

**FCC Test Report****Report Reference No.**.....: **HK2502110488-11E****FCC ID**.....: **2BNQ8-K8ACTIVE**

Compiled by

(position+printedname+signature)....: Testing Engineer Len Liao

Supervised by

(position+printedname+signature)....: Technical Manager Sliver Wan

Approved by

(position+printedname+signature)....: Authorized Signatory Jason Zhou

Date of issue.....: Mar. 25, 2025

Testing Laboratory Name: **Shenzhen HUAKE Testing Technology Co., Ltd.**Address: 1-2/F., Building B2, Junfeng Zhongcheng Zhizao Innovation Park,
Heping, Fuhai Street, Bao'an District, Shenzhen, Guangdong, China**Applicant's name**: **AOZORA WIRELESS INC.**Address: 8605 Santa Monica Blvd 30327, West Hollywood California 90069
United States**Test specification**:Standard: **FCC CFR Title 47 Part 2, Part 27**

TRF Originator.....: Shenzhen HUAKE Testing Technology Co., Ltd.

Shenzhen HUAKE Testing Technology Co., Ltd.All rights reserved.

This publication may be reproduced in whole or in part for non-commercial purposes as long as the Shenzhen HUAKE Testing Technology Co., Ltd.as copyright owner and source of the material. Shenzhen HUAKE Testing Technology Co., Ltd.takes no responsibility for and will not assume liability for damages resulting from the reader's interpretation of the reproduced material due to its placement and context.

Test item description: Rugged Tablet

Trade Mark: AOZORA

Manufacturer.....: **AOZORA WIRELESS INC.**

Model/Type reference.....: K8 Active

Series Models: K8

Modulation Type: QPSK, 16QAM

Rating: DC 5V from Type-C or DC 3.86V from Battery

Hardware version: V2.0

Software version.....: V2.0

Result.....: **PASS**

**TEST REPORT****Test Report No. :****HK2502110488-11E**

Mar. 25, 2025

Date of issue

Equipment under Test : Rugged Tablet

Model /Type : K8 Active

Series Models : K8

Applicant : AOZORA WIRELESS INC.Address : 8605 Santa Monica Blvd 30327, West Hollywood California
90069 United States**Manufacturer : AOZORA WIRELESS INC.**Address : 8605 Santa Monica Blvd 30327, West Hollywood California
90069 United States**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.



Contents

1	<u>Test Standards</u>	<u>5</u>
2	<u>Summary</u>	<u>6</u>
2.1	General Remarks	6
2.2	Product Description	6
2.3	Equipment under Test	6
2.4	Short description of the Equipment under Test (EUT)	6
2.5	Normal Accessory setting	7
2.6	EUT configuration	7
2.7	Related Submittal(s) / Grant (s)	7
2.8	Modifications	7
2.9	General Test Conditions/Configurations	7
3	<u>Test Environment</u>	<u>8</u>
3.1	Information of the Test Laboratory	8
3.2	Test Description	8
3.3	Equipments Used during the Test	9
4	<u>Test Conditions and Results</u>	<u>11</u>
4.1	Output Power	11
4.2	Peak-to-Average Ratio (PAR)	17
4.3	Occupied Bandwidth and Emission Bandwidth	22
4.4	Band Edge compliance	27
4.5	Spurious Emission Antenna Port	32
4.6	Radiated Spurious Emission	45
4.7	Frequency Stability	51
5	<u>Test Setup Photos of the EUT</u>	<u>53</u>
6	<u>External and Internal photos of the EUT</u>	<u>54</u>



**** Modified History ****

Revision	Description	Issued Data	Remark
Revision 1.0	Initial Test Report Release	Mar. 25, 2025	Jason Zhou



1 Test Standards

The tests were performed according to following standards:

[FCC Part 2](#):Frequency Alloca-Tions And Radio Treaty Mat-Ters; General Rules And Reg-Ulations

[FCC Part 27](#):Miscellaneous Wireless Communications Services

[ANSI/TIA-603-E-2016](#): Land Mobile FM or PM Communications Equipment Measurement and Performance Standards.

[ANSI C63.26-2015](#): IEEE/ANSI Standard for Compliance Testing of Transmitters Used in Licensed Radio Services

[KDB971168 D01:v03r01](#) Measurement Guidance For Certification Of Licensed Digital Transmitters.



2 Summary

2.1 General Remarks

Date of receipt of test sample	:	Feb. 11, 2025
Testing commenced on	:	Feb. 11, 2025
Testing concluded on	:	Mar. 25, 2025

2.2 Product Description

The **AOZORA WIRELESS INC.**'s Model: ph970 Gor the "EUT" as referred to in this report; more general information as follows,for more details, refer to the user's manual of the EUT.

Name of EUT	Rugged Tablet
Model/Type reference:	K8 Active
Series Models:	K8
Model Difference:	All model's the function, software and electric circuit are the same, only with model named different. Test sample mode: K8 Active.
Power supply:	DC 5V from Type-C or DC 3.86V from Battery
Modulation Type	QPSK, 16QAM
Antenna Type	FPC Antenna
Antenna Gain	-2.97dBi
Operation Frequency Band	LTE Band 7
Operation frequency	LTE Band 7: 2500 to 2570 MHz
LTE Release	R8
Extreme temp. Tolerance	-30°C to +50°C
Extreme vol. Limits	4.25VDC to 5.75VDC (nominal: 5.0VDC)

2.3 Equipment under Test

Power supply system utilised

Power supply voltage	:	☐ 120V/ 60 Hz	☐ 115V/60Hz
		☐ 12 V DC	☐ 24 V DC
		☒ Other (specified in blank below)	

DC 5V from Type-C or DC 3.86V from Battery

2.4 Short description of the Equipment under Test (EUT)

2.4.1 GeneralDescription

K8 Active is subscriberequipmentintheLTE system. LTE frequencyband is band 41;The Rugged Tablet implements suchfunctions asRFsignalreceiving/transmitting,LTE protocolprocessing,voice,video MMS service,etc.Externally itprovides microSDcardinterface,earphoneport(toprovidevoiceservice)andSIMcardinterface.



2.5 Normal Accessory setting

Fully charged battery was used during the test.

2.6 EUT configuration

The following peripheral devices and interface cables were connected during the measurement:

- - supplied by the manufacturer
- - supplied by the lab

○	Power Cable	Length (m) :	/
		Shield :	/
		Detachable :	/
○	Multimeter	Manufacturer :	/
		Model No. :	/

2.7 Related Submittal(s) / Grant (s)

This submittal(s) (test report) is intended for **FCC ID: 2BNQ8-K8ACTIVE** filing to comply with FCC Part 27, Rules.

2.8 Modifications

No modifications were implemented to meet testing criteria.

2.9 General Test Conditions/Configurations

2.9.1 Test Environment

Environment Parameter	Selected Values During Tests	
Relative Humidity	Ambient	
Temperature	TN	Ambient
Voltage	VL	4.25V
	VN	5.0V
	VH	5.75V

NOTE: VL=lower extreme test voltage VN=nominal voltage
VH=upper extreme test voltage TN=normal temperature



3 Test Environment

3.1 Information of the Test Laboratory

Shenzhen HUAKE Testing Technology Co., Ltd.

Add.: 1-2/F., Building B2, Junfeng Zhongcheng Zhizao Innovation Park, Heping,
Fuhai Street, Bao'an District, Shenzhen, Guangdong, China

Testing Laboratory Authorization:

A2LA Accreditation Code is 4781.01.

FCC Designation Number is CN1229.

Canada IC CAB identifier is CN0045.

CNAS Registration Number is L9589.

