





RF TEST REPORT

Applicant Quectel Wireless Solutions Co., Ltd

FCC ID XMR201909EC21AUX

Product LTE Module

Brand Quectel

Model EC21-AUX, EC21-AUX MINIPCIE

Report No. R1908A0502-R3

Issue Date November 6, 2019

TA Technology (Shanghai) Co., Ltd. tested the above equipment in accordance with the requirements in FCC CFR47 Part 2 (2018)/ FCC CFR47 Part 27C (2018). The test results show that the equipment tested is capable of demonstrating compliance with the requirements as documented in this report.

Performed by: Peng Tao

Approved by: Kai Xu

TA Technology (Shanghai) Co., Ltd.

No.145, Jintang Rd, Tangzhen Industry Park, Pudong Shanghai, China TEL: +86-021-50791141/2/3 FAX: +86-021-50791141/2/3-8000



TABLE OF CONTENT

1	Tes	t Laboratoryt	4
	1.1	Notes of the Test Report	4
	1.2	Testing Location	4
2	Ger	neral Description of Equipment under Test	5
	2.1	Applicant and Manufacturer Information	5
	2.2	General information	5
3	App	olied Standards	6
4	Tes	t Configuration	7
5	Tes	t Case Results	9
	5.1	RF Power Output	9
	5.2	Effective Isotropic Radiated Power	21
	5.3	Occupied Bandwidth	36
	5.4	Band Edge Compliance	60
	5.5	Peak-to-Average Power Ratio (PAPR)	157
	5.6	Frequency Stability	160
	5.7	Spurious Emissions at Antenna Terminals	167
	5.8	Radiates Spurious Emission	296
6	Mai	in Test Instruments	302



Summary of Measurement Results

Number	Test Case	Clause in FCC rules	Verdict
1	RF power output	2.1046	PASS
2	Effective Isotropic Radiated power	27.50(d)(4) /27.50(h)(2)	PASS
3	Occupied Bandwidth	2.1049	PASS
4	Band Edge Compliance	27.53(h) /27.53(m)	PASS
5	Peak-to-Average Power Ratio	27.50(d)/KDB971168 D01(5.7)	PASS
6	Frequency Stability	2.1055 / 27.54	PASS
7	Spurious Emissions at Antenna Terminals	2.1051 /27.53(h)/27.53(m)	PASS
8	Radiates Spurious Emission	2.1051 /27.53(h)/27.53(m)	PASS

Note: PASS: The EUT complies with the essential requirements in the standard.

FAIL: The EUT does not comply with the essential requirements in the standard.

Date of Testing: August 19, 2019 ~October 10, 2019



RF Test Report No.: R1908A0502-R3

1 Test Laboratory

1.1 Notes of the Test Report

This report shall not be reproduced in full or partial, without the written approval of **TA technology** (shanghai) co., Ltd. The results documented in this report apply only to the tested sample, under the conditions and modes of operation as described herein .Measurement Uncertainties were not taken into account and are published for informational purposes only. This report is written to support regulatory compliance of the applicable standards stated above.

1.2 Testing Location

Company: TA Technology (Shanghai) Co., Ltd.

Address: No.145, Jintang Rd, Tangzhen Industry Park, Pudong Shanghai, China

City: Shanghai

Post code: 201201

Country: P. R. China

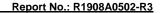
Contact: Xu Kai

Telephone: +86-021-50791141/2/3

Fax: +86-021-50791141/2/3-8000

Website: http://www.ta-shanghai.com

E-mail: xukai@ta-shanghai.com





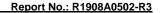
2 General Description of Equipment under Test

2.1 Applicant and Manufacturer Information

Applicant	Quectel Wireless Solutions Co., Ltd			
Applicant address	Building 5, Shanghai Business Park Phase III (Area B), No.1016			
Applicant address	Tianlin Road, Minhang District, Shanghai, China 200233			
Manufacturer	Quectel Wireless Solutions Co., Ltd			
Manufacturer address	Building 5, Shanghai Business Park Phase III (Area B), No.1016			
Manufacturer address	Tianlin Road, Minhang District, Shanghai, China 200233			

2.2 General information

EUT Description							
Model	EC21-AUX, EC21-AUX	MINIPCIE					
IMEI	868450040001099						
Hardware Version	R1.0						
Software Version	EC21AUXGAR08A01M	11G					
Power Supply	External power supply						
Antenna Type	The EUT don't have statesting in this report in Antenna)	*					
Antenna Gain	4dBi						
Test Mode(s)	WCDMA Band IV; LTE	Band 4/7;					
Test Modulation	(WCDMA) BPSK, QPSI	K,16QAM; (LTE)QF	PSK 16QAM;				
HSDPA UE Category	24						
HSUPA UE Category	6						
DC-HSDPA UE Category	24						
HSPA+ UE Category	6						
LTE Category	1						
	WCDMA Band IV:	25.78dBm					
Maximum E.I.R.P.	LTE Band 4:	25.83dm					
	LTE Band 7:	26.58dBm					
Rated Power Supply Voltage:	3.8V						
Extreme Voltage	Minimum: 3.3V Maxi	mum: 4.3V					
Extreme Temperature	Lowest: -40°C High	est: +85°C					
	Mode	Tx (MHz)	Rx (MHz)				
Operating Frequency Range(s)	WCDMA Band IV	1710 ~ 1755	2110 ~ 2155				
Operating Frequency (varige(s)	LTE Band 4	1710 ~ 1755	2110 ~ 2155				
	LTE Band 7	2500 ~ 2570	2620 ~ 2690				
Note: 1. The information of the E	UT is declared by the ma	anufacturer.					





3 Applied Standards

According to the specifications of the manufacturer, it must comply with the requirements of the following standards:

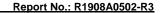
Test standards

FCC CFR47 Part 2 (2018)

FCC CFR47 Part 27C (2018)

ANSI C63.26 (2015)

KDB 971168 D01 Power Meas License Digital Systems v03r01





4 Test Configuration

Radiated measurements are performed by rotating the EUT in three different orthogonal test planes. EUT stand-up position (Z axis), lie-down position (X, Y axis). Receiver antenna polarization (horizontal and vertical), the worst emission was found in position (Z axis, horizontal polarization) and the worst case was recorded.

All mode and data rates and positions and RB size and modulations were investigated.

Subsequently, only the worst case emissions are reported.

The following testing in WCDMA/LTE is set based on the maximum RF Output Power.

The following testing in different Bandwidth is set to detailin the following table:

Test modes are chosen to be reported as the worst case configuration below for WCDMA Band IV:

Test items	Modes/Modulation
rest items	WCDMA Band IV
	RMC
RF power output	HSDPA/HSUPA
	DC-HSDPA
Effective Isotropic Radiated power	RMC
Occupied Bandwidth	RMC
Band Edge Compliance	RMC
Peak-to-Average Power Ratio	RMC
Frequency Stability	RMC
Spurious Emissions at Antenna Terminals	RMC
Radiates Spurious Emission	RMC



Test Report No.: R1908A0502-R3

Test modes are chosen to be reported as the worst case configuration below for LTE Band 4/7:

Test items	Modes	Modes Bandwidth (MHz) Modulation			RB		Test Channel								
		1.4	3	5	10	15	20	QPSK	16QAM	1	50%	100%	L	M	Н
RF power	LTE 4	0	0	0	0	0	0	0	0	0	0	0	0	0	0
output	LTE 7	-	-	0	0	0	0	0	0	0	0	0	0	0	0
Effective Isotropic	LTE 4	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Radiated power	LTE 7	-	•	0	0	0	0	0	0	0	0	0	0	0	0
Occupied	LTE 4	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Bandwidth	LTE 7	1	ı	0	0	0	0	0	0	0	0	0	0	0	0
Band Edge	LTE 4	0	0	0	0	0	0	0	0	0	-	0	0	-	0
Compliance	LTE 7	-	-	0	0	0	0	0	0	0	-	0	0	-	0
Peak-to-Aver age Power	LTE 4	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Ratio	LTE 7	-	•	0	0	0	0	0	0	0	0	0	0	0	0
Frequency	LTE 4	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Stability	LTE 7	1	ı	0	0	0	0	0	0	0	0	0	0	0	0
Spurious Emissions at	LTE 4	0	0	0	0	0	0	0	0	0	-	-	0	0	0
Antenna Terminals	LTE 7	-	-	0	0	0	0	0	0	0	-	-	0	0	0
Radiates	LTE 4	0	-	0	-	-	0	0	-	0	-	-	0	0	0
Spurious Emission	LTE 7	-	-	0	-	0	0	0	-	0	-	-	0	0	0
Note	1. The m 2. The m					•	•		sen for test esting.	ing.					



5 Test Case Results

5.1 RF Power Output

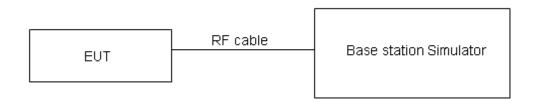
Ambient condition

Temperature	Relative humidity	Pressure
23°C ~25°C	45%~50%	101.5kPa

Methods of Measurement

During the process of the testing, The EUT is controlled by the Base Station Simulator to ensure max power transmission and proper modulation.

Test Setup



The loss between RF output port of the EUT and the input port of the tester has been taken into consideration.

Limits

No specific RF power output requirements in part 2.1046.

Measurement Uncertainty

The assessed measurement uncertainty to ensure 95% confidence level for the normal distribution is with the coverage factor k = 2, U=0.4 dB.



Band	Channel	SubTest	Power(dBm)	Limit(dBm)	Verdict
WCDMA Band IV	1312	HSDPA_Sub0	23.44	30	PASS
WCDMA Band IV	1312	HSDPA_Sub1	22.91	30	PASS
WCDMA Band IV	1312	HSDPA_Sub2	22.91	30	PASS
WCDMA Band IV	1312	HSDPA_Sub3	23.03	30	PASS
WCDMA Band IV	1413	HSDPA_Sub0	23.39	30	PASS
WCDMA Band IV	1413	HSDPA_Sub1	22.85	30	PASS
WCDMA Band IV	1413	HSDPA_Sub2	22.94	30	PASS
WCDMA Band IV	1413	HSDPA_Sub3	22.92	30	PASS
WCDMA Band IV	1513	HSDPA_Sub0	23.32	30	PASS
WCDMA Band IV	1513	HSDPA_Sub1	22.93	30	PASS
WCDMA Band IV	1513	HSDPA_Sub2	22.95	30	PASS
WCDMA Band IV	1513	HSDPA_Sub3	22.71	30	PASS
Band	Channel	SubTest	Power(dBm)	Limit(dBm)	Verdict
WCDMA Band IV	1312	HSUPA_Sub1	22.80	33	PASS
WCDMA Band IV	1312	HSUPA_Sub2	21.29	33	PASS
WCDMA Band IV	1312	HSUPA_Sub3	22.49	33	PASS
WCDMA Band IV	1312	HSUPA_Sub4	21.91	30	PASS
WCDMA Band IV	1312	HSUPA_Sub5	23.38	30	PASS
WCDMA Band IV	1413	HSUPA_Sub1	22.90	30	PASS
WCDMA Band IV	1413	HSUPA_Sub2	21.38	30	PASS
WCDMA Band IV	1413	HSUPA_Sub3	22.49	30	PASS
WCDMA Band IV	1413	HSUPA_Sub4	22.01	30	PASS
WCDMA Band IV	1413	HSUPA_Sub5	23.45	30	PASS
WCDMA Band IV	1513	HSUPA_Sub1	23.30	30	PASS
WCDMA Band IV	1513	HSUPA_Sub2	21.40	30	PASS
WCDMA Band IV	1513	HSUPA_Sub3	22.49	30	PASS
WCDMA Band IV	1513	HSUPA_Sub4	22.11	30	PASS
WCDMA Band IV	1513	HSUPA_Sub5	23.65	30	PASS



