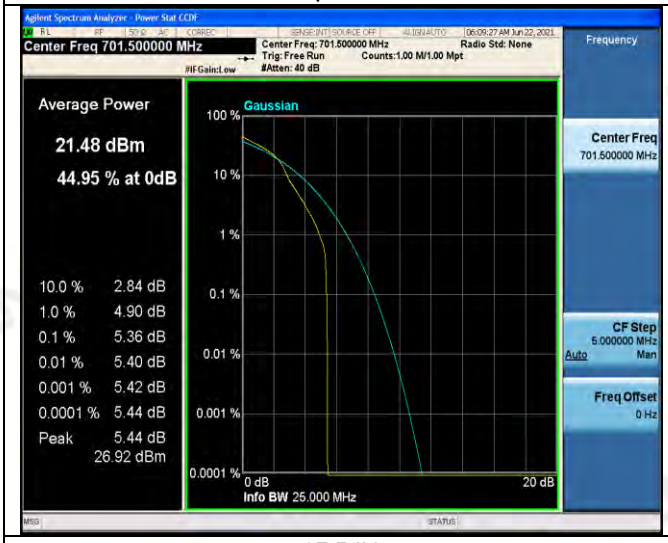
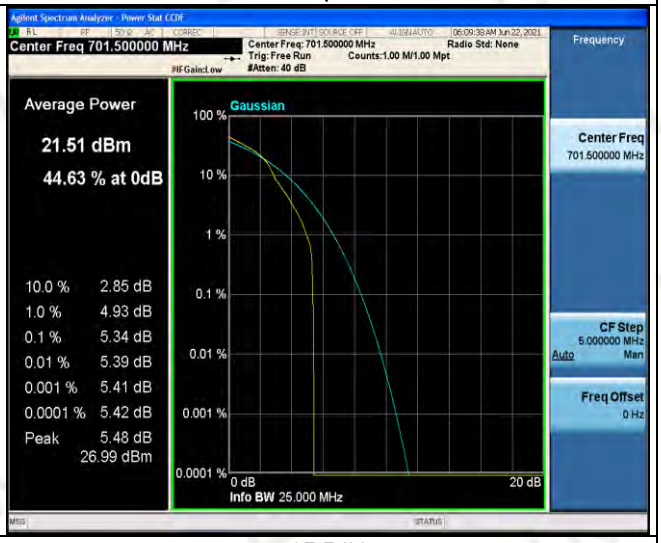
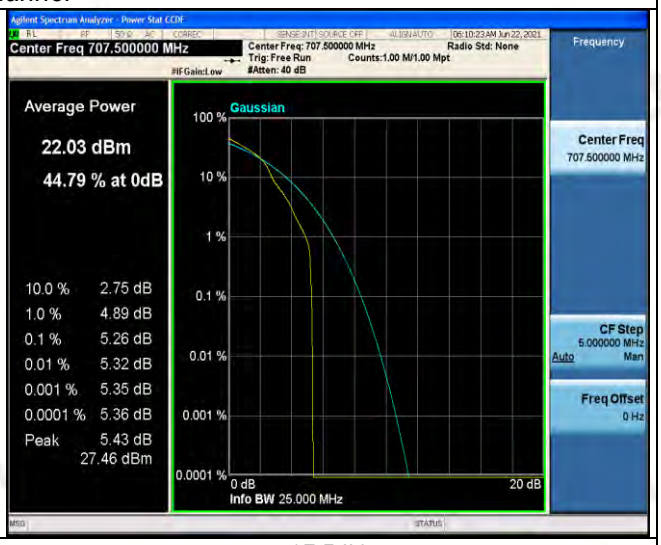
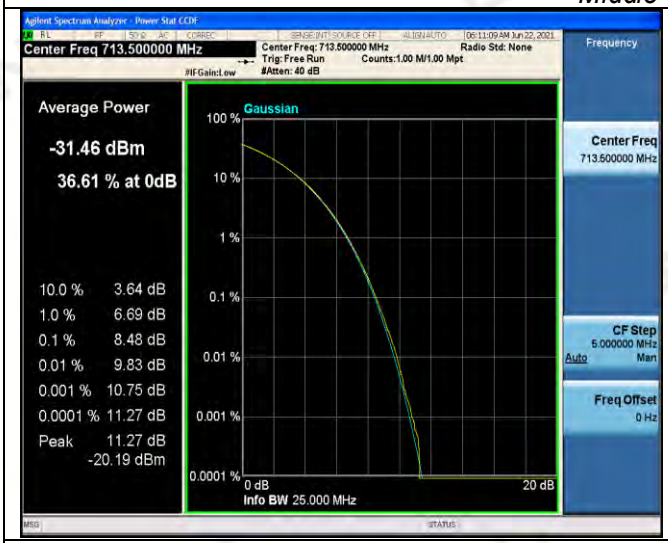
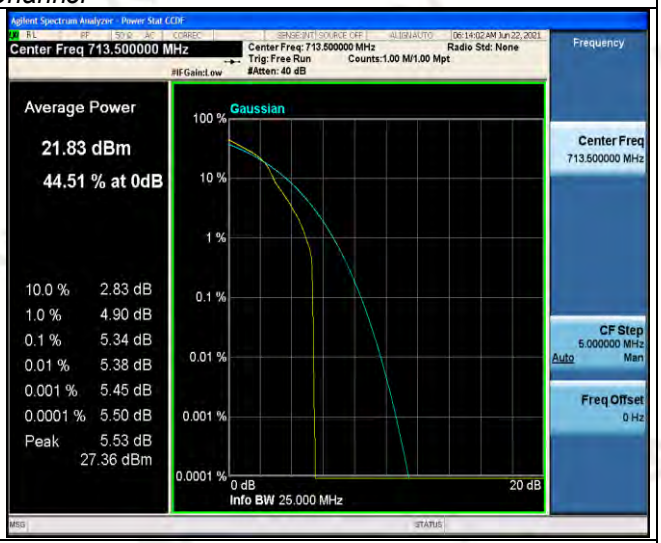
Remark:

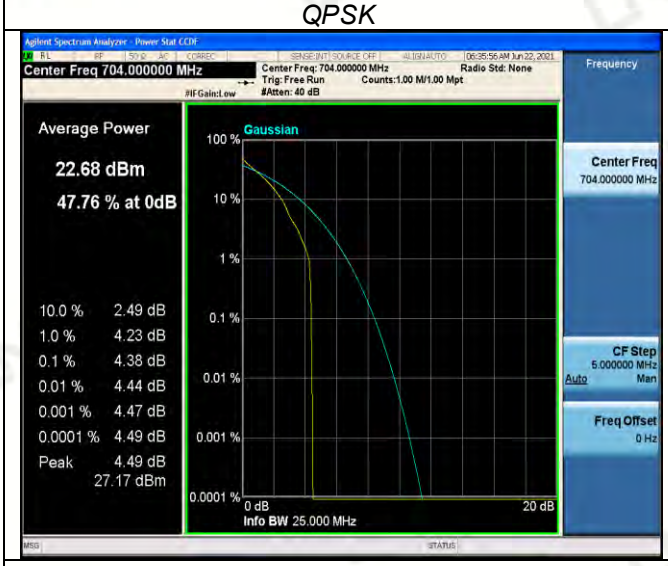
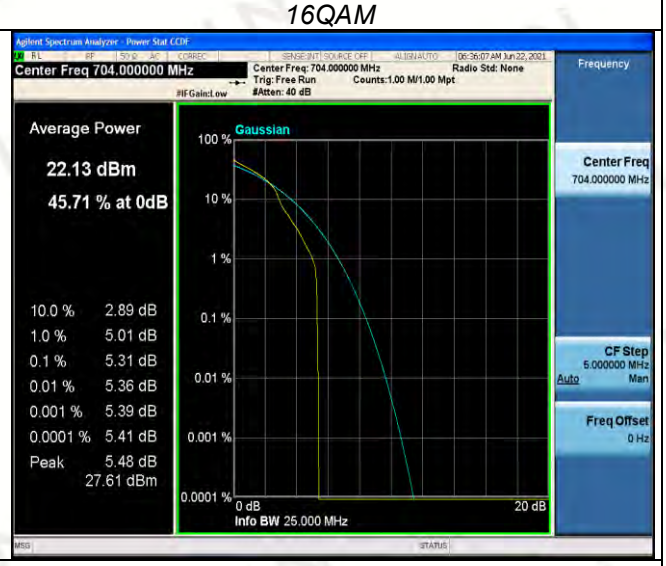
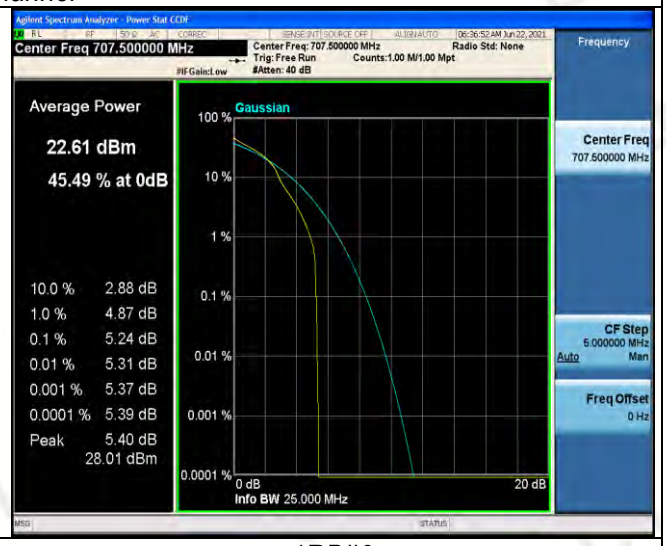
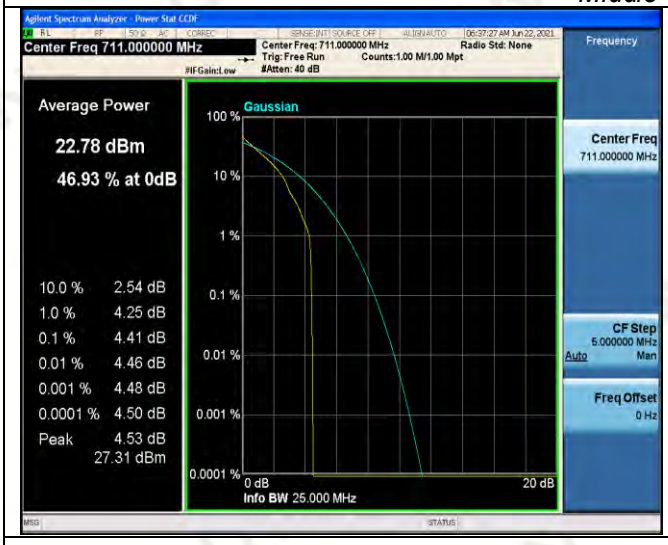
1. *We were tested all RB Configuration refer 3GPP TS136 521 for each Channel Bandwidth of LTE FDD Band 12; recorded worst case for each Channel Bandwidth of LTE FDD Band 12.*