3.2 Test Description

Test Item	FCCRuleNo.	Verdict
Effective(Isotropic)RadiatedOutputPower	Part 2.1046 27.50(h)(2)	Pass
Peak-AverageRatio	Part 2.1046	Pass
ModulationCharacteristics	§2.1047	N/A
Bandwidth	Part 2.1049	Pass
BandEdgesCompliance	Part 2.1051 27.53(m)	Pass
SpuriousEmissionatAntennaTerminals	Part 2.1051 27.53(m)	Pass
Field Strengthof Spurious Radiation	Part 2.1053 27.53(m)	Pass
Frequency Stability	Part 2.1055 27.54	Pass

NOTE 1:For the verdict,the“N/A”denotes“not applicable”,the“N/T”denotes “nottested”.

Remark:

1. The measurement uncertainty is not included in the test result.



3.3 Equipments Used during the Test

Item	Test Equipment	Manufacturer	Model No.	Serial No.	Calibration Date	Calibration Due Date
1	L.I.S.N.	R&S	ENV216	HKE-002	2024/02/20	2025/02/19
2	L.I.S.N.	R&S	ENV216	HKE-059	2024/02/20	2025/02/19
3	EMI Test Receiver	R&S	ESR	HKE-005	2024/02/20	2025/02/19
4	Spectrum analyzer	Agilent	N9020A	HKE-117	2024/02/20	2025/02/19
5	Spectrum analyzer	R&S	FSV3044	HKE-126	2024/02/20	2025/02/19
6	Preamplifier	EMCI	EMC051845S	HKE-006	2024/02/20	2025/02/19
7	Preamplifier	Schwarzbeck	BBV 9743	HKE-016	2024/02/20	2025/02/19
8	Preamplifier	A.H. Systems	SAS-574	HKE-182	2024/02/20	2025/02/19
9	6dB Attenuator	Pasternack	6db	HKE-184	2024/02/20	2025/02/19
10	EMI Test Receiver	Rohde & Schwarz	ESR-7	HKE-010	2024/02/20	2025/02/19
11	Broadband Antenna	Schwarzbeck	VULB9168	HKE-167	2024/02/21	2026/02/20
12	Loop Antenna	COM-POWER	AL-130R	HKE-014	2024/02/21	2026/02/20
13	Horn Antenna	Schwarzbeck	9120D	HKE-013	2024/02/21	2026/02/20
14	EMI Test Software	Tonscend	JS32-CE 2.5.0.6	HKE-081	/	/
15	EMI Test Software	Tonscend	JS32-RE 5.0.0	HKE-082	/	/
16	RF Automatic control unit	Tonscend	JS0806-1	HKE-096	2024/02/20	2025/02/19
17	High pass filter unit	Tonscend	JS0806-F	HKE-055	2024/02/20	2025/02/19
18	Wireless Communication Test Set	R&S	CMU200	HKE-026	2024/02/20	2025/02/19
19	Wireless Communication Test Set	R&S	CMW500	HKE-027	2024/02/20	2025/02/19
20	High-low temperature chamber	Guangke	HT-80L	HKE-118	2024/06/10	2025/06/09
21	Temperature and humidity meter	Boyang	HTC-1	HKE-075	2024/06/10	2025/06/09
22	RF Test Software	Tonscend	JS1120 Version 3.1.46	HKE-183	/	/
23	RSE Test Software	Tonscend	JS36-RSE 5.0.0	HKE-184	/	/

The results shown in this test report refer only to the sample(s) tested unless otherwise stated and the sample(s) are retained for 30 days only. The document is issued by HUAKE, this document cannot be reproduced except in full with our prior written permission. The more details and the authenticity of the report will be confirmed at <http://www.cer-mark.com>.

TEL : +86-755 2302 9901 FAX : +86-755 2302 9901 E-mail : service@cer-mark.com

Add: 1-2F., Building B2, Junfeng Zhongcheng Zhizao Innovation Park, Heping Community, Fuhai Street, Bao'an District, Shenzhen, Guangdong, China



Item	Test Equipment	Manufacturer	Model No.	Serial No.	Calibration Date	Calibration Due Date
1	L.I.S.N.	R&S	ENV216	HKE-002	2025/02/19	2026/02/18
2	L.I.S.N.	R&S	ENV216	HKE-059	2025/02/19	2026/02/18
3	EMI Test Receiver	R&S	ESR	HKE-005	2025/02/19	2026/02/18
4	Spectrum analyzer	Agilent	N9020A	HKE-117	2025/02/19	2026/02/18
5	Spectrum analyzer	R&S	FSV3044	HKE-126	2025/02/19	2026/02/18
6	Preamplifier	EMCI	EMC051845S	HKE-006	2025/02/19	2026/02/18
7	Preamplifier	Schwarzbeck	BBV 9743	HKE-016	2025/02/19	2026/02/18
8	Preamplifier	A.H. Systems	SAS-574	HKE-182	2025/02/19	2026/02/18
9	6dB Attenuator	Pasternack	6db	HKE-184	2025/02/19	2026/02/18
10	EMI Test Receiver	Rohde & Schwarz	ESR-7	HKE-010	2024/02/20	2025/02/19
11	Broadband Antenna	Schwarzbeck	VULB9168	HKE-167	2024/02/21	2026/02/20
12	Loop Antenna	COM-POWER	AL-130R	HKE-014	2024/02/21	2026/02/20
13	Horn Antenna	Schwarzbeck	9120D	HKE-013	2024/02/21	2026/02/20
14	EMI Test Software	Tonscend	JS32-CE 2.5.0.6	HKE-081	/	/
15	EMI Test Software	Tonscend	JS32-RE 5.0.0	HKE-082	/	/
16	RF Automatic control unit	Tonscend	JS0806-1	HKE-096	2025/02/19	2026/02/18
17	High pass filter unit	Tonscend	JS0806-F	HKE-055	2025/02/19	2026/02/18
18	Wireless Communication Test Set	R&S	CMU200	HKE-026	2025/02/19	2026/02/18
19	Wireless Communication Test Set	R&S	CMW500	HKE-027	2025/02/19	2026/02/18
20	High-low temperature chamber	Guangke	HT-80L	HKE-118	2024/06/10	2025/06/09
21	Temperature and humidity meter	Boyang	HTC-1	HKE-075	2024/06/10	2025/06/09
22	RF Test Software	Tonscend	JS1120 Version 3.1.46	HKE-183	/	/
23	RSE Test Software	Tonscend	JS36-RSE 5.0.0	HKE-184	/	/

The results shown in this test report refer only to the sample(s) tested unless otherwise stated and the sample(s) are retained for 30 days only. The document is issued by HUAKE, this document cannot be reproduced except in full with our prior written permission. The more details and the authenticity of the report will be confirmed at <http://www.cer-mark.com>.

TEL : +86-755 2302 9901 FAX : +86-755 2302 9901 E-mail : service@cer-mark.com

Add: 1-2F., Building B2, Junfeng Zhongcheng Zhizao Innovation Park, Heping Community, Fuhai Street, Bao'an District, Shenzhen, Guangdong, China



4 Test Conditions and Results

4.1 Output Power

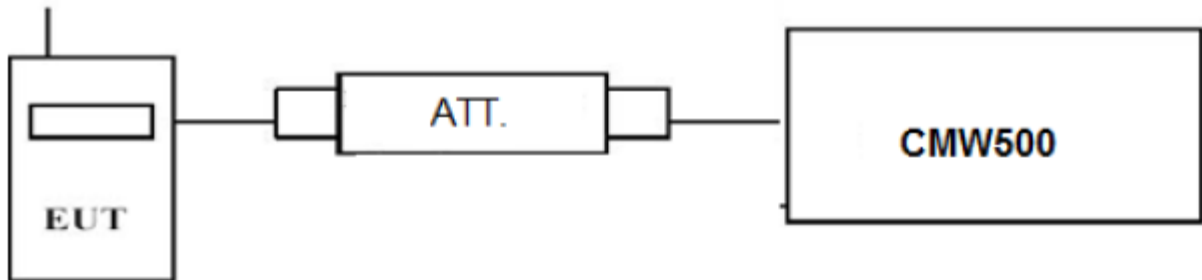
4.1.1 Conducted Output Power

TEST APPLICABLE

Part 27.50(h)(2), during the process of testing, the EUT was controlled via R&S Digital Radio Communication tester (CMW500) to ensure max power transmission and proper modulation. This result contains output power measurements for the EUT. In all cases, output power is within the specified limits.