				RB	Result	
Band	Bandwidth	Modulation	Channel	Configuration	(dBm)	Verdict
LTE Band 4	1.4MHz	QPSK	19957	1RB#0	23.48	PASS
LTE Band 4	1.4MHz	16QAM	19957	1RB#0	22.20	PASS
LTE Band 4	1.4MHz	QPSK	19957	1RB#2	23.50	PASS
LTE Band 4	1.4MHz	16QAM	19957	1RB#2	22.68	PASS
LTE Band 4	1.4MHz	QPSK	19957	1RB#5	23.26	PASS
LTE Band 4	1.4MHz	16QAM	19957	1RB#5	22.46	PASS
LTE Band 4	1.4MHz	QPSK	19957	3RB#0	23.49	PASS
LTE Band 4	1.4MHz	16QAM	19957	3RB#0	22.50	PASS
LTE Band 4	1.4MHz	QPSK	19957	3RB#1	23.57	PASS
LTE Band 4	1.4MHz	16QAM	19957	3RB#1	22.39	PASS
LTE Band 4	1.4MHz	QPSK	19957	3RB#3	23.49	PASS
LTE Band 4	1.4MHz	16QAM	19957	3RB#3	22.49	PASS
LTE Band 4	1.4MHz	QPSK	19957	6RB#0	22.40	PASS
LTE Band 4	1.4MHz	16QAM	19957	6RB#0	21.47	PASS
LTE Band 4	1.4MHz	QPSK	20175	1RB#0	23.61	PASS
LTE Band 4	1.4MHz	16QAM	20175	1RB#0	22.51	PASS
LTE Band 4	1.4MHz	QPSK	20175	1RB#2	23.88	PASS
LTE Band 4	1.4MHz	16QAM	20175	1RB#2	22.71	PASS
LTE Band 4	1.4MHz	QPSK	20175	1RB#5	23.41	PASS
LTE Band 4	1.4MHz	16QAM	20175	1RB#5	22.68	PASS
LTE Band 4	1.4MHz	QPSK	20175	3RB#0	23.63	PASS
LTE Band 4	1.4MHz	16QAM	20175	3RB#0	22.49	PASS
LTE Band 4	1.4MHz	QPSK	20175	3RB#1	23.63	PASS
LTE Band 4	1.4MHz	16QAM	20175	3RB#1	22.58	PASS
LTE Band 4	1.4MHz	QPSK	20175	3RB#3	23.48	PASS
LTE Band 4	1.4MHz	16QAM	20175	3RB#3	22.57	PASS
LTE Band 4	1.4MHz	QPSK	20175	6RB#0	22.56	PASS
LTE Band 4	1.4MHz	16QAM	20175	6RB#0	21.77	PASS
LTE Band 4	1.4MHz	QPSK	20393	1RB#0	23.89	PASS
LTE Band 4	1.4MHz	16QAM	20393	1RB#0	22.98	PASS
LTE Band 4	1.4MHz	QPSK	20393	1RB#2	23.01	PASS
LTE Band 4	1.4MHz	16QAM	20393	1RB#2	23.22	PASS
LTE Band 4	1.4MHz	QPSK	20393	1RB#5	23.87	PASS
LTE Band 4	1.4MHz	16QAM	20393	1RB#5	23.02	PASS
LTE Band 4	1.4MHz	QPSK	20393	3RB#0	23.80	PASS
LTE Band 4	1.4MHz	16QAM	20393	3RB#0	22.33	PASS
LTE Band 4	1.4MHz	QPSK	20393	3RB#1	23.87	PASS
LTE Band 4	1.4MHz	16QAM	20393	3RB#1	22.30	PASS
LTE Band 4	1.4MHz	QPSK	20393	3RB#3	23.90	PASS
LTE Band 4	1.4MHz	16QAM	20393	3RB#3	22.65	PASS



RF Test Report Report No.: R1908A0502-R3 LTE Band 4 1.4MHz **QPSK** 20393 6RB#0 22.60 **PASS** LTE Band 4 1.4MHz 16QAM 20393 6RB#0 21.88 **PASS** LTE Band 4 3MHz **QPSK** 19965 1RB#0 23.44 **PASS** LTE Band 4 16QAM **PASS** 3MHz 19965 1RB#0 22.31 LTE Band 4 3MHz **QPSK** 19965 1RB#8 23.12 **PASS** LTE Band 4 3MHz 16QAM 19965 1RB#8 22.18 **PASS** LTE Band 4 3MHz **QPSK** 19965 1RB#14 23.39 **PASS** LTE Band 4 3MHz 16QAM 1RB#14 22.22 **PASS** 19965 LTE Band 4 3MHz **QPSK** 19965 8RB#0 22.35 **PASS** LTE Band 4 3MHz 16QAM 19965 8RB#0 21.22 **PASS** LTE Band 4 3MHz **QPSK** 19965 8RB#4 22.34 **PASS** LTE Band 4 16QAM 21.38 **PASS** 3MHz 19965 8RB#4 **QPSK** LTE Band 4 3MHz 19965 8RB#7 22.36 **PASS** LTE Band 4 3MHz 16QAM 19965 8RB#7 21.45 **PASS** LTE Band 4 3MHz **QPSK** 19965 15RB#0 22.35 **PASS** LTE Band 4 3MHz 16QAM 19965 15RB#0 **PASS** 21.32 LTE Band 4 3MHz **QPSK** 20175 1RB#0 23.49 **PASS** LTE Band 4 3MHz 16QAM 20175 1RB#0 22.65 **PASS** LTE Band 4 3MHz **QPSK** 20175 1RB#8 23.25 **PASS** LTE Band 4 3MHz 16QAM 1RB#8 22.54 **PASS** 20175 LTE Band 4 3MHz **QPSK** 20175 1RB#14 23.45 **PASS** LTE Band 4 3MHz 16QAM 20175 1RB#14 22.52 **PASS QPSK PASS** LTE Band 4 3MHz 20175 8RB#0 22.63 LTE Band 4 3MHz 16QAM 20175 8RB#0 21.64 **PASS** LTE Band 4 3MHz **QPSK** 8RB#4 22.55 **PASS** 20175 LTE Band 4 3MHz 16QAM 20175 8RB#4 21.74 **PASS** LTE Band 4 3MHz **QPSK** 20175 8RB#7 22.62 **PASS** LTE Band 4 3MHz 16QAM 20175 8RB#7 21.43 **PASS** LTE Band 4 3MHz **QPSK** 20175 15RB#0 22.57 **PASS** LTE Band 4 3MHz 16QAM 20175 15RB#0 21.58 **PASS** LTE Band 4 3MHz **QPSK** 20385 1RB#0 **PASS** 23.60 LTE Band 4 3MHz 16QAM 22.41 **PASS** 20385 1RB#0 LTE Band 4 **QPSK** 3MHz 20385 1RB#8 23.57 **PASS** LTE Band 4 3MHz 16QAM 20385 1RB#8 22.62 **PASS** LTE Band 4 3MHz **QPSK** 20385 1RB#14 **PASS** 23.84 LTE Band 4 3MHz 16QAM 20385 1RB#14 22.71 **PASS** LTE Band 4 **QPSK PASS** 3MHz 20385 8RB#0 22.75 16QAM **PASS** LTE Band 4 3MHz 20385 8RB#0 21.58 LTE Band 4 3MHz **QPSK** 8RB#4 **PASS** 20385 22.58 LTE Band 4 3MHz 16QAM 20385 21.58 **PASS** 8RB#4 LTE Band 4 3MHz **QPSK** 20385 8RB#7 22.66 **PASS** LTE Band 4 3MHz 16QAM 20385 8RB#7 21.69 **PASS** LTE Band 4 3MHz **QPSK** 20385 15RB#0 22.71 **PASS**



Report No.: R1908A0502-R3

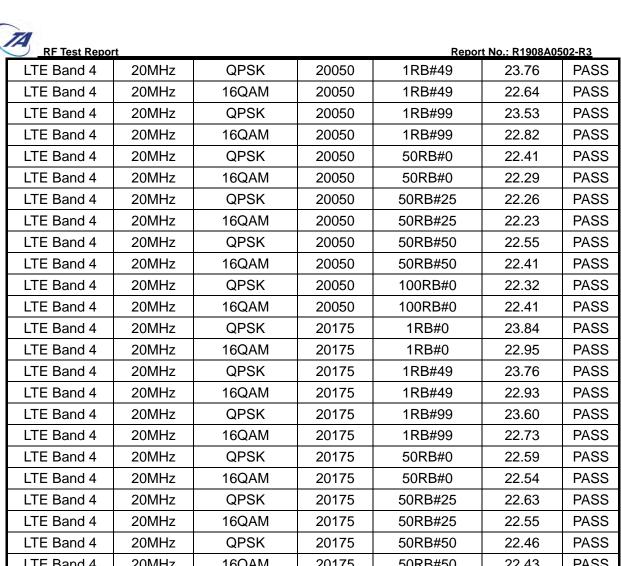
LTE Band 4	3MHz 5MHz 5MHz 5MHz 5MHz 5MHz	16QAM QPSK 16QAM QPSK	20385 19975 19975	15RB#0 1RB#0	21.51 23.44	PASS PASS
LTE Band 4 LTE Band 4 LTE Band 4	5MHz 5MHz 5MHz	16QAM			23.44	PASS
LTE Band 4 LTE Band 4	5MHz 5MHz		19975	400.00		
LTE Band 4	5MHz	QPSK		1RB#0	22.72	PASS
		i de la companya de	19975	1RB#12	23.39	PASS
LTE Band 4	51/1U-2	16QAM	19975	1RB#12	22.55	PASS
	SIVITIZ	QPSK	19975	1RB#24	23.49	PASS
LTE Band 4	5MHz	16QAM	19975	1RB#24	22.32	PASS
LTE Band 4	5MHz	QPSK	19975	12RB#0	22.30	PASS
LTE Band 4	5MHz	16QAM	19975	12RB#0	21.34	PASS
LTE Band 4	5MHz	QPSK	19975	12RB#6	22.30	PASS
LTE Band 4	5MHz	16QAM	19975	12RB#6	21.33	PASS
LTE Band 4	5MHz	QPSK	19975	12RB#13	22.23	PASS
LTE Band 4	5MHz	16QAM	19975	12RB#13	21.61	PASS
LTE Band 4	5MHz	QPSK	19975	25RB#0	22.30	PASS
LTE Band 4	5MHz	16QAM	19975	25RB#0	21.24	PASS
LTE Band 4	5MHz	QPSK	20175	1RB#0	23.74	PASS
LTE Band 4	5MHz	16QAM	20175	1RB#0	22.65	PASS
LTE Band 4	5MHz	QPSK	20175	1RB#12	23.45	PASS
LTE Band 4	5MHz	16QAM	20175	1RB#12	22.47	PASS
LTE Band 4	5MHz	QPSK	20175	1RB#24	23.63	PASS
LTE Band 4	5MHz	16QAM	20175	1RB#24	22.65	PASS
LTE Band 4	5MHz	QPSK	20175	12RB#0	22.53	PASS
LTE Band 4	5MHz	16QAM	20175	12RB#0	21.62	PASS
LTE Band 4	5MHz	QPSK	20175	12RB#6	22.54	PASS
LTE Band 4	5MHz	16QAM	20175	12RB#6	21.71	PASS
LTE Band 4	5MHz	QPSK	20175	12RB#13	22.41	PASS
LTE Band 4	5MHz	16QAM	20175	12RB#13	21.44	PASS
LTE Band 4	5MHz	QPSK	20175	25RB#0	22.69	PASS
LTE Band 4	5MHz	16QAM	20175	25RB#0	21.60	PASS
LTE Band 4	5MHz	QPSK	20375	1RB#0	23.47	PASS
LTE Band 4	5MHz	16QAM	20375	1RB#0	21.93	PASS
LTE Band 4	5MHz	QPSK	20375	1RB#12	23.67	PASS
LTE Band 4	5MHz	16QAM	20375	1RB#12	22.78	PASS
LTE Band 4	5MHz	QPSK	20375	1RB#24	23.93	PASS
LTE Band 4	5MHz	16QAM	20375	1RB#24	22.60	PASS
LTE Band 4	5MHz	QPSK	20375	12RB#0	22.54	PASS
LTE Band 4	5MHz	16QAM	20375	12RB#0	21.55	PASS
LTE Band 4	5MHz	QPSK	20375	12RB#6	22.55	PASS
LTE Band 4	5MHz	16QAM	20375	12RB#6	21.54	PASS
LTE Band 4	5MHz	QPSK	20375	12RB#13	22.65	PASS
LTE Band 4	5MHz	16QAM	20375	12RB#13	21.74	PASS
LTE Band 4	5MHz	QPSK	20375	25RB#0	22.76	PASS
LTE Band 4	5MHz	16QAM	20375	25RB#0	21.87	PASS