LTE FDD Band 12				
TX Channel Bandwidth	Frequency (MHz)	RB Size/Offset	PAPR (dB)	
			QPSK	16QAM
1.4 MHz	699.7	*1RB#0*	4.35	5.34
	707.5		4.42	5.40
	715.3		4.08	5.06
3 MHz	700.5	*1RB#0*	4.36	5.19
	707.5		4.42	5.36
	714.5		4.23	5.25
5 MHz	701.5	*1RB#0*	5.36	5.34
	707.5		4.39	5.26
	713.5		8.48	5.34
10 MHz	704.0	*1RB#0*	4.38	5.31
	707.5		4.36	5.24
	711.0		4.41	5.31

LTE FDD Band 12-1.4MHz Channel Bandwidth PAPR	
QPSK	16QAM
	
1RB#0	1RB#0
Low Channel	
	
1RB#0	1RB#0
Middle Channel	
	
1RB#0	1RB#0
High Channel	

LTE FDD Band 12-3MHz Channel Bandwidth PAPR	
QPSK	16QAM
	
1RB#0	1RB#0
Low Channel	
	
1RB#0	1RB#0
Middle Channel	
	
1RB#0	1RB#0
High Channel	

LTE FDD Band 12-5MHz Channel Bandwidth PAPR	
QPSK	16QAM
	
1RB#0	1RB#0
Low Channel	
	
1RB#0	1RB#0
Middle Channel	
	
1RB#0	1RB#0
High Channel	

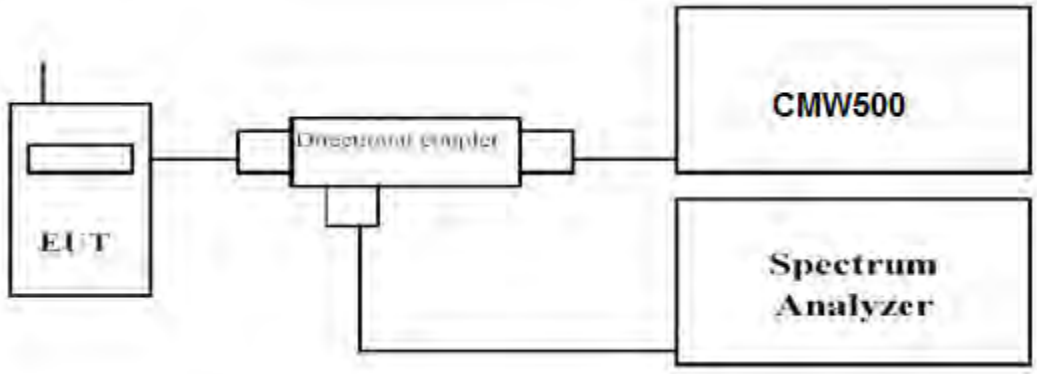
LTE FDD Band 12-10MHz Channel Bandwidth PAPR	
QPSK	16QAM
	