TEST CONFIGURATION

Conducted Power Measurement:



TEST PROCEDURE

Conducted Power Measurement:

- Place the EUT on a bench and set it in transmitting mode.
- Connect a low loss RF cable from the antenna port to a CMW500 by an Att.
- EUT Communicate with CMW500 then selects a channel for testing.
- Add a correction factor to the display CMW500, and then test.

TEST RESULTS



Remark:

1. We measured all RB Configuration refer 3GPP TS136 521 for each Channel Bandwidth of LTE Band 7;

LTE Band 7				
TX Channel Bandwidth	Frequency (MHz)	RB Size/Offset	Burst Average Power [dBm]	
			QPSK	16QAM
5 MHz	2502.5	1 RB low	23.40	22.32
		1 RB mid	23.33	22.22
		1 RB high	23.25	22.20
		50% RB low	22.22	21.17
		50% RB mid	22.24	21.15
		50% RB high	22.20	21.17
		100% RB	22.13	21.14
	2535	1 RB low	23.09	21.98
		1 RB mid	23.06	21.94
		1 RB high	23.08	21.99
		50% RB low	21.87	20.84
		50% RB mid	21.89	20.86
		50% RB high	21.93	20.92
		100% RB	21.85	20.87
	2567.5	1 RB low	23.06	21.94
		1 RB mid	22.88	21.74
		1 RB high	22.88	21.73
		50% RB low	21.75	20.73
		50% RB mid	21.75	20.74
		50% RB high	21.68	20.72
		100% RB	21.72	20.72
10 MHz	2505	1 RB low	23.34	22.37
		1 RB mid	23.16	22.18
		1 RB high	23.08	22.15
		50% RB low	22.31	21.27
		50% RB mid	22.34	21.27
		50% RB high	22.09	21.07
		100% RB	22.25	/
	2535	1 RB low	23.14	22.18
		1 RB mid	22.96	21.98
		1 RB high	23.16	22.23
		50% RB low	21.88	20.87
		50% RB mid	21.90	20.85
		50% RB high	21.82	20.89
		100% RB	21.92	/
	2565	1 RB low	23.10	22.15
		1 RB mid	22.77	21.84
		1 RB high	22.96	21.89
		50% RB low	21.84	20.84
		50% RB mid	21.81	20.87
		50% RB high	21.77	20.79
		100% RB	21.87	/



15 MHz	2507.5	1 RB low	23.03	22.07
		1 RB mid	23.06	22.08
		1 RB high	22.82	21.86
		50% RB low	22.08	22.09
		50% RB mid	22.09	22.08
		50% RB high	22.07	22.08
		100% RB	22.08	/
	2535	1 RB low	22.85	21.82
		1 RB mid	22.82	21.84
		1 RB high	22.85	21.98
		50% RB low	21.86	21.86
		50% RB mid	21.86	21.86
		50% RB high	21.86	21.86
		100% RB	21.85	/
	2562.5	1 RB low	22.86	21.88
		1 RB mid	22.80	21.81
		1 RB high	22.81	21.77
		50% RB low	21.78	21.79
		50% RB mid	21.80	21.82
		50% RB high	21.84	21.83
		100% RB	21.84	/
20 MHz	2510	1 RB low	23.12	22.03
		1 RB mid	23.26	22.05
		1 RB high	22.80	21.74
		50% RB low	22.19	21.14
		50% RB mid	22.19	21.10
		50% RB high	21.94	20.89
		100% RB	22.11	/
	2535	1 RB low	22.93	21.87
		1 RB mid	22.94	21.92
		1 RB high	22.98	21.91
		50% RB low	21.81	20.85
		50% RB mid	21.82	20.85
		50% RB high	21.83	20.80
		100% RB	21.89	/
	2560	1 RB low	23.16	21.97
		1 RB mid	22.97	21.98
		1 RB high	22.84	21.74
		50% RB low	22.02	21.02
		50% RB mid	22.03	20.98
		50% RB high	21.89	20.88
		100% RB	21.91	/

The results shown in this test report refer only to the sample(s) tested unless otherwise stated and the sample(s) are retained for 30 days only. The document is issued by HUAKE, this document cannot be reproduced except in full with our prior written permission. The more details and the authenticity of the report will be confirmed at <http://www.cer-mark.com>.

TEL : +86-755 2302 9901 FAX : +86-755 2302 9901 E-mail : service@cer-mark.com

Add: 1-2F., Building B2, Junfeng Zhongcheng Zhizao Innovation Park, Heping Community, Fuhai Street, Bao'an District, Shenzhen, Guangdong, China



4.1.2. Radiated Output Power

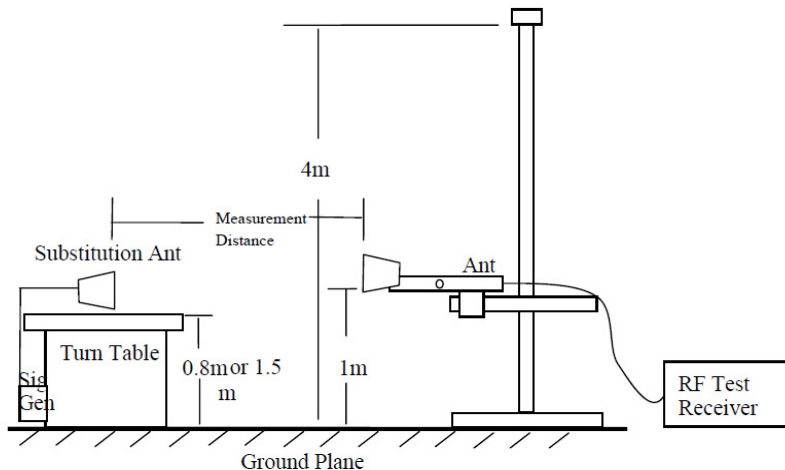
LIMIT

This is the test for the maximum radiated power from the EUT.

TEST CONFIGURATION

Radiated Power Measurement:

remark : 0.8m for below 1GHz, 1.5m for above 1GHz



TEST PROCEDURE

The EUT was setup according to EIA/TIA 603D

- The EUT shall be placed at the specified height on a support, and in the position closest to normal use as declared by provider.
- The test antenna shall be oriented initially for vertical polarization and shall be chosen to correspond to the frequency of the transmitter.
- The output of the test antenna shall be connected to the measuring receiver.
- The transmitter shall be switched on and the measuring receiver shall be tuned to the frequency of the transmitter under test.
- 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.
- The transmitter shall then be rotated through 360° in the horizontal plane, until the maximum signal level is detected by the measuring receiver.
- 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.
- The maximum signal level detected by the measuring receiver shall be noted.
- The transmitter shall be replaced by a substitution antenna.
- 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.
- The substitution antenna shall be connected to a calibrated signal generator.
- If necessary, the input attenuator setting of the measuring receiver shall be adjusted in order to increase the sensitivity of the measuring receiver.
- The test antenna shall be raised and lowered through the specified range of height to ensure that the maximum signal is received.
- 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.
- The measurement shall be repeated with the test antenna and the substitution antenna orientated for horizontal polarization.
- 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.
- Test site anechoic chamber refer to ANSI C63.4.

**TEST RESULTS****Radiated Measurement:***Remark:*

1. We measured all RB Configuration refer 3GPP TS136 521 for each Channel Bandwidth of LTE Band 7; recorded worst case for each Channel Bandwidth of LTE Band 7.
2. $EIRP = P_s(dBm) - P_{cl}(dB) + G_a(dBi)$
3. We measured both Horizontal and Vertical direction, recorded worst case direction.