Report No.: R1908A0502-R3 LTE Band 4 10MHz **QPSK** 20000 1RB#0 23.54 **PASS** LTE Band 4 10MHz 16QAM 20000 1RB#0 22.46 **PASS** LTE Band 4 10MHz **QPSK** 20000 1RB#24 23.61 **PASS** LTE Band 4 16QAM **PASS** 10MHz 20000 1RB#24 22.58 LTE Band 4 10MHz **QPSK** 20000 1RB#49 23.53 **PASS** LTE Band 4 10MHz 16QAM 20000 1RB#49 22.26 **PASS** LTE Band 4 10MHz **QPSK** 20000 25RB#0 22.34 **PASS** LTE Band 4 10MHz 16QAM 20000 25RB#0 21.26 **PASS** LTE Band 4 10MHz **QPSK** 20000 25RB#12 22.45 **PASS** LTE Band 4 10MHz 16QAM 20000 25RB#12 21.36 **PASS** 25RB#25 LTE Band 4 10MHz **QPSK** 20000 22.37 **PASS** LTE Band 4 16QAM 21.30 **PASS** 10MHz 20000 25RB#25 LTE Band 4 **QPSK PASS** 10MHz 20000 50RB#0 22.35 LTE Band 4 10MHz 16QAM 20000 50RB#0 22.23 **PASS** LTE Band 4 10MHz **QPSK** 20175 1RB#0 22.46 **PASS** LTE Band 4 10MHz 16QAM 1RB#0 22.78 **PASS** 20175 LTE Band 4 10MHz **QPSK** 20175 1RB#24 23.80 **PASS** LTE Band 4 10MHz 16QAM 20175 1RB#24 22.36 **PASS QPSK** LTE Band 4 10MHz 20175 1RB#49 23.39 **PASS** LTE Band 4 10MHz 16QAM 1RB#49 22.40 **PASS** 20175 LTE Band 4 10MHz **QPSK** 20175 25RB#0 22.55 **PASS** LTE Band 4 10MHz 16QAM 20175 25RB#0 21.47 **PASS QPSK PASS** LTE Band 4 10MHz 20175 25RB#12 22.62 LTE Band 4 10MHz 16QAM 20175 25RB#12 21.63 **PASS** LTE Band 4 10MHz **QPSK** 20175 25RB#25 22.45 **PASS** LTE Band 4 10MHz 16QAM 20175 25RB#25 21.28 **PASS** LTE Band 4 10MHz **QPSK** 20175 50RB#0 22.51 **PASS** LTE Band 4 10MHz 16QAM 20175 50RB#0 22.59 **PASS QPSK PASS** LTE Band 4 10MHz 20350 1RB#0 23.87 LTE Band 4 10MHz 16QAM 20350 1RB#0 22.56 **PASS** LTE Band 4 10MHz **QPSK** 20350 1RB#24 23.84 **PASS** LTE Band 4 10MHz 16QAM 20350 1RB#24 22.23 **PASS** LTE Band 4 **QPSK** 10MHz 20350 1RB#49 23.55 **PASS** LTE Band 4 10MHz 16QAM 20350 1RB#49 22.71 **PASS QPSK** LTE Band 4 10MHz 20350 25RB#0 22.51 **PASS** LTE Band 4 10MHz 16QAM 20350 25RB#0 21.59 **PASS** LTE Band 4 **QPSK PASS** 10MHz 20350 25RB#12 22.50 LTE Band 4 10MHz 16QAM **PASS** 20350 25RB#12 21.57 LTE Band 4 10MHz **QPSK PASS** 20350 25RB#25 22.69 LTE Band 4 10MHz 16QAM 20350 25RB#25 21.99 **PASS** LTE Band 4 10MHz **QPSK** 20350 50RB#0 22.50 **PASS** LTE Band 4 10MHz 16QAM 20350 50RB#0 22.52 **PASS** LTE Band 4 15MHz **QPSK** 20025 1RB#0 23.64 **PASS**



Report No.: R1908A0502-R3 LTE Band 4 15MHz 16QAM 20025 1RB#0 22.20 **PASS** LTE Band 4 15MHz **QPSK** 20025 1RB#38 23.48 **PASS** LTE Band 4 15MHz 16QAM 20025 1RB#38 22.29 **PASS** LTE Band 4 **QPSK PASS** 15MHz 20025 1RB#74 23.72 LTE Band 4 15MHz 16QAM 20025 1RB#74 23.13 **PASS QPSK** LTE Band 4 15MHz 20025 38RB#0 23.22 **PASS** LTE Band 4 15MHz 16QAM 20025 38RB#0 22.92 **PASS** LTE Band 4 15MHz **QPSK** 21.71 **PASS** 20025 38RB#18 LTE Band 4 15MHz 16QAM 20025 38RB#18 22.11 **PASS QPSK** LTE Band 4 15MHz 20025 38RB#37 22.37 **PASS** 38RB#37 LTE Band 4 15MHz 16QAM 20025 22.27 **PASS** LTE Band 4 **QPSK** 22.32 **PASS** 15MHz 20025 75RB#0 LTE Band 4 **PASS** 15MHz 16QAM 20025 75RB#0 22.28 LTE Band 4 15MHz **QPSK** 20175 1RB#0 23.44 **PASS** LTE Band 4 15MHz 16QAM 20175 1RB#0 22.59 **PASS** LTE Band 4 15MHz **QPSK** 1RB#38 **PASS** 20175 23.32 LTE Band 4 15MHz 16QAM 20175 1RB#38 22.42 **PASS** LTE Band 4 15MHz **QPSK** 20175 1RB#74 23.39 **PASS** LTE Band 4 15MHz 16QAM 20175 1RB#74 22.08 **PASS QPSK** LTE Band 4 22.29 **PASS** 15MHz 20175 38RB#0 LTE Band 4 15MHz 16QAM 20175 38RB#0 22.28 **PASS** LTE Band 4 15MHz **QPSK** 20175 38RB#18 22.34 **PASS PASS** LTE Band 4 15MHz 16QAM 20175 38RB#18 22.34 LTE Band 4 15MHz **QPSK** 20175 38RB#37 22.33 **PASS** LTE Band 4 15MHz 16QAM 20175 38RB#37 22.41 **PASS** LTE Band 4 15MHz **QPSK** 20175 75RB#0 22.55 **PASS** LTE Band 4 15MHz 16QAM 20175 75RB#0 22.48 **PASS** LTE Band 4 15MHz **QPSK** 20325 1RB#0 23.52 **PASS PASS** LTE Band 4 15MHz 16QAM 20325 1RB#0 22.26 LTE Band 4 15MHz **QPSK** 20325 1RB#38 23.46 **PASS** LTE Band 4 15MHz 16QAM 20325 1RB#38 22.43 **PASS** LTE Band 4 15MHz **QPSK** 20325 1RB#74 23.45 **PASS** LTE Band 4 22.74 15MHz 16QAM 20325 1RB#74 **PASS** LTE Band 4 15MHz **QPSK** 20325 38RB#0 22.56 **PASS** LTE Band 4 15MHz 16QAM 20325 38RB#0 22.56 **PASS** LTE Band 4 15MHz **QPSK** 20325 38RB#18 22.54 **PASS** 16QAM LTE Band 4 **PASS** 15MHz 20325 38RB#18 22.42 LTE Band 4 **QPSK PASS** 15MHz 20325 38RB#37 22.09 LTE Band 4 15MHz 16QAM **PASS** 20325 38RB#37 22.06 LTE Band 4 15MHz **QPSK** 20325 75RB#0 22.38 **PASS** LTE Band 4 15MHz 16QAM 20325 75RB#0 22.36 **PASS QPSK** LTE Band 4 20MHz 20050 1RB#0 23.47 **PASS** LTE Band 4 20MHz 16QAM 20050 1RB#0 22.49 **PASS**



LIE Band 4	ZUIVI⊓Z	QP3N	20050	1KD#49	23.76	PASS
LTE Band 4	20MHz	16QAM	20050	1RB#49	22.64	PASS
LTE Band 4	20MHz	QPSK	20050	1RB#99	23.53	PASS
LTE Band 4	20MHz	16QAM	20050	1RB#99	22.82	PASS
LTE Band 4	20MHz	QPSK	20050	50RB#0	22.41	PASS
LTE Band 4	20MHz	16QAM	20050	50RB#0	22.29	PASS
LTE Band 4	20MHz	QPSK	20050	50RB#25	22.26	PASS
LTE Band 4	20MHz	16QAM	20050	50RB#25	22.23	PASS
LTE Band 4	20MHz	QPSK	20050	50RB#50	22.55	PASS
LTE Band 4	20MHz	16QAM	20050	50RB#50	22.41	PASS
LTE Band 4	20MHz	QPSK	20050	100RB#0	22.32	PASS
LTE Band 4	20MHz	16QAM	20050	100RB#0	22.41	PASS
LTE Band 4	20MHz	QPSK	20175	1RB#0	23.84	PASS
LTE Band 4	20MHz	16QAM	20175	1RB#0	22.95	PASS
LTE Band 4	20MHz	QPSK	20175	1RB#49	23.76	PASS
LTE Band 4	20MHz	16QAM	20175	1RB#49	22.93	PASS
LTE Band 4	20MHz	QPSK	20175	1RB#99	23.60	PASS
LTE Band 4	20MHz	16QAM	20175	1RB#99	22.73	PASS
LTE Band 4	20MHz	QPSK	20175	50RB#0	22.59	PASS
LTE Band 4	20MHz	16QAM	20175	50RB#0	22.54	PASS
LTE Band 4	20MHz	QPSK	20175	50RB#25	22.63	PASS
LTE Band 4	20MHz	16QAM	20175	50RB#25	22.55	PASS
LTE Band 4	20MHz	QPSK	20175	50RB#50	22.46	PASS
LTE Band 4	20MHz	16QAM	20175	50RB#50	22.43	PASS
LTE Band 4	20MHz	QPSK	20175	100RB#0	22.31	PASS
LTE Band 4	20MHz	16QAM	20175	100RB#0	22.37	PASS
LTE Band 4	20MHz	QPSK	20300	1RB#0	23.81	PASS
LTE Band 4	20MHz	16QAM	20300	1RB#0	22.95	PASS
LTE Band 4	20MHz	QPSK	20300	1RB#49	23.70	PASS
LTE Band 4	20MHz	16QAM	20300	1RB#49	22.93	PASS
LTE Band 4	20MHz	QPSK	20300	1RB#99	23.48	PASS
LTE Band 4	20MHz	16QAM	20300	1RB#99	23.10	PASS
LTE Band 4	20MHz	QPSK	20300	50RB#0	22.46	PASS
LTE Band 4	20MHz	16QAM	20300	50RB#0	22.41	PASS
LTE Band 4	20MHz	QPSK	20300	50RB#25	22.37	PASS
LTE Band 4	20MHz	16QAM	20300	50RB#25	22.46	PASS
LTE Band 4	20MHz	QPSK	20300	50RB#50	22.46	PASS
LTE Band 4	20MHz	16QAM	20300	50RB#50	22.42	PASS



Б	5 1 1 1 11 11		01 1	RB	Result	V
Band	Bandwidth	Modulation	Channel	Configuration	(dBm)	Verdict
LTE Band 7	5MHz	QPSK	20775	1RB#0	23.26	PASS
LTE Band 7	5MHz	16QAM	20775	1RB#0	22.36	PASS
LTE Band 7	5MHz	QPSK	20775	1RB#12	23.22	PASS
LTE Band 7	5MHz	16QAM	20775	1RB#12	22.12	PASS
LTE Band 7	5MHz	QPSK	20775	1RB#24	23.27	PASS
LTE Band 7	5MHz	16QAM	20775	1RB#24	22.31	PASS
LTE Band 7	5MHz	QPSK	20775	12RB#0	22.43	PASS
LTE Band 7	5MHz	16QAM	20775	12RB#0	21.64	PASS
LTE Band 7	5MHz	QPSK	20775	12RB#6	22.49	PASS
LTE Band 7	5MHz	16QAM	20775	12RB#6	21.57	PASS
LTE Band 7	5MHz	QPSK	20775	12RB#13	22.42	PASS
LTE Band 7	5MHz	16QAM	20775	12RB#13	21.53	PASS
LTE Band 7	5MHz	QPSK	20775	25RB#0	22.42	PASS
LTE Band 7	5MHz	16QAM	20775	25RB#0	21.34	PASS
LTE Band 7	5MHz	QPSK	21100	1RB#0	23.34	PASS
LTE Band 7	5MHz	16QAM	21100	1RB#0	22.45	PASS
LTE Band 7	5MHz	QPSK	21100	1RB#12	23.34	PASS
LTE Band 7	5MHz	16QAM	21100	1RB#12	22.38	PASS
LTE Band 7	5MHz	QPSK	21100	1RB#24	23.39	PASS
LTE Band 7	5MHz	16QAM	21100	1RB#24	22.33	PASS
LTE Band 7	5MHz	QPSK	21100	12RB#0	22.33	PASS
LTE Band 7	5MHz	16QAM	21100	12RB#0	21.32	PASS
LTE Band 7	5MHz	QPSK	21100	12RB#6	22.34	PASS
LTE Band 7	5MHz	16QAM	21100	12RB#6	21.41	PASS
LTE Band 7	5MHz	QPSK	21100	12RB#13	22.48	PASS
LTE Band 7	5MHz	16QAM	21100	12RB#13	21.56	PASS
LTE Band 7	5MHz	QPSK	21100	25RB#0	22.38	PASS
LTE Band 7	5MHz	16QAM	21100	25RB#0	21.58	PASS
LTE Band 7	5MHz	QPSK	21425	1RB#0	23.46	PASS
LTE Band 7	5MHz	16QAM	21425	1RB#0	22.19	PASS
LTE Band 7	5MHz	QPSK	21425	1RB#12	23.50	PASS
LTE Band 7	5MHz	16QAM	21425	1RB#12	22.14	PASS
LTE Band 7	5MHz	QPSK	21425	1RB#24	23.42	PASS
LTE Band 7	5MHz	16QAM	21425	1RB#24	22.20	PASS
LTE Band 7	5MHz	QPSK	21425	12RB#0	22.53	PASS
LTE Band 7	5MHz	16QAM	21425	12RB#0	21.25	PASS
LTE Band 7	5MHz	QPSK	21425	12RB#6	22.43	PASS
LTE Band 7	5MHz	16QAM	21425	12RB#6	21.21	PASS
LTE Band 7	5MHz	QPSK	21425	12RB#13	22.30	PASS
LTE Band 7	5MHz	16QAM	21425	12RB#13	21.30	PASS