1RB#0	1RB#0
Low Channel	
	
1RB#0	1RB#0
Middle Channel	
	
1RB#0	1RB#0
High Channel	

2.8 Occupied Bandwidth and Emission Bandwidth

LIMIT

N/A

TEST CONFIGURATION



TEST PROCEDURE

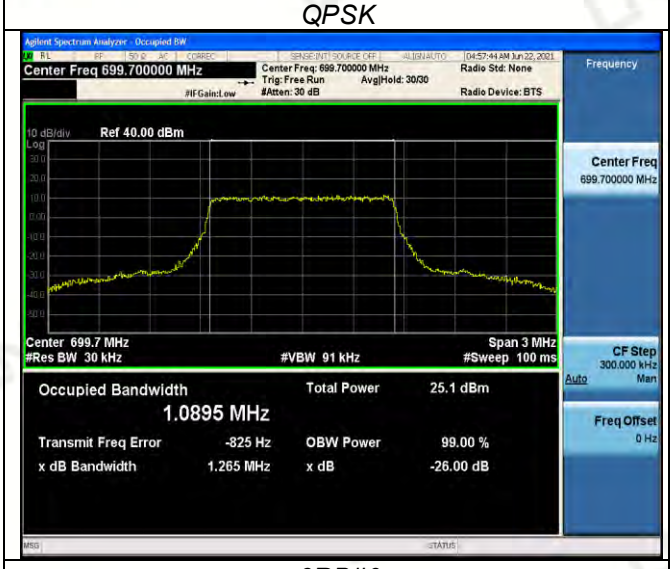
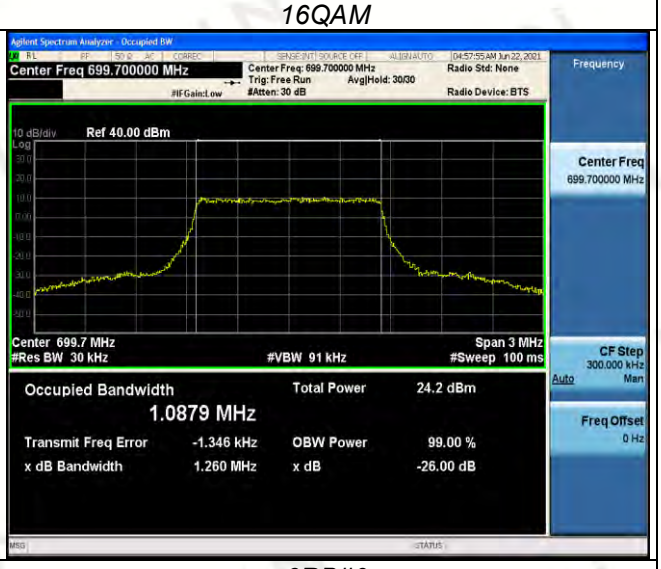
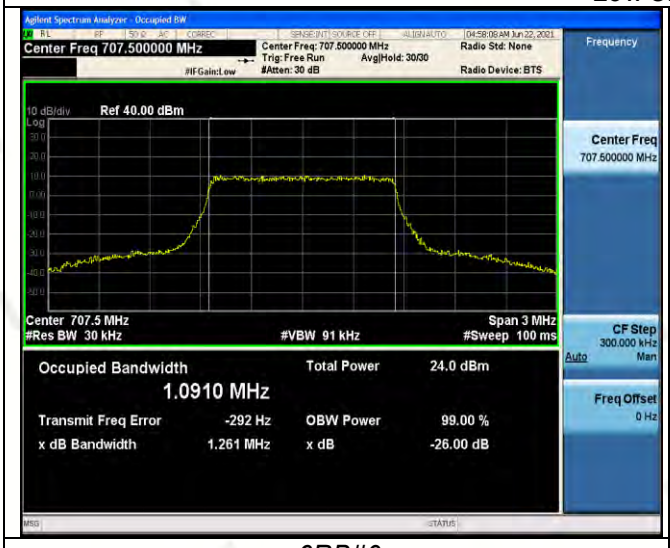
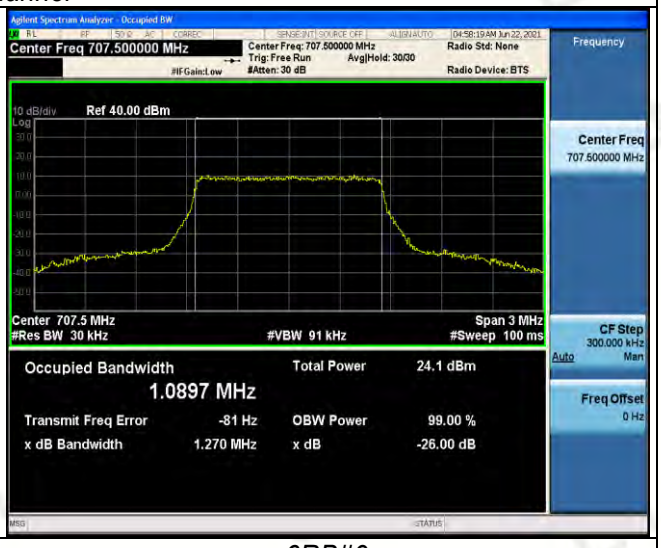
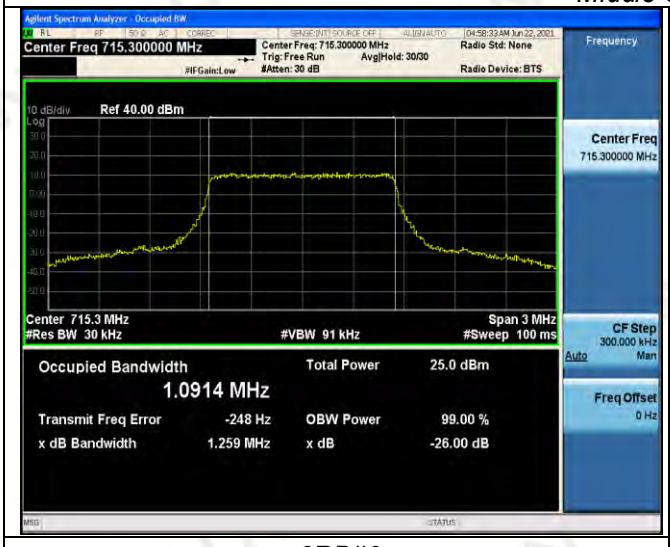
The transmitter output was connected to a calibrated coaxial cable and coupler, the other end of which was connected to a spectrum analyzer. The occupied bandwidth was measured with the spectrum analyzer at low, middle and high channel in each band. The -26dBc Emission bandwidth was also measured and recorded.
Set RBW was set to about 1% of emission BW, VBW≥3 times RBW.
-26dBc display line was placed on the screen (or 99% bandwidth), the occupied bandwidth is the delta frequency between the two points where the display line intersects the signal trace.