LTE Band 7 Channel Bandwidth 5MHz_QPSK_1RB#0

Frequency (MHz)	P_s (dBm)	P_{cl} (dB)	G_a Antenna Gain(dB)	Burst Average EIRP (dBm)	Limit (dBm)	Margin (dB)	Polarization
2502.5	11.97	3.41	15.12	23.68	33.01	9.33	V
2535	13.1	3.49	15.12	24.73	33.01	8.28	V
2567.5	11.72	3.55	15.12	23.29	33.01	9.72	V

LTE Band 7 Channel Bandwidth 10MHz_QPSK_1RB#0

Frequency (MHz)	P_s (dBm)	P_{cl} (dB)	G_a Antenna Gain(dB)	Burst Average EIRP (dBm)	Limit (dBm)	Margin (dB)	Polarization
2505	12.47	3.41	15.12	24.18	33.01	8.83	V
2535	12.58	3.49	15.12	24.21	33.01	8.8	V
2565	11.42	3.55	15.12	22.99	33.01	10.02	V

LTE Band 7 Channel Bandwidth 15MHz_QPSK_1RB#0

Frequency (MHz)	P_s (dBm)	P_{cl} (dB)	G_a Antenna Gain(dB)	Burst Average EIRP (dBm)	Limit (dBm)	Margin (dB)	Polarization
2507.5	12.31	3.41	15.12	24.02	33.01	8.99	V
2535	12.95	3.49	15.12	24.58	33.01	8.43	V
2562.5	11.07	3.55	15.12	22.64	33.01	10.37	V

LTE Band 7 Channel Bandwidth 20MHz_QPSK_1RB#0

Frequency (MHz)	P_s (dBm)	P_{cl} (dB)	G_a Antenna Gain(dB)	Burst Average EIRP (dBm)	Limit (dBm)	Margin (dB)	Polarization
2510	13.29	3.41	15.12	25	33.01	8.01	V
2535	12.59	3.49	15.12	24.22	33.01	8.79	V
2560	11.65	3.55	15.12	23.22	33.01	9.79	V

**LTE Band 7 Channel Bandwidth 5MHz 16QAM 1RB#0**

Frequency (MHz)	P _s (dBm)	P _{cl} (dB)	G _a Antenna Gain(dB)	Burst Average EIRP (dBm)	Limit (dBm)	Margin (dB)	Polarization
2502.5	12.42	3.41	15.12	24.13	33.01	8.88	V
2535	12.79	3.49	15.12	24.42	33.01	8.59	V
2567.5	11.74	3.55	15.12	23.31	33.01	9.7	V

LTE Band 7 Channel Bandwidth 10MHz 16QAM 1RB#0

Frequency (MHz)	P _s (dBm)	P _{cl} (dB)	G _a Antenna Gain(dB)	Burst Average EIRP (dBm)	Limit (dBm)	Margin (dB)	Polarization
2505	12.02	3.41	15.12	23.73	33.01	9.28	V
2535	12.41	3.49	15.12	24.04	33.01	8.97	V
2565	11.18	3.55	15.12	22.75	33.01	10.26	V

LTE Band 7 Channel Bandwidth 15MHz 16QAM 1RB#0

Frequency (MHz)	P _s (dBm)	P _{cl} (dB)	G _a Antenna Gain(dB)	Burst Average EIRP (dBm)	Limit (dBm)	Margin (dB)	Polarization
2507.5	12.67	3.41	15.12	24.38	33.01	8.63	V
2535	13.13	3.49	15.12	24.76	33.01	8.25	V
2562.5	11.31	3.55	15.12	22.88	33.01	10.13	V

LTE Band 7 Channel Bandwidth 20MHz 16QAM 1RB#0

Frequency (MHz)	P _s (dBm)	P _{cl} (dB)	G _a Antenna Gain(dB)	Burst Average EIRP (dBm)	Limit (dBm)	Margin (dB)	Polarization
2510	13.76	3.41	15.12	25.47	33.01	7.54	V
2535	12.67	3.49	15.12	24.3	33.01	8.71	V
2560	11.53	3.55	15.12	23.1	33.01	9.91	V

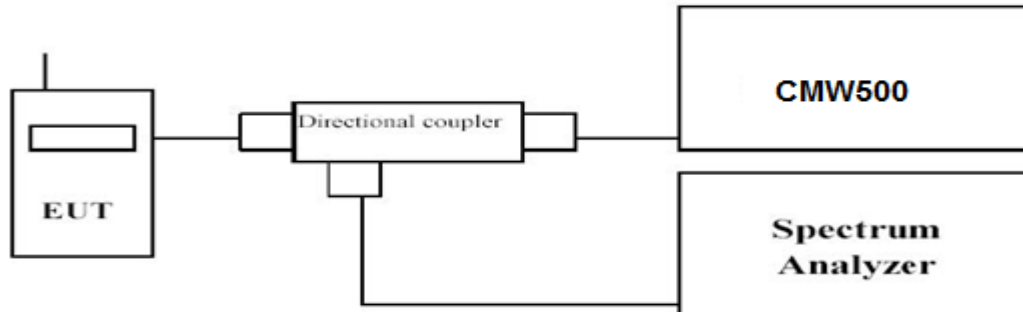


4.2 Peak-to-Average Ratio (PAR)

LIMIT

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

TEST CONFIGURATION



TEST PROCEDURE

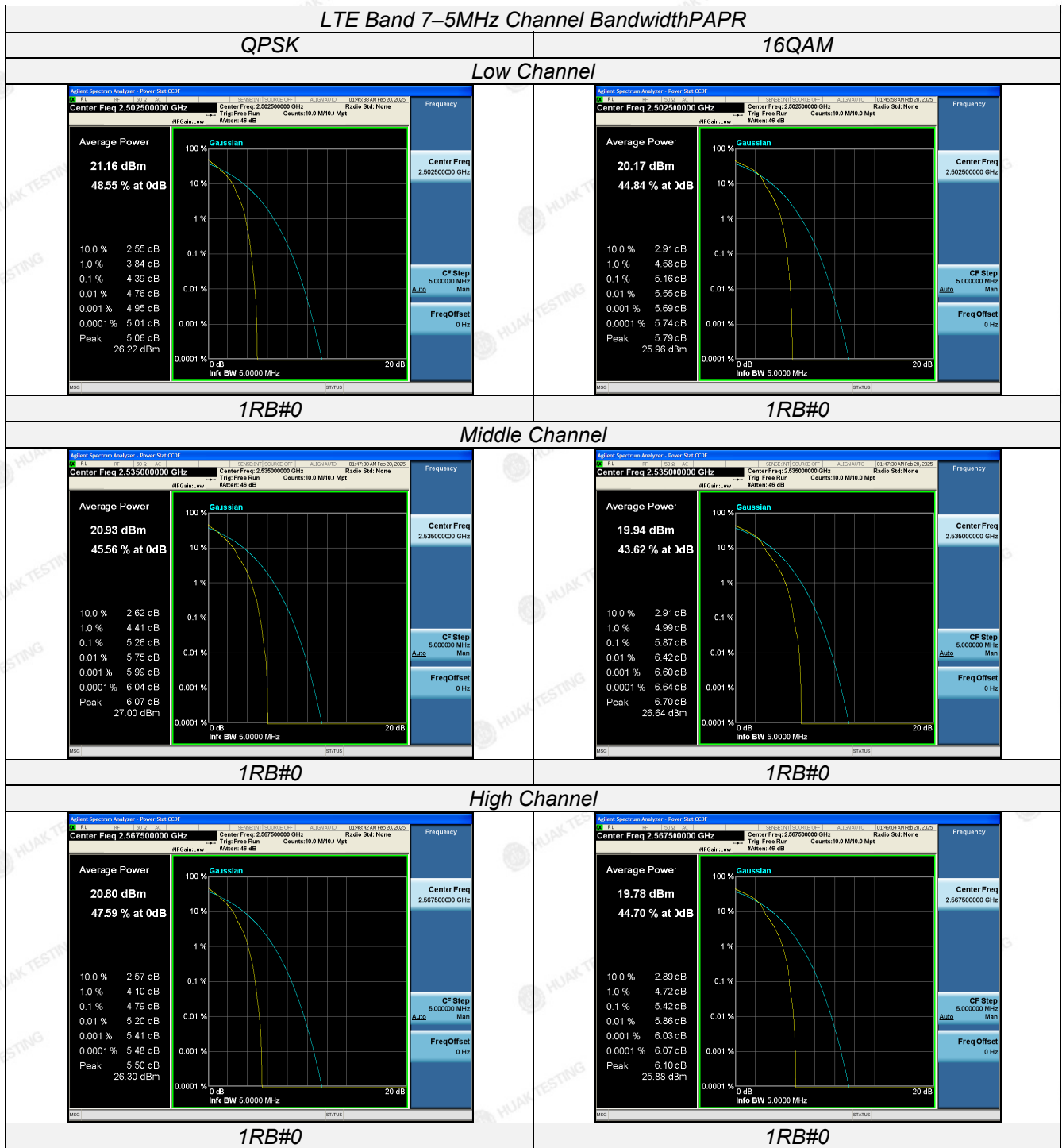
1. Refer to instrument's analyzer instruction manual for details on how to use the power statistics/CCDF function;
2. Set resolution/measurement bandwidth $\geq$ signal's occupied bandwidth;
3. Set the number of counts to a value that stabilizes the measured CCDF curve;
4. Set the measurement interval 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