Report No.: R1908A0502-R3

RF Test Re	eport			Report	No.: R1908A0	<u> </u>
LTE Band 7	5MHz	QPSK	21425	25RB#0	22.33	PASS
LTE Band 7	5MHz	16QAM	21425	25RB#0	21.46	PASS
LTE Band 7	10MHz	QPSK	20800	1RB#0	23.16	PASS
LTE Band 7	10MHz	16QAM	20800	1RB#0	22.21	PASS
LTE Band 7	10MHz	QPSK	20800	1RB#24	23.26	PASS
LTE Band 7	10MHz	16QAM	20800	1RB#24	22.46	PASS
LTE Band 7	10MHz	QPSK	20800	1RB#49	23.58	PASS
LTE Band 7	10MHz	16QAM	20800	1RB#49	22.20	PASS
LTE Band 7	10MHz	QPSK	20800	25RB#0	22.38	PASS
LTE Band 7	10MHz	16QAM	20800	25RB#0	21.59	PASS
LTE Band 7	10MHz	QPSK	20800	25RB#12	22.41	PASS
LTE Band 7	10MHz	16QAM	20800	25RB#12	21.56	PASS
LTE Band 7	10MHz	QPSK	20800	25RB#25	22.45	PASS
LTE Band 7	10MHz	16QAM	20800	25RB#25	21.63	PASS
LTE Band 7	10MHz	QPSK	20800	50RB#0	22.38	PASS
LTE Band 7	10MHz	16QAM	20800	50RB#0	22.34	PASS
LTE Band 7	10MHz	QPSK	21100	1RB#0	23.24	PASS
LTE Band 7	10MHz	16QAM	21100	1RB#0	22.12	PASS
LTE Band 7	10MHz	QPSK	21100	1RB#24	23.52	PASS
LTE Band 7	10MHz	16QAM	21100	1RB#24	22.45	PASS
LTE Band 7	10MHz	QPSK	21100	1RB#49	23.59	PASS
LTE Band 7	10MHz	16QAM	21100	1RB#49	22.41	PASS
LTE Band 7	10MHz	QPSK	21100	25RB#0	22.42	PASS
LTE Band 7	10MHz	16QAM	21100	25RB#0	21.58	PASS
LTE Band 7	10MHz	QPSK	21100	25RB#12	22.52	PASS
LTE Band 7	10MHz	16QAM	21100	25RB#12	21.56	PASS
LTE Band 7	10MHz	QPSK	21100	25RB#25	22.50	PASS
LTE Band 7	10MHz	16QAM	21100	25RB#25	21.55	PASS
LTE Band 7	10MHz	QPSK	21100	50RB#0	22.32	PASS
LTE Band 7	10MHz	16QAM	21100	50RB#0	22.41	PASS
LTE Band 7	10MHz	QPSK	21400	1RB#0	23.45	PASS
LTE Band 7	10MHz	16QAM	21400	1RB#0	22.50	PASS
LTE Band 7	10MHz	QPSK	21400	1RB#24	23.66	PASS
LTE Band 7	10MHz	16QAM	21400	1RB#24	22.59	PASS
LTE Band 7	10MHz	QPSK	21400	1RB#49	23.46	PASS
LTE Band 7	10MHz	16QAM	21400	1RB#49	22.18	PASS
LTE Band 7	10MHz	QPSK	21400	25RB#0	22.53	PASS
LTE Band 7	10MHz	16QAM	21400	25RB#0	21.57	PASS
LTE Band 7	10MHz	QPSK	21400	25RB#12	22.45	PASS
LTE Band 7	10MHz	16QAM	21400	25RB#12	21.54	PASS
LTE Band 7	10MHz	QPSK	21400	25RB#25	22.40	PASS
LTE Band 7	10MHz	16QAM	21400	25RB#25	21.48	PASS
LTE Band 7	10MHz	QPSK	21400	50RB#0	22.39	PASS



RF Test Report Report No.: R1908A0502-R3 LTE Band 7 10MHz 16QAM 21400 50RB#0 22.39 **PASS** LTE Band 7 15MHz **QPSK** 20825 1RB#0 23.74 **PASS** LTE Band 7 15MHz 16QAM 20825 1RB#0 22.56 **PASS** LTE Band 7 **QPSK** 1RB#38 **PASS** 15MHz 20825 23.29 LTE Band 7 15MHz 16QAM 20825 1RB#38 22.45 **PASS QPSK PASS** LTE Band 7 15MHz 20825 1RB#74 23.15 LTE Band 7 15MHz 16QAM 20825 1RB#74 22.43 **PASS** LTE Band 7 15MHz **QPSK** 20825 38RB#0 22.26 **PASS** LTE Band 7 15MHz 16QAM 20825 38RB#0 22.20 **PASS QPSK PASS** LTE Band 7 15MHz 20825 38RB#18 22.29 LTE Band 7 15MHz 16QAM 20825 38RB#18 22.22 **PASS PASS** LTE Band 7 **QPSK** 20825 22.27 15MHz 38RB#37 **PASS** LTE Band 7 15MHz 16QAM 20825 38RB#37 22.19 LTE Band 7 15MHz **QPSK** 20825 75RB#0 22.32 **PASS** LTE Band 7 15MHz 16QAM 20825 75RB#0 22.36 **PASS** LTE Band 7 15MHz **QPSK** 21100 1RB#0 23.40 **PASS** LTE Band 7 15MHz 16QAM 21100 1RB#0 22.42 **PASS** LTE Band 7 15MHz **QPSK** 21100 1RB#38 23.16 **PASS PASS** LTE Band 7 15MHz 16QAM 21100 1RB#38 22.24 LTE Band 7 15MHz **QPSK** 21100 1RB#74 23.20 **PASS** LTE Band 7 15MHz 16QAM 21100 1RB#74 22.27 **PASS** LTE Band 7 15MHz **QPSK** 21100 38RB#0 21.80 **PASS** LTE Band 7 21.77 **PASS** 15MHz 16QAM 21100 38RB#0 LTE Band 7 15MHz **QPSK** 21100 38RB#18 21.70 **PASS** LTE Band 7 15MHz 16QAM 21100 38RB#18 21.66 **PASS** LTE Band 7 15MHz **QPSK** 21100 38RB#37 21.72 **PASS** LTE Band 7 15MHz 16QAM 21100 38RB#37 21.69 **PASS** LTE Band 7 15MHz **QPSK** 21100 75RB#0 22.32 **PASS PASS** LTE Band 7 15MHz 16QAM 21100 75RB#0 22.35 LTE Band 7 15MHz **QPSK** 21375 1RB#0 23.46 **PASS** LTE Band 7 15MHz 16QAM 21375 1RB#0 22.33 **PASS** LTE Band 7 15MHz **QPSK** 21375 1RB#38 23.23 **PASS** LTE Band 7 1RB#38 **PASS** 15MHz 16QAM 21375 22.37 LTE Band 7 15MHz **QPSK** 21375 1RB#74 23.21 **PASS PASS** LTE Band 7 15MHz 16QAM 21375 1RB#74 22.21 LTE Band 7 15MHz **QPSK** 21375 38RB#0 22.34 **PASS** LTE Band 7 16QAM **PASS** 15MHz 21375 38RB#0 22.28 LTE Band 7 15MHz **QPSK** 21375 **PASS** 38RB#18 21.98 LTE Band 7 15MHz 16QAM 21375 38RB#18 22.20 **PASS**

15MHz

15MHz

15MHz

15MHz

LTE Band 7

LTE Band 7

LTE Band 7

LTE Band 7

38RB#37

38RB#37

75RB#0

75RB#0

21375

21375

21375

21375

PASS

PASS

PASS

PASS

22.37

22.20

22.31

22.27

QPSK

16QAM

QPSK

16QAM



RF Test Report Report No.: R1908A0502-R3 LTE Band 7 20MHz **QPSK** 20850 1RB#0 23.12 **PASS** LTE Band 7 20MHz 16QAM 20850 1RB#0 22.62 **PASS** LTE Band 7 20MHz **QPSK** 20850 1RB#49 23.60 **PASS** LTE Band 7 1RB#49 **PASS** 20MHz 16QAM 20850 22.93 LTE Band 7 20MHz **QPSK** 20850 1RB#99 23.18 **PASS PASS** LTE Band 7 20MHz 16QAM 20850 1RB#99 22.48 LTE Band 7 20MHz **QPSK** 20850 50RB#0 22.35 **PASS** LTE Band 7 20MHz 16QAM 20850 50RB#0 22.70 **PASS** LTE Band 7 20MHz **QPSK** 20850 50RB#25 22.67 **PASS PASS** LTE Band 7 20MHz 16QAM 20850 50RB#25 22.59 LTE Band 7 20MHz **QPSK** 20850 50RB#50 22.62 **PASS PASS** LTE Band 7 16QAM 20850 22.35 20MHz 50RB#50 **QPSK PASS** LTE Band 7 20MHz 20850 100RB#0 22.49 LTE Band 7 20MHz 16QAM 20850 100RB#0 22.46 **PASS** LTE Band 7 20MHz **QPSK** 21100 1RB#0 23.27 **PASS** LTE Band 7 20MHz 16QAM 21100 1RB#0 22.83 **PASS** LTE Band 7 20MHz **QPSK** 21100 1RB#49 23.68 **PASS** LTE Band 7 20MHz 16QAM 21100 1RB#49 23.02 **PASS QPSK PASS** LTE Band 7 20MHz 21100 1RB#99 23.55 LTE Band 7 20MHz 21100 1RB#99 22.87 **PASS** 16QAM LTE Band 7 20MHz **QPSK** 21100 50RB#0 22.33 **PASS** LTE Band 7 20MHz 16QAM 21100 50RB#0 22.38 **PASS** LTE Band 7 **QPSK PASS** 20MHz 21100 50RB#25 22.35 LTE Band 7 20MHz 16QAM 21100 50RB#25 22.35 **PASS** LTE Band 7 20MHz **QPSK** 21100 50RB#50 22.40 **PASS** LTE Band 7 20MHz 16QAM 21100 50RB#50 22.43 **PASS** LTE Band 7 20MHz **QPSK** 21100 100RB#0 22.42 **PASS** LTE Band 7 20MHz 16QAM 21100 100RB#0 22.41 **PASS PASS** LTE Band 7 20MHz **QPSK** 21350 1RB#0 23.62 LTE Band 7 20MHz 16QAM 21350 1RB#0 22.91 **PASS** LTE Band 7 20MHz **QPSK** 21350 1RB#49 23.65 **PASS** LTE Band 7 20MHz 16QAM 21350 1RB#49 22.98 **PASS** LTE Band 7 **QPSK PASS** 20MHz 21350 1RB#99 23.45 LTE Band 7 20MHz 16QAM 21350 1RB#99 22.81 **PASS PASS** LTE Band 7 20MHz **QPSK** 21350 50RB#0 22.46 LTE Band 7 20MHz 16QAM 21350 50RB#0 22.35 **PASS** LTE Band 7 **QPSK** 50RB#25 22.42 **PASS** 20MHz 21350 LTE Band 7 20MHz 16QAM 21350 **PASS** 50RB#25 22.35 LTE Band 7 20MHz **QPSK** 21350 22.33 **PASS** 50RB#50 LTE Band 7 20MHz 16QAM 21350 22.34 **PASS** 50RB#50 100RB#0 LTE Band 7 20MHz **QPSK** 21350 22.46 **PASS PASS** LTE Band 7 20MHz 16QAM 21350 100RB#0 22.38