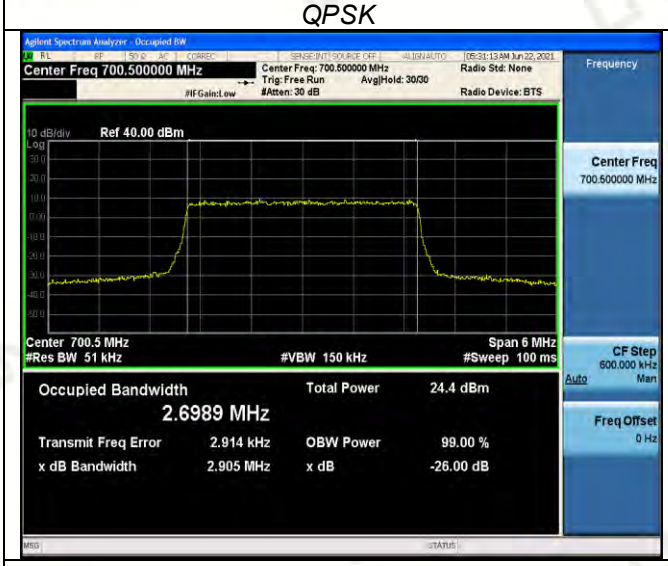
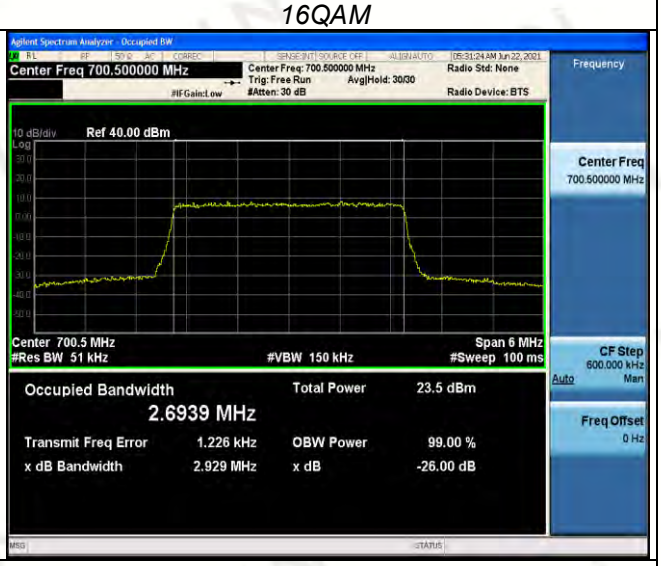
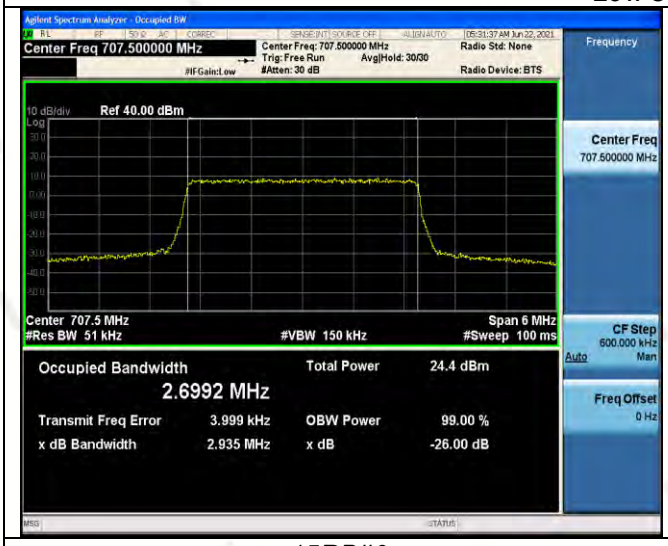
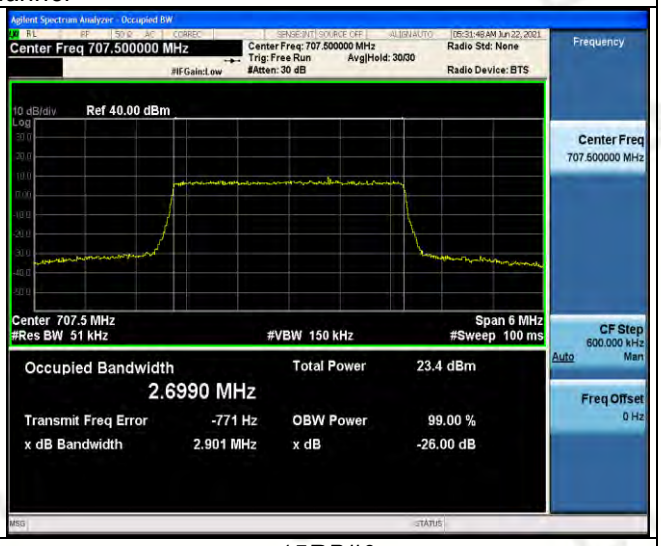
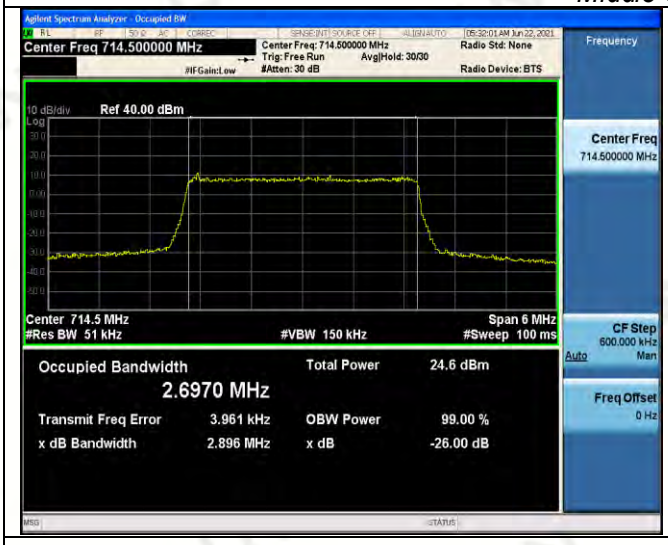
TEST RESULTS