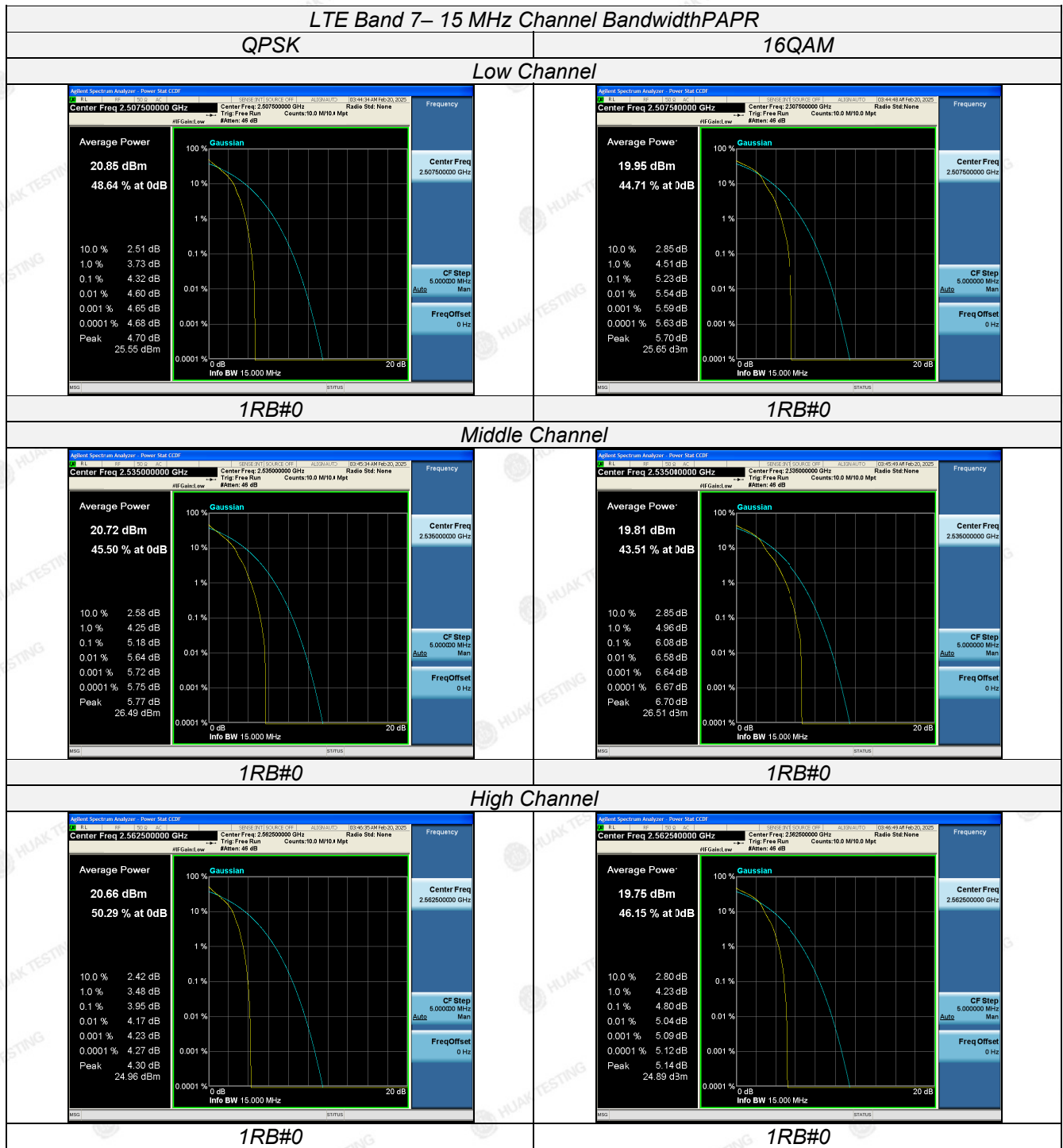
Remark:

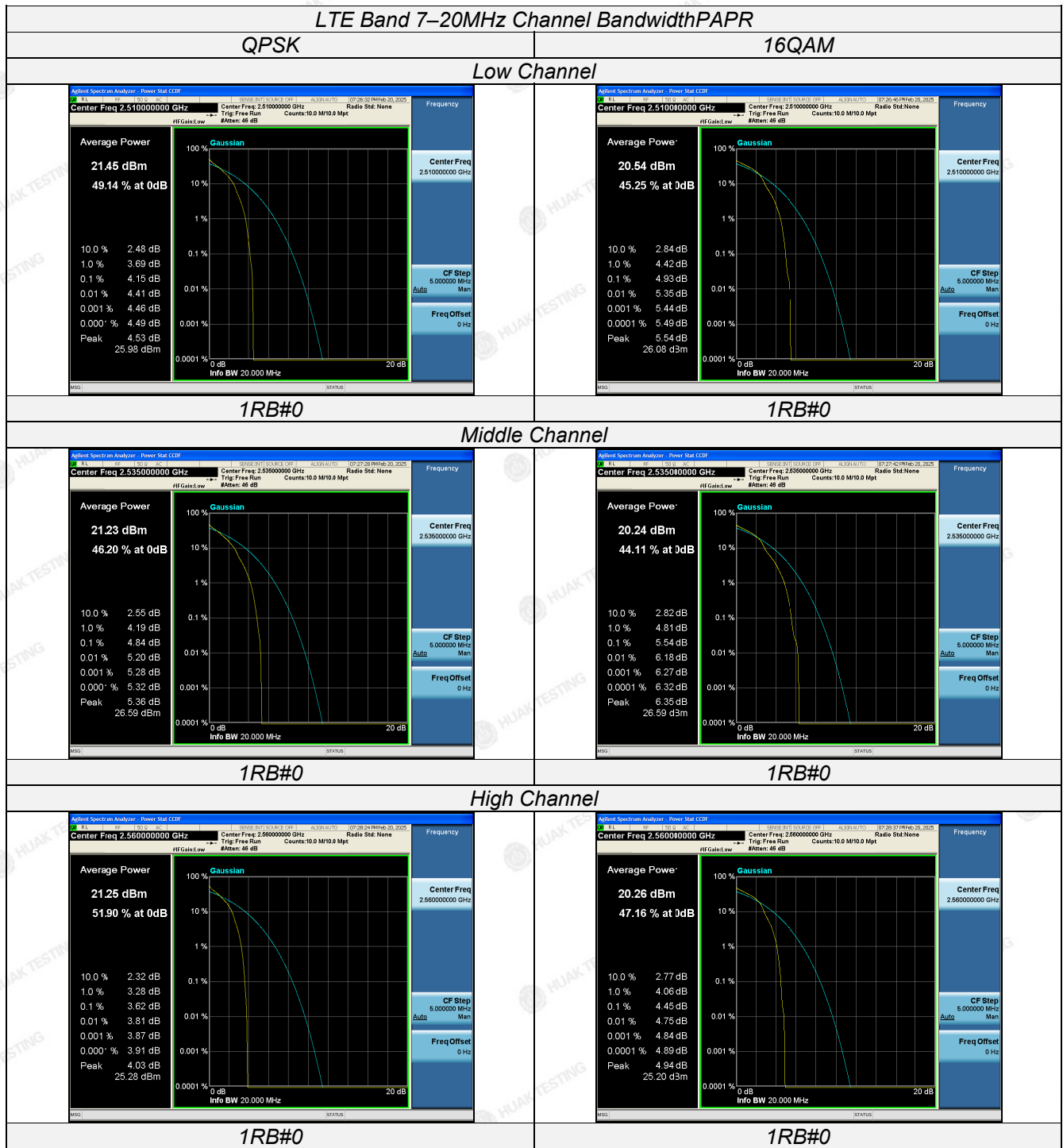
1. We measured all RB Configuration refer 3GPP TS136 521 for each Channel Bandwidth of LTE Band 7; recorded worst case for each Channel Bandwidth of LTE Band 7.