RF Test Report No.: R1908A0502-R3

5.2 Effective Isotropic Radiated Power

Ambient condition

Temperature	Relative humidity	Pressure
23°C ~25°C	45%~50%	101.5kPa

Methods of Measurement

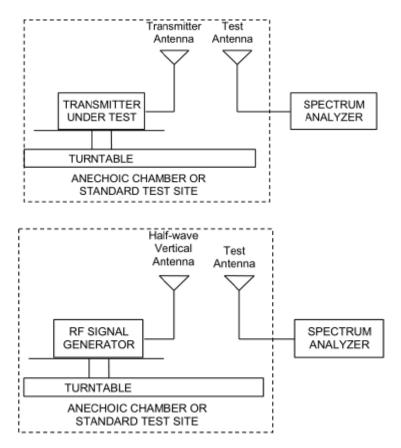
- 1. The testing follows FCC KDB 971168 D01 v03r01 Section 5.8 and ANSI C63.26 (2015).
- a) Connect the equipment as illustrated. Mount the equipment with the manufacturer specified antenna in a vertical orientation on a manufacturer specified mounting surface located on a non-conducting rotating platform of a RF anechoic chamber (preferred) or a standard radiation site.
- b) Key the transmitter, then rotate the EUT 360° azimuthally and record spectrum analyzer power level (LVL) measurements at angular increments that are sufficiently small to permit resolution of all peaks. If a standard radiation test site is used, raise and lower the test antenna to obtain a maximum reading at each angular increment. (Note: several batteries may be needed to offset the effect of battery voltage droop, which should not exceed 5% of the manufactured specified battery voltage during transmission).
- c) Replace the transmitter under test with a vertically polarized half-wave dipole (or an antenna whose gain is known relative to an ideal half-wave dipole). The center of the antenna should be at the same location as the center of the antenna under test.
- d) Connect the antenna to a signal generator with a known output power and record the path loss (in dB) as LOSS. If a standard radiation test site is used, raise and lower the test antenna to obtain a maximum reading.LOSS = Generator Output Power (dBm) Analyzer reading (dBm)
- e) Determine the effective radiated output power at each angular position from the readings in steps b) and d) using the following equation:ERP (dBm) = LVL (dBm) + LOSS (dB)
- f) The maximum ERP is the maximum value determined in the preceding step.
- g) When calculating ERP, in addition to knowing the antenna radiation and matching characteristics, it is necessary to know the loss values of all elements (e.g. transmission line attenuation, mismatches, filters, combiners) interposed between the point where transmitter output power is measured, and the point where power is applied to the antenna. ERP can then be calculated as follows:

EIRP (dBm) = Output Power (dBm) - Losses (dB) + Antenna Gain (dBi) where:dBd refers to gain relative to an ideal dipole.

EIRP (dBm) = ERP (dBm) + 2.15 (dB.)

The RB allocation refers to section 5.1, using the maximum output power configuration.

Test setup



Note: Area side:2.4mX3.6m

The radiated emission was measured in the following position: EUT stand-up position (Z axis), lie-down position (X, Y axis). The worst emission was found in stand-up position (Z axis) and the worst case was recorded.

Test Report No.: R1908A0502-R3

Limits

Rule Part 27.50(d) (4) specifies that "Fixed, mobile and portable (hand-held) stations operating in the 1710–1755 MHz band are limited to 1 watt EIRP"

Rule Part 27.50(h) (2) specifies that "Mobile and other user stations. Mobile stations are limited to 2.0 watts EIRP. All user stations are limited to 2.0 watts transmitter output power."

Part 27.50(d)(4)Limit	≤ 1 W (30 dBm)
Part 27.50(h)(2)	\leq 2 W (33 dBm)

Measurement Uncertainty

The assessed measurement uncertainty to ensure 95% confidence level for the normal distribution is with the coverage factor k = 2, U = 1.19 dB

RF Test Report No.: R1908A0502-R3

Test Results

The measurement is performed for both of horizontal and vertical antenna Polarization, and only the data of worst mode is recorded in this report.

Band	Channel	SubTest	EIRP	Limit (dBm)
WCDMA Band IV	1312	-	25.78	30
WCDMA Band IV	1413	-	25.63	30
WCDMA Band IV	1513	-	25.62	30
WCDMA Band IV	1312	HSDPA_Sub0	25.34	30
WCDMA Band IV	1312	HSDPA_Sub1	24.81	30
WCDMA Band IV	1312	HSDPA_Sub2	24.81	30
WCDMA Band IV	1312	HSDPA_Sub3	24.93	30
WCDMA Band IV	1413	HSDPA_Sub0	25.29	30
WCDMA Band IV	1413	HSDPA_Sub1	24.75	30
WCDMA Band IV	1413	HSDPA_Sub2	24.84	30
WCDMA Band IV	1413	HSDPA_Sub3	24.82	30
WCDMA Band IV	1513	HSDPA_Sub0	25.22	30
WCDMA Band IV	1513	HSDPA_Sub1	24.83	30
WCDMA Band IV	1513	HSDPA_Sub2	24.85	30
WCDMA Band IV	1513	HSDPA_Sub3	24.61	30
WCDMA Band IV	1312	HSUPA_Sub1	24.7	30
WCDMA Band IV	1312	HSUPA_Sub2	23.19	30
WCDMA Band IV	1312	HSUPA_Sub3	24.39	30
WCDMA Band IV	1312	HSUPA_Sub4	23.81	30
WCDMA Band IV	1312	HSUPA_Sub5	25.28	30
WCDMA Band IV	1413	HSUPA_Sub1	24.8	30
WCDMA Band IV	1413	HSUPA_Sub2	23.28	30
WCDMA Band IV	1413	HSUPA_Sub3	24.39	30
WCDMA Band IV	1413	HSUPA_Sub4	23.91	30
WCDMA Band IV	1413	HSUPA_Sub5	25.35	30
WCDMA Band IV	1513	HSUPA_Sub1	25.2	30
WCDMA Band IV	1513	HSUPA_Sub2	23.3	30
WCDMA Band IV	1513	HSUPA_Sub3	24.39	30
WCDMA Band IV	1513	HSUPA_Sub4	24.01	30
WCDMA Band IV	1513	HSUPA_Sub5	25.55	30



Band	Bandwidth	Modulation	Channel	RB Configuration	EIRP	Limit (dBm)
LTE Band4	1.4MHz	QPSK	19957	1RB#0	25.38	30
LTE Band4	1.4MHz	16QAM	19957	1RB#0	24.10	30
LTE Band4	1.4MHz	QPSK	19957	1RB#2	25.40	30
LTE Band4	1.4MHz	16QAM	19957	1RB#2	24.58	30
LTE Band4	1.4MHz	QPSK	19957	1RB#5	25.16	30
LTE Band4	1.4MHz	16QAM	19957	1RB#5	24.36	30
LTE Band4	1.4MHz	QPSK	19957	3RB#0	25.39	30
LTE Band4	1.4MHz	16QAM	19957	3RB#0	24.40	30
LTE Band4	1.4MHz	QPSK	19957	3RB#1	25.47	30
LTE Band4	1.4MHz	16QAM	19957	3RB#1	24.29	30
LTE Band4	1.4MHz	QPSK	19957	3RB#3	25.39	30
LTE Band4	1.4MHz	16QAM	19957	3RB#3	24.39	30
LTE Band4	1.4MHz	QPSK	19957	6RB#0	24.30	30
LTE Band4	1.4MHz	16QAM	19957	6RB#0	23.37	30
LTE Band4	1.4MHz	QPSK	20175	1RB#0	25.51	30
LTE Band4	1.4MHz	16QAM	20175	1RB#0	24.41	30
LTE Band4	1.4MHz	QPSK	20175	1RB#2	25.78	30
LTE Band4	1.4MHz	16QAM	20175	1RB#2	24.61	30
LTE Band4	1.4MHz	QPSK	20175	1RB#5	25.31	30
LTE Band4	1.4MHz	16QAM	20175	1RB#5	24.58	30
LTE Band4	1.4MHz	QPSK	20175	3RB#0	25.53	30
LTE Band4	1.4MHz	16QAM	20175	3RB#0	24.39	30
LTE Band4	1.4MHz	QPSK	20175	3RB#1	25.53	30
LTE Band4	1.4MHz	16QAM	20175	3RB#1	24.48	30
LTE Band4	1.4MHz	QPSK	20175	3RB#3	25.38	30
LTE Band4	1.4MHz	16QAM	20175	3RB#3	24.47	30
LTE Band4	1.4MHz	QPSK	20175	6RB#0	24.46	30
LTE Band4	1.4MHz	16QAM	20175	6RB#0	23.67	30
LTE Band4	1.4MHz	QPSK	20393	1RB#0	25.79	30
LTE Band4	1.4MHz	16QAM	20393	1RB#0	24.88	30
LTE Band4	1.4MHz	QPSK	20393	1RB#2	24.91	30
LTE Band4	1.4MHz	16QAM	20393	1RB#2	25.12	30
LTE Band4	1.4MHz	QPSK	20393	1RB#5	25.77	30
LTE Band4	1.4MHz	16QAM	20393	1RB#5	24.92	30
LTE Band4	1.4MHz	QPSK	20393	3RB#0	25.70	30
LTE Band4	1.4MHz	16QAM	20393	3RB#0	24.23	30
LTE Band4	1.4MHz	QPSK	20393	3RB#1	25.77	30
LTE Band4	1.4MHz	16QAM	20393	3RB#1	24.20	30
LTE Band4	1.4MHz	QPSK	20393	3RB#3	25.80	30



Report No.: R1908A0502-R3 LTE Band4 1.4MHz 16QAM 20393 3RB#3 24.55 30 **QPSK** LTE Band4 1.4MHz 20393 6RB#0 24.50 30 LTE Band4 1.4MHz 16QAM 6RB#0 23.78 20393 30 LTE Band4 3MHz **QPSK** 1RB#0 30 19965 25.34 LTE Band4 3MHz 16QAM 19965 1RB#0 24.21 30 LTE Band4 3MHz **QPSK** 19965 1RB#8 25.02 30 LTE Band4 3MHz 16QAM 19965 1RB#8 24.08 30 19965 LTE Band4 3MHz **QPSK** 1RB#14 25.29 30 LTE Band4 3MHz 16QAM 1RB#14 24.12 19965 30 LTE Band4 3MHz **QPSK** 19965 8RB#0 24.25 30 LTE Band4 3MHz 16QAM 19965 8RB#0 23.12 30 LTE Band4 3MHz **QPSK** 19965 8RB#4 24.24 30 LTE Band4 3MHz 16QAM 19965 8RB#4 23.28 30 **QPSK** LTE Band4 3MHz 19965 8RB#7 24.26 30 30 LTE Band4 3MHz 16QAM 19965 8RB#7 23.35 LTE Band4 3MHz **QPSK** 19965 15RB#0 24.25 30 LTE Band4 3MHz 16QAM 19965 15RB#0 23.22 30 LTE Band4 3MHz **QPSK** 20175 1RB#0 25.39 30 LTE Band4 3MHz 16QAM 20175 1RB#0 24.55 30 LTE Band4 3MHz **QPSK** 20175 1RB#8 25.15 30 LTE Band4 3MHz 16QAM 20175 1RB#8 24.44 30 **QPSK** 25.35 LTE Band4 3MHz 20175 1RB#14 30 30 LTE Band4 3MHz 16QAM 20175 1RB#14 24.42 LTE Band4 3MHz **QPSK** 20175 8RB#0 24.53 30 LTE Band4 3MHz 16QAM 20175 8RB#0 23.54 30 **QPSK** LTE Band4 3MHz 20175 8RB#4 24.45 30 LTE Band4 3MHz 16QAM 8RB#4 23.64 30 20175 LTE Band4 3MHz **QPSK** 20175 8RB#7 24.52 30 LTE Band4 3MHz 16QAM 20175 8RB#7 23.33 30 **QPSK** LTE Band4 3MHz 20175 15RB#0 24.47 30 LTE Band4 16QAM 3MHz 20175 15RB#0 23.48 30 LTE Band4 3MHz **QPSK** 20385 1RB#0 25.50 30 LTE Band4 3MHz 16QAM 20385 1RB#0 24.31 30 LTE Band4 3MHz **QPSK** 20385 1RB#8 25.47 30 LTE Band4 3MHz 16QAM 20385 1RB#8 24.52 30 **QPSK** LTE Band4 3MHz 20385 1RB#14 25.74 30 1RB#14 LTE Band4 3MHz 16QAM 20385 24.61 30 LTE Band4 **QPSK** 3MHz 20385 8RB#0 24.65 30 LTE Band4 3MHz 16QAM 8RB#0 23.48 30 20385 LTE Band4 3MHz **QPSK** 20385 8RB#4 24.48 30 LTE Band4 3MHz 16QAM 20385 8RB#4 23.48 30 LTE Band4 **QPSK** 30 3MHz 20385 8RB#7 24.56