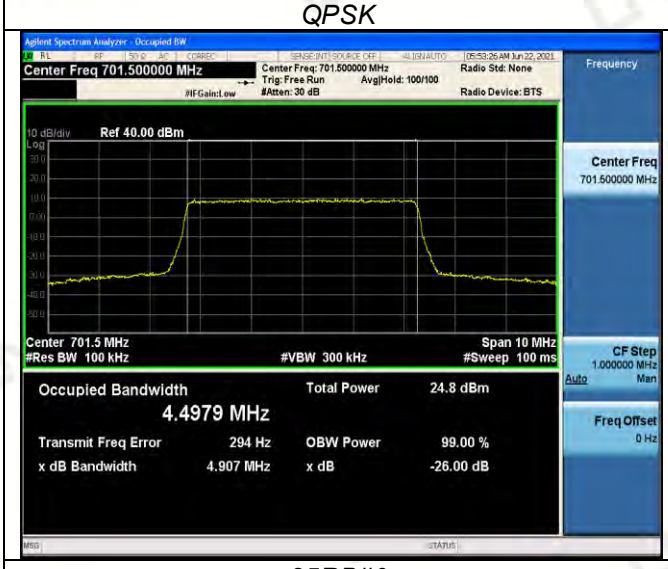
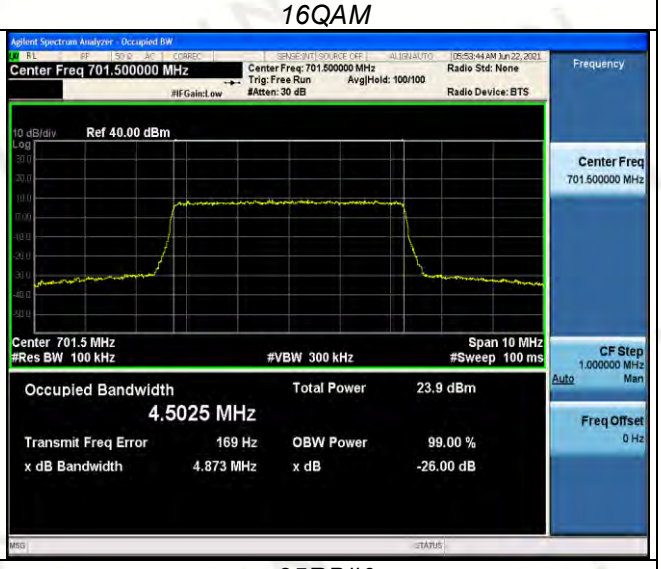
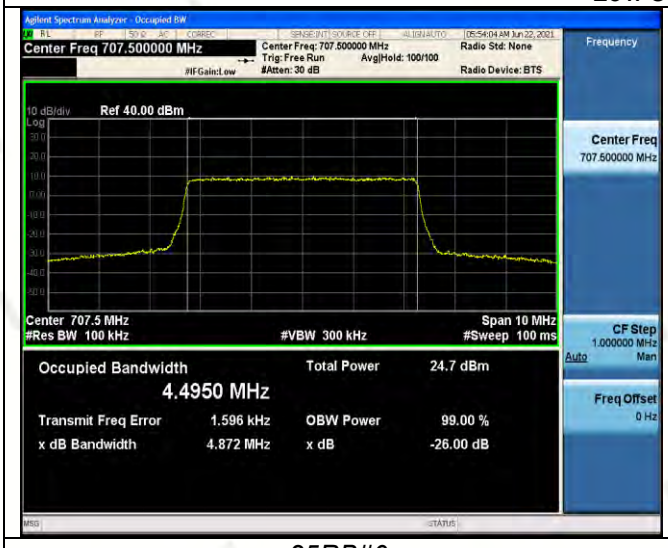
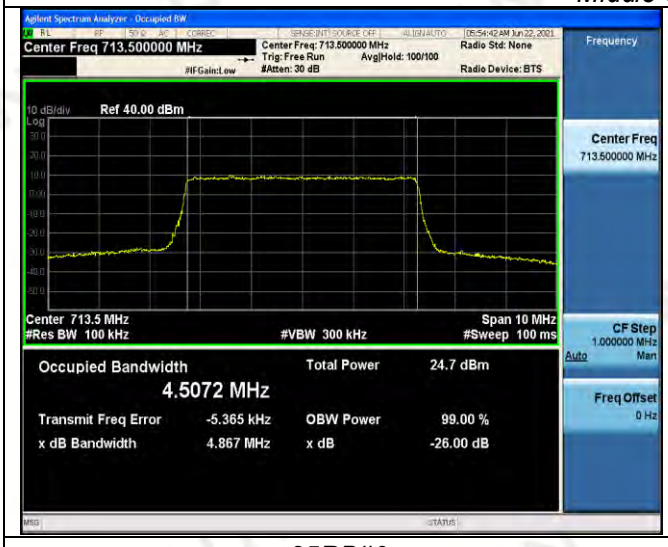
Remark:

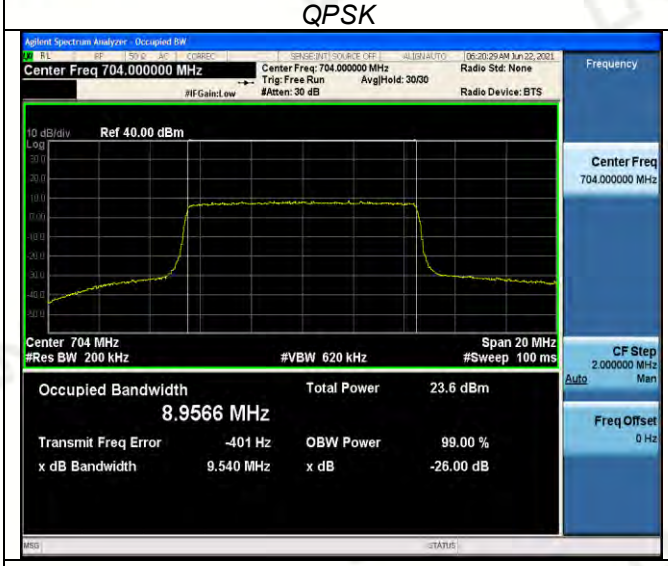
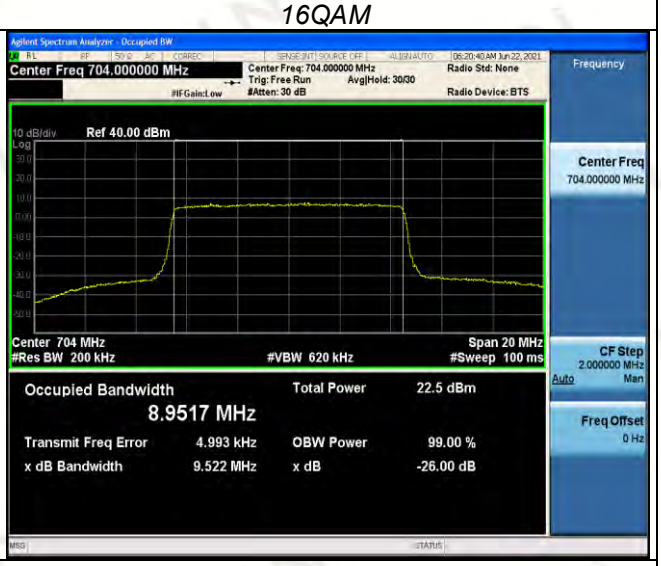
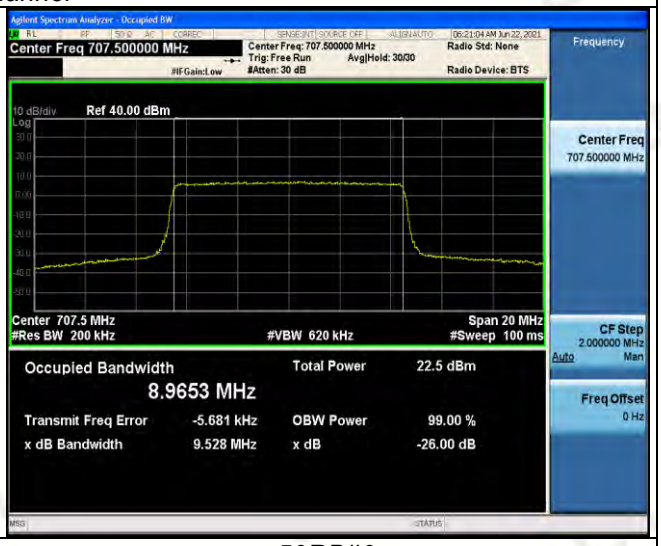
1. *We were tested all RB Configuration refer 3GPP TS136 521 for each Channel Bandwidth of LTE FDD Band 12; recorded worst case for each Channel Bandwidth of LTE FDD Band 12.*

LTE FDD Band 12						
TX Channel Bandwidth	RB Size/Offset	Frequency (MHz)	-26dBc Emission bandwidth (MHz)		99% Occupied bandwidth (MHz)	
			QPSK	16QAM	QPSK	16QAM
1.4 MHz	*6RB#0*	699.7	1.265	1.260	1.0895	1.0879
		707.5	1.261	1.270	1.0910	1.0897
		715.3	1.259	1.274	1.0914	1.0928
3 MHz	*15RB#0*	700.5	2.905	2.929	2.6989	2.6939
		707.5	2.935	2.901	2.6992	2.6990
		714.5	2.896	2.924	2.6970	2.6889
5 MHz	*25RB#0*	701.5	4.907	4.873	4.4979	4.5025
		707.5	4.872	4.898	4.4950	4.4943
		713.5	4.867	4.872	4.5072	4.5090
10 MHz	*50RB#0*	704.0	9.540	9.522	8.9566	8.9517
		707.5	9.557	9.528	8.9744	8.9653
		711.0	9.540	9.544	8.9582	8.9609