LTE Band 7				
TX Channel Bandwidth	Frequency (MHz)	RB Size/Offset	PAPR(dB)	
			QPSK	16QAM
5 MHz	2502.5	1RB#0	4.39	5.16
	2535		5.26	5.87
	2567.5		4.79	5.42
10 MHz	2505	1RB#0	4.24	5.17
	2535		5.22	6.08
	2565		4.29	5.12
15 MHz	2507.5	1RB#0	4.32	5.23
	2535		5.18	6.08
	2562.5		3.95	4.80
20 MHz	2510	1RB#0	4.15	4.93
	2535		4.84	5.54
	2560		3.62	4.45









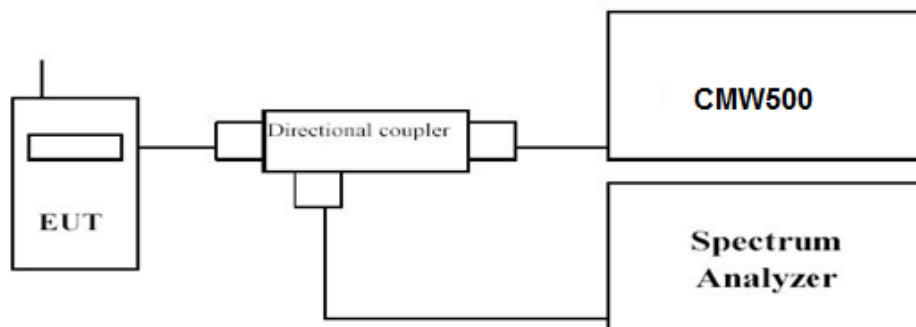


4.3 Occupied Bandwidth and Emission Bandwidth

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 Band 7; recorded worst case for each Channel Bandwidth of LTE Band 7.

LTE Band 7						
TX Channel Bandwidth	RB Size/Offset	Frequency (MHz)	99% Occupied bandwidth (MHz)		-26dBc Emission bandwidth (MHz)	
			QPSK	16QAM	QPSK	16QAM
5 MHz	25RB#0	2502.5	4.5154	4.5052	5.017	4.977
		2535	4.5103	4.5036	5.033	4.993
		2567.5	4.5082	4.5066	5.020	4.990
10 MHz	50RB#0	2505	8.9817	8.9824	9.906	9.832
		2535	8.9877	8.9903	9.937	9.895
		2565	8.9918	8.9983	9.938	9.832
15 MHz	75RB#0	2507.5	13.481	13.479	14.87	14.70
		2535	13.513	13.485	14.73	14.79
		2562.5	13.507	13.493	14.85	14.74
20 MHz	100RB#0	2510	17.921	17.926	19.43	19.51
		2535	17.975	17.946	19.59	19.64
		2560	17.948	17.984	19.57	19.48