RF Test Report					Report No.: R1908	3A0502-R3
LTE Band4	3MHz	16QAM	20385	8RB#7	23.59	30
LTE Band4	3MHz	QPSK	20385	15RB#0	24.61	30
LTE Band4	3MHz	16QAM	20385	15RB#0	23.41	30
LTE Band4	5MHz	QPSK	19975	1RB#0	25.34	30
LTE Band4	5MHz	16QAM	19975	1RB#0	24.62	30
LTE Band4	5MHz	QPSK	19975	1RB#12	25.29	30
LTE Band4	5MHz	16QAM	19975	1RB#12	24.45	30
LTE Band4	5MHz	QPSK	19975	1RB#24	25.39	30
LTE Band4	5MHz	16QAM	19975	1RB#24	24.22	30
LTE Band4	5MHz	QPSK	19975	12RB#0	24.20	30
LTE Band4	5MHz	16QAM	19975	12RB#0	23.24	30
LTE Band4	5MHz	QPSK	19975	12RB#6	24.20	30
LTE Band4	5MHz	16QAM	19975	12RB#6	23.23	30
LTE Band4	5MHz	QPSK	19975	12RB#13	24.13	30
LTE Band4	5MHz	16QAM	19975	12RB#13	23.51	30
LTE Band4	5MHz	QPSK	19975	25RB#0	24.20	30
LTE Band4	5MHz	16QAM	19975	25RB#0	23.14	30
LTE Band4	5MHz	QPSK	20175	1RB#0	25.64	30
LTE Band4	5MHz	16QAM	20175	1RB#0	24.55	30
LTE Band4	5MHz	QPSK	20175	1RB#12	25.35	30
LTE Band4	5MHz	16QAM	20175	1RB#12	24.37	30
LTE Band4	5MHz	QPSK	20175	1RB#24	25.53	30
LTE Band4	5MHz	16QAM	20175	1RB#24	24.55	30
LTE Band4	5MHz	QPSK	20175	12RB#0	24.43	30
LTE Band4	5MHz	16QAM	20175	12RB#0	23.52	30
LTE Band4	5MHz	QPSK	20175	12RB#6	24.44	30
LTE Band4	5MHz	16QAM	20175	12RB#6	23.61	30
LTE Band4	5MHz	QPSK	20175	12RB#13	24.31	30
LTE Band4	5MHz	16QAM	20175	12RB#13	23.34	30
LTE Band4	5MHz	QPSK	20175	25RB#0	24.59	30
LTE Band4	5MHz	16QAM	20175	25RB#0	23.50	30
LTE Band4	5MHz	QPSK	20375	1RB#0	25.37	30
LTE Band4	5MHz	16QAM	20375	1RB#0	23.83	30
LTE Band4	5MHz	QPSK	20375	1RB#12	25.57	30
LTE Band4	5MHz	16QAM	20375	1RB#12	24.68	30
LTE Band4	5MHz	QPSK	20375	1RB#24	25.83	30
LTE Band4	5MHz	16QAM	20375	1RB#24	24.50	30
LTE Band4	5MHz	QPSK	20375	12RB#0	24.44	30
LTE Band4	5MHz	16QAM	20375	12RB#0	23.45	30
LTE Band4	5MHz	QPSK	20375	12RB#6	24.45	30
LTE Band4	5MHz	16QAM	20375	12RB#6	23.44	30
LTE Band4	5MHz	QPSK	20375	12RB#13	24.55	30



Report No.: R1908A0502-R3 LTE Band4 5MHz 16QAM 20375 12RB#13 23.64 30 **QPSK** LTE Band4 5MHz 20375 25RB#0 24.66 30 LTE Band4 5MHz 16QAM 20375 25RB#0 23.77 30 LTE Band4 10MHz **QPSK** 1RB#0 30 20000 25.44 LTE Band4 10MHz 16QAM 20000 1RB#0 24.36 30 LTE Band4 10MHz **QPSK** 20000 1RB#24 25.51 30 LTE Band4 10MHz 16QAM 20000 1RB#24 24.48 30 LTE Band4 10MHz **QPSK** 20000 1RB#49 25.43 30 LTE Band4 16QAM 20000 1RB#49 24.16 10MHz 30 **QPSK** LTE Band4 10MHz 20000 25RB#0 24.24 30 LTE Band4 10MHz 16QAM 20000 25RB#0 23.16 30 LTE Band4 10MHz **QPSK** 20000 25RB#12 24.35 30 LTE Band4 10MHz 16QAM 20000 25RB#12 23.26 30 **QPSK** LTE Band4 10MHz 20000 25RB#25 24.27 30 30 LTE Band4 10MHz 16QAM 20000 25RB#25 23.20 LTE Band4 10MHz **QPSK** 20000 50RB#0 24.25 30 LTE Band4 10MHz 16QAM 20000 50RB#0 24.13 30 LTE Band4 10MHz **QPSK** 20175 1RB#0 24.36 30 LTE Band4 10MHz 16QAM 20175 1RB#0 24.68 30 LTE Band4 10MHz **QPSK** 20175 1RB#24 25.70 30 LTE Band4 10MHz 16QAM 20175 1RB#24 24.26 30 **QPSK** 25.29 LTE Band4 10MHz 20175 1RB#49 30 30 LTE Band4 10MHz 16QAM 20175 1RB#49 24.30 LTE Band4 10MHz **QPSK** 20175 25RB#0 24.45 30 LTE Band4 10MHz 16QAM 20175 25RB#0 23.37 30 **QPSK** LTE Band4 10MHz 20175 25RB#12 24.52 30 LTE Band4 10MHz 16QAM 25RB#12 23.53 30 20175 LTE Band4 10MHz **QPSK** 20175 25RB#25 24.35 30 LTE Band4 10MHz 16QAM 20175 25RB#25 23.18 30 **QPSK** LTE Band4 10MHz 20175 50RB#0 24.41 30 LTE Band4 16QAM 24.49 10MHz 20175 50RB#0 30 LTE Band4 10MHz **QPSK** 20350 1RB#0 25.77 30 LTE Band4 10MHz 16QAM 20350 1RB#0 24.46 30 **QPSK** LTE Band4 10MHz 20350 1RB#24 25.74 30 LTE Band4 10MHz 16QAM 20350 1RB#24 24.13 30 **QPSK** LTE Band4 10MHz 20350 1RB#49 25.45 30 LTE Band4 10MHz 16QAM 20350 1RB#49 24.61 30 LTE Band4 **QPSK** 24.41 10MHz 20350 25RB#0 30 LTE Band4 16QAM 23.49 30 10MHz 20350 25RB#0 LTE Band4 10MHz **QPSK** 20350 25RB#12 24.40 30 LTE Band4 10MHz 16QAM 20350 25RB#12 23.47 30 LTE Band4 **QPSK** 30 10MHz 20350 25RB#25 24.59



Report No.: R1908A0502-R3 LTE Band4 10MHz 16QAM 20350 25RB#25 23.89 30 **QPSK** LTE Band4 10MHz 20350 50RB#0 24.40 30 LTE Band4 10MHz 16QAM 50RB#0 24.42 20350 30 LTE Band4 15MHz **QPSK** 1RB#0 25.54 30 20025 LTE Band4 15MHz 16QAM 20025 1RB#0 24.10 30 LTE Band4 15MHz **QPSK** 20025 1RB#38 25.38 30 LTE Band4 15MHz 16QAM 20025 1RB#38 24.19 30 LTE Band4 15MHz **QPSK** 20025 1RB#74 25.62 30 LTE Band4 16QAM 20025 1RB#74 25.03 15MHz 30 **QPSK** LTE Band4 15MHz 20025 38RB#0 25.12 30 LTE Band4 15MHz 16QAM 20025 38RB#0 24.82 30 LTE Band4 15MHz **QPSK** 20025 38RB#18 23.61 30 20025 LTE Band4 15MHz 16QAM 38RB#18 24.01 30 **QPSK** LTE Band4 15MHz 20025 38RB#37 24.27 30 20025 30 LTE Band4 15MHz 16QAM 38RB#37 24.17 LTE Band4 15MHz **QPSK** 20025 75RB#0 24.22 30 LTE Band4 15MHz 16QAM 20025 75RB#0 24.18 30 LTE Band4 15MHz **QPSK** 20175 1RB#0 25.34 30 LTE Band4 15MHz 16QAM 20175 1RB#0 24.49 30 LTE Band4 15MHz **QPSK** 20175 1RB#38 25.22 30 LTE Band4 15MHz 16QAM 20175 1RB#38 24.32 30 **QPSK** 25.29 LTE Band4 15MHz 20175 1RB#74 30 30 LTE Band4 15MHz 16QAM 20175 1RB#74 23.98 LTE Band4 15MHz **QPSK** 20175 38RB#0 24.19 30 LTE Band4 15MHz 16QAM 20175 38RB#0 24.18 30 **QPSK** 24.24 LTE Band4 15MHz 20175 38RB#18 30 LTE Band4 15MHz 16QAM 38RB#18 24.24 30 20175 LTE Band4 15MHz **QPSK** 20175 38RB#37 24.23 30 LTE Band4 15MHz 16QAM 20175 38RB#37 24.31 30 **QPSK** LTE Band4 15MHz 20175 75RB#0 24.45 30 LTE Band4 16QAM 15MHz 20175 75RB#0 24.38 30 LTE Band4 15MHz **QPSK** 1RB#0 25.42 20325 30 LTE Band4 15MHz 16QAM 20325 1RB#0 24.16 30 **QPSK** LTE Band4 15MHz 20325 1RB#38 25.36 30 LTE Band4 15MHz 16QAM 20325 1RB#38 24.33 30 **QPSK** LTE Band4 15MHz 20325 1RB#74 25.35 30 24.64 LTE Band4 15MHz 16QAM 20325 1RB#74 30 LTE Band4 **QPSK** 20325 24.46 15MHz 38RB#0 30 LTE Band4 16QAM 24.46 30 15MHz 20325 38RB#0 LTE Band4 15MHz **QPSK** 20325 38RB#18 24.44 30 LTE Band4 15MHz 16QAM 20325 38RB#18 24.32 30 LTE Band4 **QPSK** 30 15MHz 20325 38RB#37 23.99



Report No.: R1908A0502-R3 LTE Band4 15MHz 16QAM 20325 38RB#37 23.96 30 **QPSK** LTE Band4 15MHz 20325 75RB#0 24.28 30 LTE Band4 15MHz 16QAM 20325 75RB#0 24.26 30 LTE Band4 20MHz **QPSK** 30 20050 1RB#0 25.37 LTE Band4 20MHz 16QAM 20050 1RB#0 24.39 30 LTE Band4 20MHz **QPSK** 20050 1RB#49 25.66 30 24.54 LTE Band4 20MHz 16QAM 20050 1RB#49 30 1RB#99 LTE Band4 20MHz **QPSK** 20050 25.43 30 LTE Band4 20MHz 16QAM 20050 24.72 1RB#99 30 **QPSK** LTE Band4 20MHz 20050 50RB#0 24.31 30 LTE Band4 20MHz 16QAM 20050 50RB#0 24.19 30 LTE Band4 20MHz **QPSK** 20050 50RB#25 24.16 30 LTE Band4 20MHz 16QAM 20050 50RB#25 24.13 30 **QPSK** LTE Band4 20MHz 20050 50RB#50 24.45 30 24.31 30 LTE Band4 20MHz 16QAM 20050 50RB#50 LTE Band4 20MHz **QPSK** 20050 100RB#0 24.22 30 LTE Band4 20MHz 16QAM 20050 100RB#0 24.31 30 LTE Band4 20MHz **QPSK** 20175 1RB#0 25.74 30 LTE Band4 20MHz 16QAM 20175 1RB#0 24.85 30 LTE Band4 20MHz **QPSK** 20175 1RB#49 25.66 30 LTE Band4 20MHz 16QAM 20175 1RB#49 24.83 30 **QPSK** 25.50 LTE Band4 20MHz 20175 1RB#99 30 30 LTE Band4 20MHz 16QAM 20175 1RB#99 24.63 LTE Band4 20MHz **QPSK** 20175 50RB#0 24.49 30 LTE Band4 20MHz 16QAM 20175 50RB#0 24.44 30 **QPSK** LTE Band4 20MHz 20175 50RB#25 24.53 30 LTE Band4 20MHz 16QAM 50RB#25 24.45 30 20175 LTE Band4 20MHz **QPSK** 20175 50RB#50 24.36 30 LTE Band4 20MHz 16QAM 20175 50RB#50 24.33 30 **QPSK** LTE Band4 20MHz 20175 100RB#0 24.21 30 LTE Band4 16QAM 20MHz 20175 100RB#0 24.27 30 LTE Band4 20MHz **QPSK** 20300 1RB#0 25.71 30 LTE Band4 20MHz 16QAM 20300 1RB#0 24.85 30 **QPSK** LTE Band4 20MHz 20300 1RB#49 25.60 30 LTE Band4 20MHz 16QAM 20300 1RB#49 24.83 30 **QPSK** LTE Band4 20MHz 20300 1RB#99 25.38 30 LTE Band4 20MHz 16QAM 20300 1RB#99 25.00 30 LTE Band4 **QPSK** 24.36 20MHz 20300 50RB#0 30 LTE Band4 16QAM 24.31 30 20MHz 20300 50RB#0 LTE Band4 20MHz **QPSK** 20300 50RB#25 24.27 30 LTE Band4 20MHz 16QAM 20300 50RB#25 24.36 30 LTE Band4 **QPSK** 30 20MHz 20300 50RB#50 24.36