LTE FDD Band 12-1.4MHz Channel Bandwidth	
QPSK	16QAM
	
6RB#0	6RB#0
Low Channel	
	
6RB#0	6RB#0
Middle Channel	
	
6RB#0	6RB#0
High Channel	

LTE FDD Band 12-3MHz Channel Bandwidth	
QPSK	16QAM
	
15RB#0	15RB#0
Low Channel	
	
15RB#0	15RB#0
Middle Channel	
	
15RB#0	15RB#0
High Channel	

LTE FDD Band 12-5MHz Channel Bandwidth	
QPSK	16QAM
	
25RB#0	25RB#0
Low Channel	
	
25RB#0	25RB#0
Middle Channel	
	
25RB#0	25RB#0
High Channel	

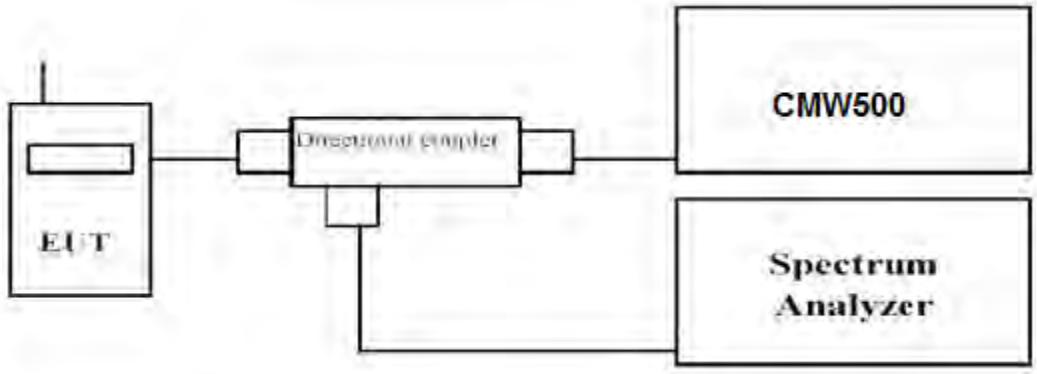
LTE FDD Band 12-10MHz Channel Bandwidth	
QPSK	16QAM
	
50RB#0	50RB#0
Low Channel	
	
50RB#0	50RB#0
Middle Channel	
	
50RB#0	50RB#0
High Channel	

2.9 Band Edge compliance

LIMIT

that 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 specification that emissions shall be attenuated below the transmitter power (P) by at least 43 + 10 log (P) dB, translates in the relevant power range (1 to 0.001 W) to -13 dBm. At 1 W the specified minimum attenuation becomes 43 dB and relative to a 30 dBm (1 W) carrier becomes a limit of -13 dBm. At 0.001 W (0 dBm) the minimum attenuation is 13 dB, which again yields a limit of -13 dBm. In this way a translation of the specification from relative to absolute terms is carried out.

TEST CONFIGURATION



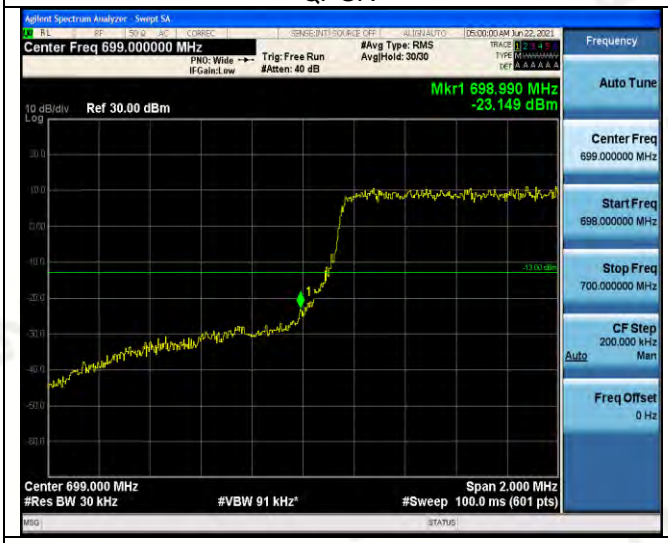
TEST PROCEDURE

1. The transmitter output port was connected to base station.
2. The RF output of EUT was connected to the power meter by RF cable and attenuator, the path loss was compensated to the results for each measurement.
3. Set EUT at maximum power through base station.
4. Select lowest and highest channels for each band and different modulation.
5. Measure Band edge using RMS (Average) detector by spectrum

TEST RESULTS

Remark:

1. *We were tested all RB Configuration refer 3GPP TS136 521 for each Channel Bandwidth of LTE FDD Band 12; recorded worst case for each Channel Bandwidth of LTE FDD Band 12.*

LTE FDD Band 12-1.4MHz Channel Bandwidth Band Edge Compliance	
QPSK	16QAM
	
6RB#0	6RB#0
Low Channel	
	
6RB#0	6RB#0
High Channel	

LTE FDD Band 12-3MHz Channel Bandwidth Band Edge Compliance	
QPSK	16QAM
	
15RB#0	15RB#0
Low Channel	
	
15RB#0	15RB#0
High Channel	

LTE FDD Band 12-5MHz Channel Bandwidth Band Edge Compliance	
QPSK	16QAM
	
25RB#0	25RB#0
Low Channel	
	
25RB#0	25RB#0
High Channel	

LTE FDD Band 12-10MHz Channel Bandwidth Band Edge Compliance	
QPSK	16QAM
	
50RB#0	50RB#0
Low Channel	
	
50RB#0	50RB#0
High Channel	