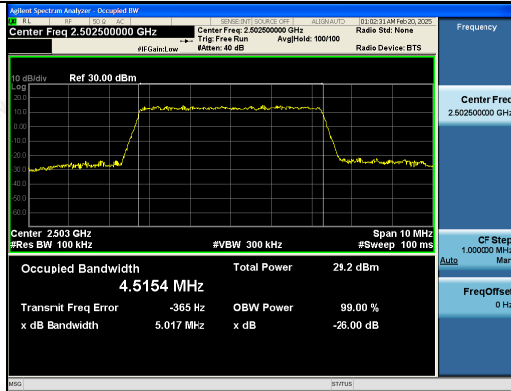


LTE Band 7-5MHz Channel Bandwidth Occupied Bandwidth and Emission Bandwidth

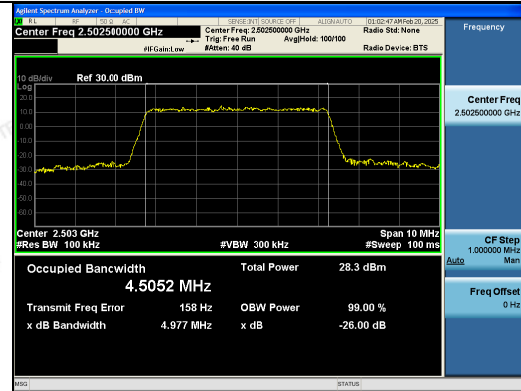
QPSK

16QAM

Low Channel

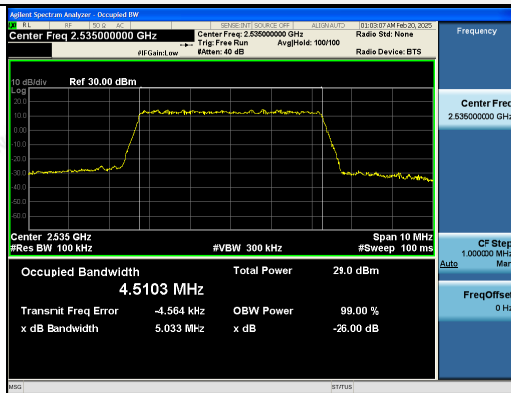


25RB#0

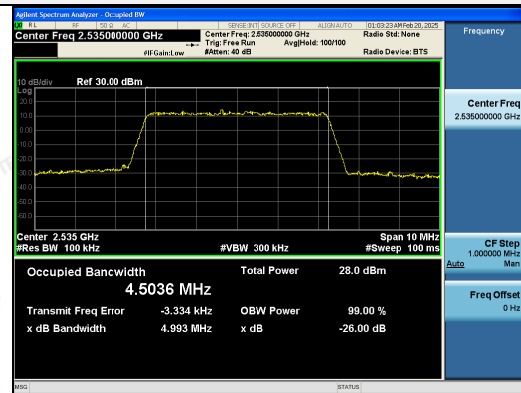


25RB#0

Middle Channel

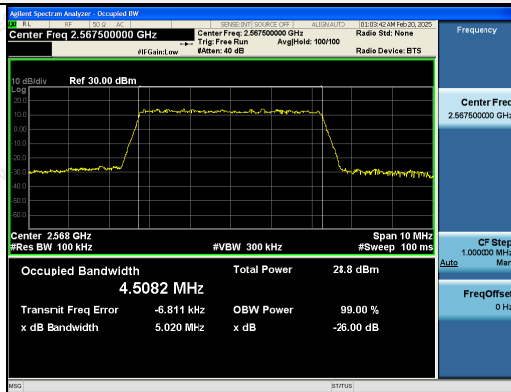


25RB#0

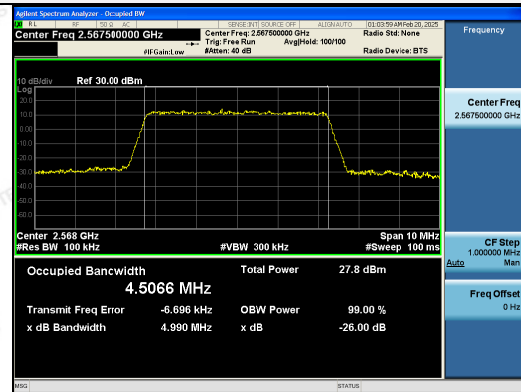


25RB#0

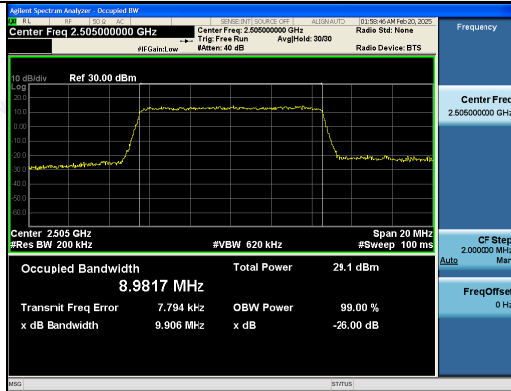
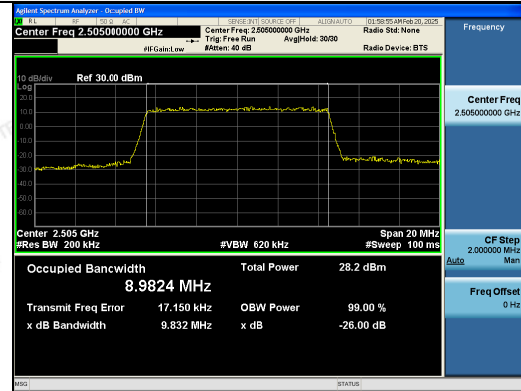
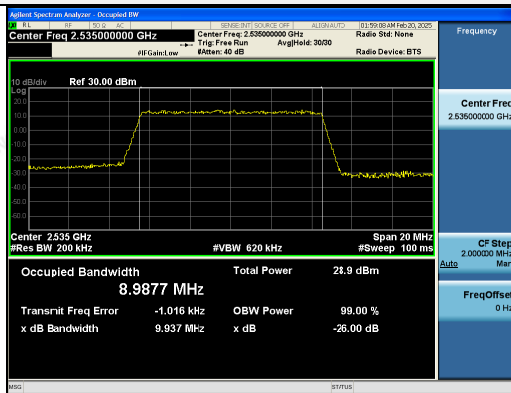
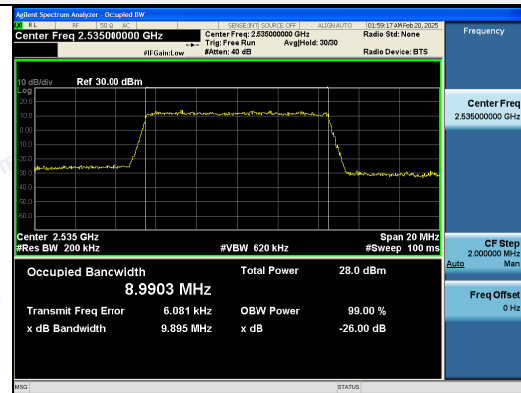
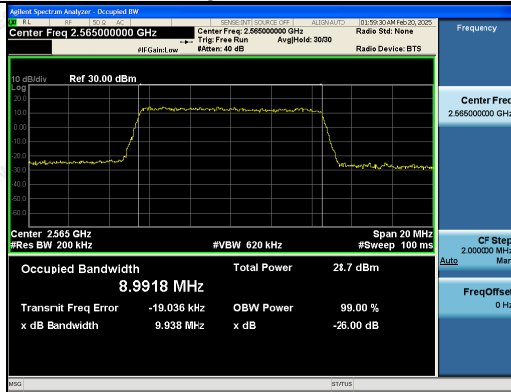
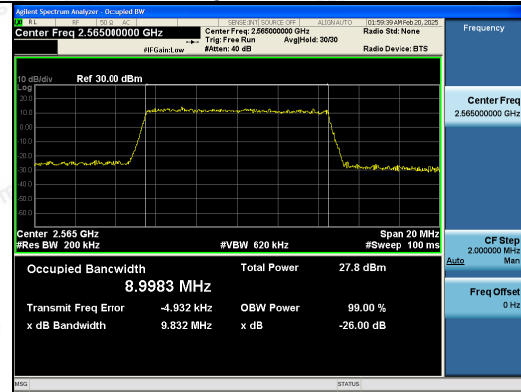
High Channel



25RB#0



25RB#0

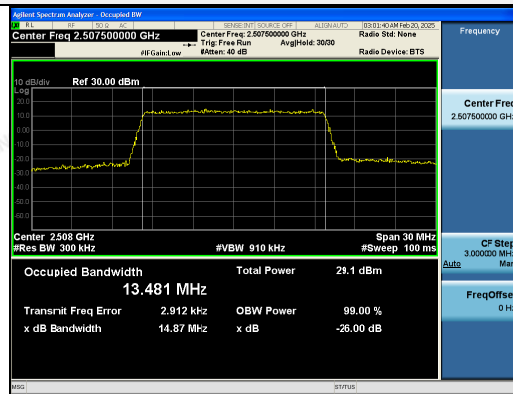
**LTE Band 7-10MHz Channel Bandwidth Occupied Bandwidth and Emission Bandwidth
QPSK****Low Channel****Low Channel****50RB#0
Middle Channel****50RB#0
Middle Channel****50RB#0
High Channel****50RB#0
High Channel****50RB#0****50RB#0**



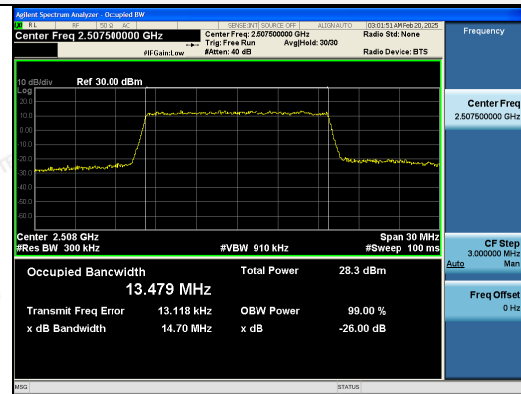
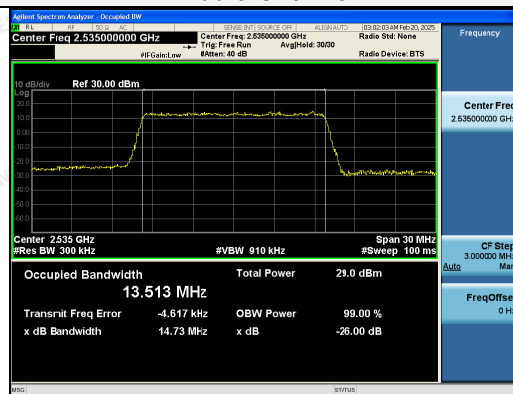
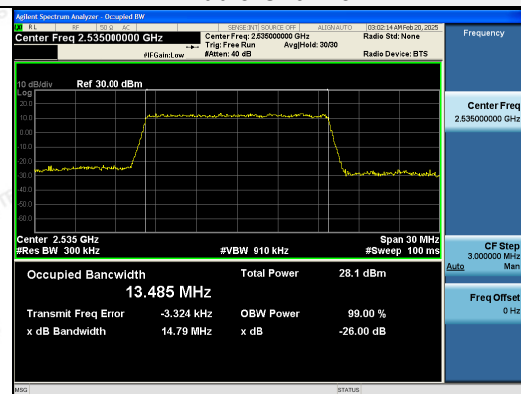
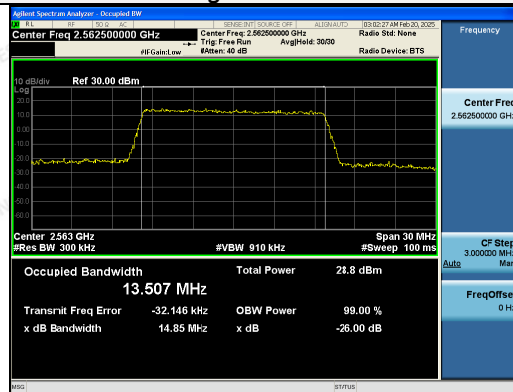
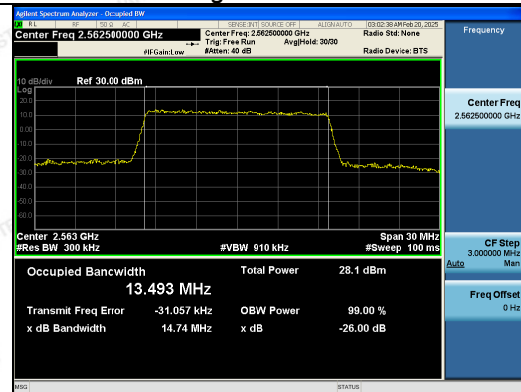
LTE Band 7-15MHz Channel Bandwidth Occupied Bandwidth and Emission Bandwidth