RF Test Report Report No.: R1908A0502-R3

LTE Band4	20MHz	16QAM	20300	50RB#50	24.32	30
LTE Band4	20MHz	QPSK	20300	100RB#0	24.28	30
LTE Band4	20MHz	16QAM	20300	100RB#0	24.37	30

Band	Bandwidth	Modulation	Channel	RB Configuration	EIRP	Limit (dBm)
LTE Band 7	5MHz	QPSK	20775	1RB#0	26.26	33
LTE Band 7	5MHz	16QAM	20775	1RB#0	25.36	33
LTE Band 7	5MHz	QPSK	20775	1RB#12	26.22	33
LTE Band 7	5MHz	16QAM	20775	1RB#12	25.12	33
LTE Band 7	5MHz	QPSK	20775	1RB#24	26.27	33
LTE Band 7	5MHz	16QAM	20775	1RB#24	25.31	33
LTE Band 7	5MHz	QPSK	20775	12RB#0	25.43	33
LTE Band 7	5MHz	16QAM	20775	12RB#0	24.64	33
LTE Band 7	5MHz	QPSK	20775	12RB#6	25.49	33
LTE Band 7	5MHz	16QAM	20775	12RB#6	24.57	33
LTE Band 7	5MHz	QPSK	20775	12RB#13	25.42	33
LTE Band 7	5MHz	16QAM	20775	12RB#13	24.53	33
LTE Band 7	5MHz	QPSK	20775	25RB#0	25.42	33
LTE Band 7	5MHz	16QAM	20775	25RB#0	24.34	33
LTE Band 7	5MHz	QPSK	21100	1RB#0	25.78	33
LTE Band 7	5MHz	16QAM	21100	1RB#0	24.89	33
LTE Band 7	5MHz	QPSK	21100	1RB#12	25.78	33
LTE Band 7	5MHz	16QAM	21100	1RB#12	24.82	33
LTE Band 7	5MHz	QPSK	21100	1RB#24	25.83	33
LTE Band 7	5MHz	16QAM	21100	1RB#24	24.77	33
LTE Band 7	5MHz	QPSK	21100	12RB#0	24.77	33
LTE Band 7	5MHz	16QAM	21100	12RB#0	23.76	33
LTE Band 7	5MHz	QPSK	21100	12RB#6	24.78	33
LTE Band 7	5MHz	16QAM	21100	12RB#6	23.85	33
LTE Band 7	5MHz	QPSK	21100	12RB#13	24.92	33
LTE Band 7	5MHz	16QAM	21100	12RB#13	24	33
LTE Band 7	5MHz	QPSK	21100	25RB#0	24.82	33
LTE Band 7	5MHz	16QAM	21100	25RB#0	24.02	33
LTE Band 7	5MHz	QPSK	21425	1RB#0	25.76	33
LTE Band 7	5MHz	16QAM	21425	1RB#0	24.49	33
LTE Band 7	5MHz	QPSK	21425	1RB#12	25.8	33
LTE Band 7	5MHz	16QAM	21425	1RB#12	24.44	33
LTE Band 7	5MHz	QPSK	21425	1RB#24	25.72	33
LTE Band 7	5MHz	16QAM	21425	1RB#24	24.5	33
LTE Band 7	5MHz	QPSK	21425	12RB#0	24.83	33
LTE Band 7	5MHz	16QAM	21425	12RB#0	23.55	33



Report No.: R1908A0502-R3 LTE Band 7 5MHz **QPSK** 21425 12RB#6 24.73 33 LTE Band 7 5MHz 16QAM 21425 12RB#6 23.51 33 LTE Band 7 5MHz **QPSK** 21425 12RB#13 24.6 33 LTE Band 7 5MHz 16QAM 21425 12RB#13 33 23.6 **QPSK** LTE Band 7 5MHz 21425 25RB#0 24.63 33 33 LTE Band 7 5MHz 16QAM 21425 25RB#0 23.76 **QPSK** 1RB#0 33 LTE Band 7 10MHz 20800 26.16 LTE Band 7 10MHz 16QAM 20800 1RB#0 25.21 33 LTE Band 7 10MHz **QPSK** 20800 1RB#24 26.26 33 LTE Band 7 10MHz 16QAM 20800 1RB#24 25.46 33 LTE Band 7 **QPSK** 1RB#49 33 10MHz 20800 26.58 LTE Band 7 10MHz 16QAM 20800 1RB#49 25.2 33 **QPSK** 33 LTE Band 7 10MHz 20800 25RB#0 25.38 LTE Band 7 10MHz 16QAM 20800 25RB#0 24.59 33 LTE Band 7 **QPSK** 10MHz 20800 25RB#12 25.41 33 LTE Band 7 10MHz 16QAM 20800 25RB#12 24.56 33 LTE Band 7 10MHz **QPSK** 20800 25RB#25 25.45 33 LTE Band 7 10MHz 16QAM 20800 25RB#25 24.63 33 LTE Band 7 10MHz **QPSK** 20800 50RB#0 25.38 33 LTE Band 7 10MHz 16QAM 20800 50RB#0 25.34 33 LTE Band 7 10MHz **QPSK** 21100 1RB#0 25.68 33 LTE Band 7 10MHz 1RB#0 33 16QAM 21100 24.56 **QPSK** 33 LTE Band 7 10MHz 21100 1RB#24 25.96 LTE Band 7 10MHz 16QAM 21100 1RB#24 24.89 33 10MHz **QPSK** 33 LTE Band 7 21100 1RB#49 26.03 10MHz LTE Band 7 16QAM 21100 1RB#49 24.85 33 LTE Band 7 33 10MHz **QPSK** 21100 25RB#0 24.86 LTE Band 7 10MHz 16QAM 21100 25RB#0 24.02 33 33 LTE Band 7 10MHz **QPSK** 21100 25RB#12 24.96 33 LTE Band 7 10MHz 16QAM 21100 25RB#12 24 LTE Band 7 **QPSK** 33 10MHz 21100 25RB#25 24.94 LTE Band 7 10MHz 16QAM 21100 25RB#25 23.99 33 LTE Band 7 10MHz QPSK 21100 50RB#0 24.76 33 LTE Band 7 10MHz 16QAM 21100 50RB#0 24.85 33 33 LTE Band 7 10MHz **QPSK** 21400 1RB#0 25.75 33 LTE Band 7 10MHz 16QAM 21400 1RB#0 24.8 LTE Band 7 **QPSK** 21400 1RB#24 33 10MHz 25.96 LTE Band 7 10MHz 1RB#24 16QAM 21400 24.89 33 LTE Band 7 10MHz **QPSK** 21400 1RB#49 33 25.76 LTE Band 7 10MHz 16QAM 21400 1RB#49 24.48 33 **QPSK** LTE Band 7 10MHz 21400 25RB#0 24.83 33 LTE Band 7 21400 25RB#0 33 10MHz 16QAM 23.87



Report No.: R1908A0502-R3 LTE Band 7 10MHz **QPSK** 21400 25RB#12 24.75 33 LTE Band 7 10MHz 16QAM 21400 25RB#12 23.84 33 LTE Band 7 10MHz **QPSK** 21400 25RB#25 24.7 33 LTE Band 7 10MHz 16QAM 21400 33 25RB#25 23.78 **QPSK** LTE Band 7 10MHz 21400 50RB#0 24.69 33 33 LTE Band 7 10MHz 16QAM 21400 50RB#0 24.69 1RB#0 LTE Band 7 15MHz **QPSK** 33 20825 26.42 LTE Band 7 15MHz 16QAM 20825 1RB#0 25.24 33 LTE Band 7 15MHz **QPSK** 20825 1RB#38 33 25.97 LTE Band 7 15MHz 16QAM 20825 1RB#38 25.13 33 LTE Band 7 **QPSK** 1RB#74 33 15MHz 20825 25.83 LTE Band 7 15MHz 16QAM 20825 1RB#74 25.11 33 **QPSK** 33 LTE Band 7 15MHz 20825 38RB#0 24.94 LTE Band 7 15MHz 16QAM 20825 38RB#0 24.88 33 LTE Band 7 **QPSK** 15MHz 20825 38RB#18 24.97 33 LTE Band 7 15MHz 16QAM 20825 38RB#18 24.9 33 LTE Band 7 15MHz **QPSK** 20825 38RB#37 24.95 33 LTE Band 7 15MHz 16QAM 20825 38RB#37 24.87 33 33 LTE Band 7 15MHz **QPSK** 20825 75RB#0 25 LTE Band 7 15MHz 16QAM 20825 75RB#0 25.04 33 LTE Band 7 15MHz **QPSK** 21100 1RB#0 25.84 33 LTE Band 7 1RB#0 33 15MHz 16QAM 21100 24.86 **QPSK** 33 LTE Band 7 15MHz 21100 1RB#38 25.6 LTE Band 7 15MHz 16QAM 21100 1RB#38 33 24.68 15MHz **QPSK** 33 LTE Band 7 21100 1RB#74 25.64 1RB#74 LTE Band 7 15MHz 16QAM 21100 24.71 33 LTE Band 7 33 15MHz **QPSK** 21100 38RB#0 24.24 LTE Band 7 15MHz 16QAM 21100 38RB#0 24.21 33 33 LTE Band 7 15MHz **QPSK** 21100 38RB#18 24.14 33 LTE Band 7 15MHz 16QAM 21100 38RB#18 24.1 LTE Band 7 **QPSK** 33 15MHz 21100 38RB#37 24.16 LTE Band 7 15MHz 16QAM 21100 38RB#37 24.13 33 LTE Band 7 15MHz QPSK 21100 75RB#0 24.76 33 LTE Band 7 15MHz 16QAM 21100 75RB#0 24.79 33 33 LTE Band 7 15MHz **QPSK** 21375 1RB#0 25.76 33 LTE Band 7 15MHz 16QAM 21375 1RB#0 24.63 LTE Band 7 **QPSK** 1RB#38 33 15MHz 21375 25.53 LTE Band 7 1RB#38 15MHz 16QAM 21375 24.67 33 LTE Band 7 **QPSK** 1RB#74 33 15MHz 21375 25.51 LTE Band 7 15MHz 16QAM 21375 1RB#74 24.51 33 **QPSK** LTE Band 7 15MHz 21375 38RB#0 24.64 33 LTE Band 7 38RB#0 33 15MHz 16QAM 21375 24.58