QPSK

Low Channel



Low Channel

75RB#0
Middle Channel75RB#0
Middle Channel75RB#0
High Channel75RB#0
High Channel

75RB#0

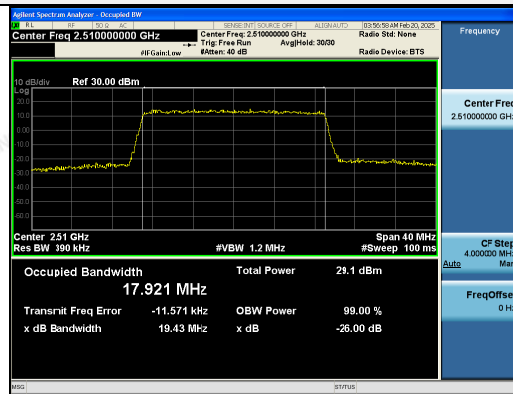
75RB#0



LTE Band 7-20MHz Channel Bandwidth Occupied Bandwidth and Emission Bandwidth

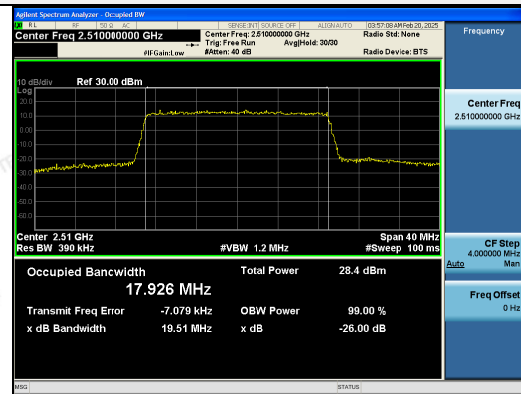
QPSK

Low Channel



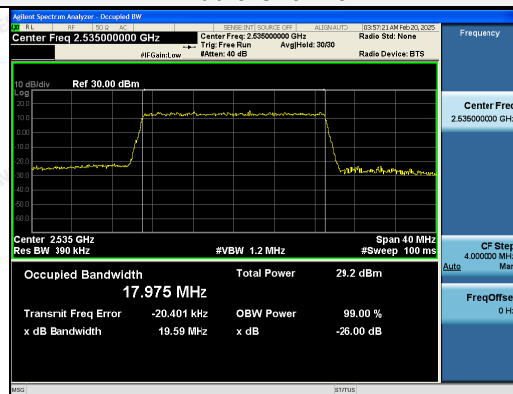
16QAM

Low Channel



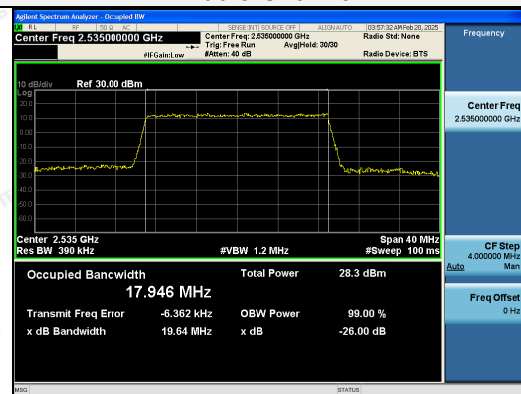
100RB#0

Middle Channel



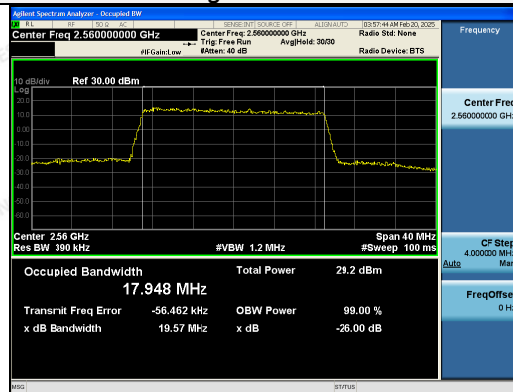
100RB#0

Middle Channel



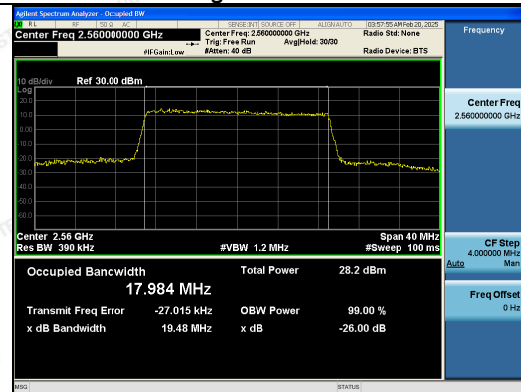
100RB#0

High Channel



100RB#0

High Channel



100RB#0

100RB#0

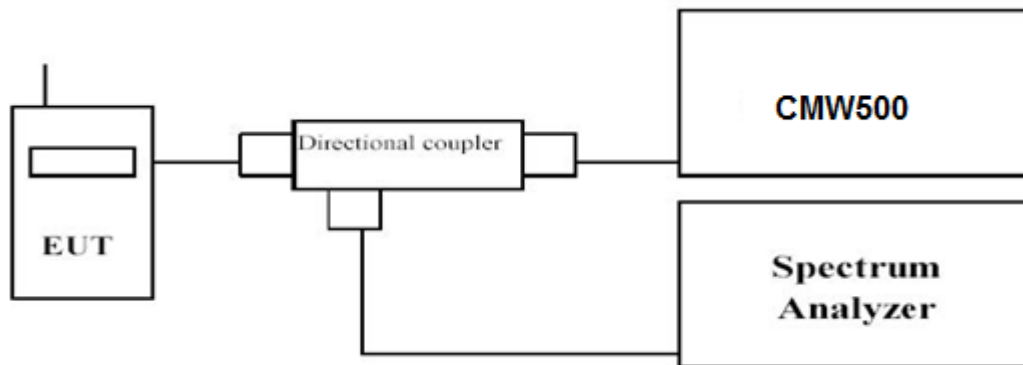


4.4 Band Edge compliance

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 $40 + 10 \log P$ dB (–10 dBm, 100 nW) on all frequencies between the channel edge and 5 MHz from the channel edge, $43 + 10 \log P$ dB (–13 dBm, 50 nW) on all frequencies between 5 MHz and X MHz from the channel edge, and $55 + 10 \log P$ dB (–25 dBm, 3 nW) on all frequencies more than 20 MHz from the channel edge, where X MHz is the greater of 6 MHz or the actual emission bandwidth (26 dB).

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
6. Set RBW = 100 kHz, VBW=300 kHz, Span=50MHz Peak Detector.

TEST RESULTS

Remark:

1. We were tested all RB Configuration refer 3GPP TS136 521 for each Channel Bandwidth of LTE Band 7; recorded worst case for each Channel Bandwidth of LTE Band 7.