Report No.: R1908A0502-R3 LTE Band 7 15MHz **QPSK** 21375 38RB#18 24.28 33 LTE Band 7 15MHz 16QAM 21375 38RB#18 24.5 33 LTE Band 7 15MHz **QPSK** 21375 38RB#37 24.67 33 LTE Band 7 15MHz 16QAM 33 21375 38RB#37 24.5 **QPSK** LTE Band 7 15MHz 21375 75RB#0 24.61 33 33 LTE Band 7 15MHz 16QAM 21375 75RB#0 24.57 1RB#0 **QPSK** 33 LTE Band 7 20MHz 20850 25.8 LTE Band 7 20MHz 16QAM 20850 1RB#0 25.3 33 LTE Band 7 20MHz **QPSK** 20850 1RB#49 26.28 33 LTE Band 7 20MHz 16QAM 20850 1RB#49 25.61 33 1RB#99 LTE Band 7 **QPSK** 33 20MHz 20850 25.86 LTE Band 7 20MHz 16QAM 20850 1RB#99 25.16 33 **QPSK** 33 LTE Band 7 20MHz 20850 50RB#0 25.03 LTE Band 7 20MHz 16QAM 20850 50RB#0 25.38 33 LTE Band 7 **QPSK** 20MHz 20850 50RB#25 25.35 33 LTE Band 7 20MHz 16QAM 20850 50RB#25 25.27 33 LTE Band 7 20MHz **QPSK** 20850 50RB#50 25.3 33 LTE Band 7 20MHz 16QAM 20850 50RB#50 25.03 33 LTE Band 7 20MHz **QPSK** 20850 100RB#0 25.17 33 LTE Band 7 20MHz 16QAM 20850 100RB#0 25.14 33 LTE Band 7 20MHz **QPSK** 21100 1RB#0 25.71 33 LTE Band 7 20MHz 1RB#0 33 16QAM 21100 25.27 **QPSK** 33 LTE Band 7 20MHz 21100 1RB#49 26.12 LTE Band 7 20MHz 16QAM 21100 1RB#49 33 25.46 20MHz **QPSK** 33 LTE Band 7 21100 1RB#99 25.99 20MHz LTE Band 7 16QAM 21100 1RB#99 25.31 33 LTE Band 7 33 20MHz **QPSK** 21100 50RB#0 24.77 LTE Band 7 20MHz 16QAM 21100 50RB#0 24.82 33 33 LTE Band 7 20MHz **QPSK** 21100 50RB#25 24.79 33 LTE Band 7 20MHz 16QAM 21100 50RB#25 24.79 LTE Band 7 **QPSK** 33 20MHz 21100 50RB#50 24.84 50RB#50 LTE Band 7 20MHz 16QAM 21100 33 24.87 LTE Band 7 20MHz QPSK 21100 100RB#0 24.86 33 LTE Band 7 20MHz 16QAM 21100 100RB#0 24.85 33 33 LTE Band 7 20MHz **QPSK** 21350 1RB#0 25.92 33 LTE Band 7 20MHz 16QAM 21350 1RB#0 25.21 LTE Band 7 **QPSK** 1RB#49 33 20MHz 21350 25.95 LTE Band 7 1RB#49 20MHz 16QAM 21350 25.28 33 LTE Band 7 20MHz **QPSK** 21350 1RB#99 33 25.75 LTE Band 7 20MHz 16QAM 21350 1RB#99 25.11 33 **QPSK** LTE Band 7 20MHz 21350 50RB#0 24.76 33 LTE Band 7 50RB#0 33 20MHz 16QAM 21350 24.65



Report No.: R1908A0502-R3

LTE Band 7	20MHz	QPSK	21350	50RB#25	24.72	33
LTE Band 7	20MHz	16QAM	21350	50RB#25	24.65	33
LTE Band 7	20MHz	QPSK	21350	50RB#50	24.63	33
LTE Band 7	20MHz	16QAM	21350	50RB#50	24.64	33
LTE Band 7	20MHz	QPSK	21350	100RB#0	24.76	33
LTE Band 7	20MHz	16QAM	21350	100RB#0	24.68	33

F Test Report No.: R1908A0502-R3

5.3 Occupied Bandwidth

Ambient condition

Temperature	Relative humidity	Pressure
23°C ~25°C	45%~50%	101.5kPa

Method of Measurement

The EUT was connected to Spectrum Analyzer and Base Station Simulator via power Splitter. The occupied bandwidth is measured using spectrum analyzer.

RBW is set to 100 kHz, VBW is set to 300 kHz for WCDMA Band IV.

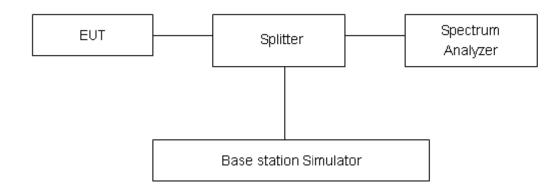
RBW is set to 51 kHz, VBW is set to 51 kHz for LTE Band 4 (1.4MHz/3MHz).

RBW is set to 51 kHz, VBW is set to 51 kHz for LTE Band 4/7 (5MHz/10MHz).

RBW is set to 51 kHz, VBW is set to 51KHz for LTE Band 4/7 (15MHz/20MHz).

99% power and -26dBc occupied bandwidths are recorded. Spectrum analyzer plots are included on the following pages.

Test Setup

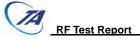


Limits

No specific occupied bandwidth requirements in part 2.1049.

Measurement Uncertainty

The assessed measurement uncertainty to ensure 95% confidence level for the normal distribution is with the coverage factor k = 2, U=624Hz.



Band	Channel	Occupied Bandwidth (kHz)	26dB Bandwidth (kHz)	Limit(kHz)	Verdict
Band IV	1312	4124.7	4710		PASS
Band IV	1413	4139.3	4712		PASS
Band IV	1513	4137.8	4703		PASS

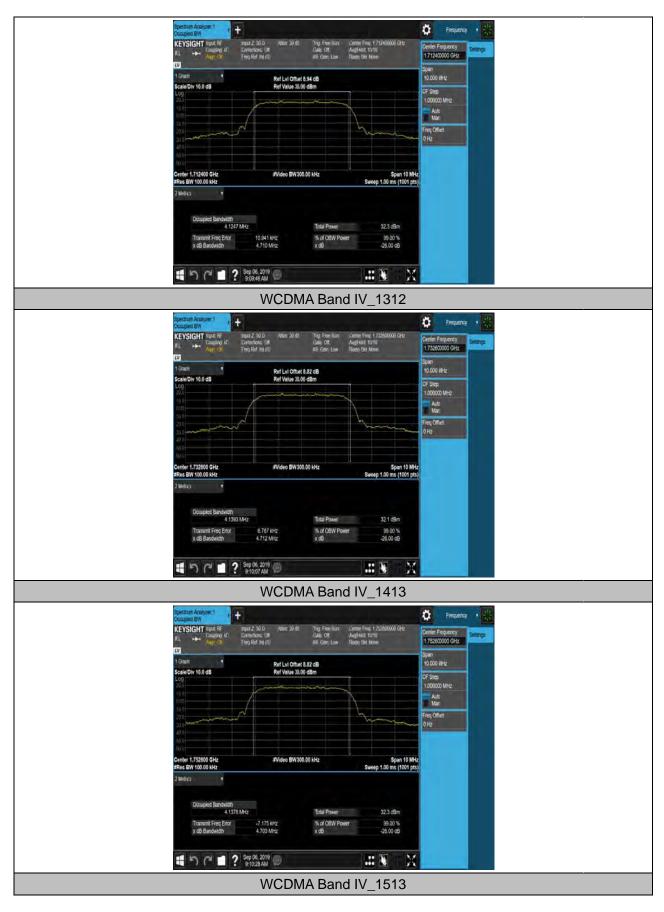
Band	Bandwidth	Modulation	Channel	RB Configuration	Occupied Bandwidth (MHz)	26dB Bandwidth (MHz)	Verdict
LTE Band 4	1.4MHz	QPSK	19957	6RB#0	1.1121	1.274	PASS
LTE Band 4	1.4MHz	16QAM	19957	6RB#0	1.1101	1.299	PASS
LTE Band 4	1.4MHz	QPSK	20175	6RB#0	1.1077	1.283	PASS
LTE Band 4	1.4MHz	16QAM	20175	6RB#0	1.1097	1.283	PASS
LTE Band 4	1.4MHz	QPSK	20393	6RB#0	1.1069	1.289	PASS
LTE Band 4	1.4MHz	16QAM	20393	6RB#0	1.1107	1.290	PASS
LTE Band 4	3MHz	QPSK	19965	15RB#0	2.6871	2.912	PASS
LTE Band 4	3MHz	16QAM	19965	15RB#0	2.6952	2.947	PASS
LTE Band 4	3MHz	QPSK	20175	15RB#0	2.6995	2.921	PASS
LTE Band 4	3MHz	16QAM	20175	15RB#0	2.6919	2.941	PASS
LTE Band 4	3MHz	QPSK	20385	15RB#0	2.7014	2.925	PASS
LTE Band 4	3MHz	16QAM	20385	15RB#0	2.6958	2.928	PASS
LTE Band 4	5MHz	QPSK	19975	25RB#0	4.4780	4.859	PASS
LTE Band 4	5MHz	16QAM	19975	25RB#0	4.4744	4.829	PASS
LTE Band 4	5MHz	QPSK	20175	25RB#0	4.4709	4.834	PASS
LTE Band 4	5MHz	16QAM	20175	25RB#0	4.4776	4.859	PASS
LTE Band 4	5MHz	QPSK	20375	25RB#0	4.4771	4.805	PASS
LTE Band 4	5MHz	16QAM	20375	25RB#0	4.4769	4.837	PASS
LTE Band 4	10MHz	QPSK	20000	50RB#0	8.9109	9.343	PASS
LTE Band 4	10MHz	16QAM	20000	50RB#0	8.9104	9.349	PASS
LTE Band 4	10MHz	QPSK	20175	50RB#0	8.9079	9.348	PASS
LTE Band 4	10MHz	16QAM	20175	50RB#0	8.9002	9.305	PASS
LTE Band 4	10MHz	QPSK	20350	50RB#0	8.9060	9.380	PASS
LTE Band 4	10MHz	16QAM	20350	50RB#0	8.9036	9.348	PASS
LTE Band 4	15MHz	QPSK	20025	75RB#0	13.365	13.94	PASS
LTE Band 4	15MHz	16QAM	20025	75RB#0	13.361	13.90	PASS
LTE Band 4	15MHz	QPSK	20175	75RB#0	13.358	13.87	PASS
LTE Band 4	15MHz	16QAM	20175	75RB#0	13.351	13.85	PASS
LTE Band 4	15MHz	QPSK	20325	75RB#0	13.351	13.89	PASS
LTE Band 4	15MHz	16QAM	20325	75RB#0	13.339	13.83	PASS
LTE Band 4	20MHz	QPSK	20050	100RB#0	17.808	18.38	PASS
LTE Band 4	20MHz	16QAM	20050	100RB#0	17.815	18.31	PASS
LTE Band 4	20MHz	QPSK	20175	100RB#0	17.829	18.41	PASS

Page 37 of 302

LTE Band 4	20MHz	16QAM	20175	100RB#0	17.809	18.41	PASS
LTE Band 4	20MHz	QPSK	20300	100RB#0	17.776	18.42	PASS
LTE Band 4	20MHz	16QAM	20300	100RB#0	17.775	18.39	PASS

Band	Bandwidth	Modulation	Channel	RB	Occupied Bandwidth	26dB Bandwidth	Verdict
Bana	Banawiatii	Modulation	Onamici	Configuration	(MHz)	(MHz)	Verdict
LTE Band 7	5MHz	QPSK	20775	25RB#0	4.4703	4.831	PASS
LTE Band 7	5MHz	16QAM	20775	25RB#0	4.4749	4.855	PASS
LTE Band 7	5MHz	QPSK	21100	25RB#0	4.4757	4.806	PASS
LTE Band 7	5MHz	16QAM	21100	25RB#0	4.4800	4.825	PASS
LTE Band 7	5MHz	QPSK	21425	25RB#0	4.4730	4.846	PASS
LTE Band 7	5MHz	16QAM	21425	25RB#0	4.4749	4.798	PASS
LTE Band 7	10MHz	QPSK	20800	50RB#0	8.9132	9.328	PASS
LTE Band 7	10MHz	16QAM	20800	50RB#0	8.9168	9.348	PASS
LTE Band 7	10MHz	QPSK	21100	50RB#0	8.9102	9.314	PASS
LTE Band 7	10MHz	16QAM	21100	50RB#0	8.9010	9.346	PASS
LTE Band 7	10MHz	QPSK	21400	50RB#0	8.9016	9.334	PASS
LTE Band 7	10MHz	16QAM	21400	50RB#0	8.9052	9.366	PASS
LTE Band 7	15MHz	QPSK	20825	75RB#0	13.338	13.90	PASS
LTE Band 7	15MHz	16QAM	20825	75RB#0	13.355	13.97	PASS
LTE Band 7	15MHz	QPSK	21100	75RB#0	13.367	13.87	PASS
LTE Band 7	15MHz	16QAM	21100	75RB#0	13.336	13.95	PASS
LTE Band 7	15MHz	QPSK	21375	75RB#0	13.353	13.84	PASS
LTE Band 7	15MHz	16QAM	21375	75RB#0	13.362	13.87	PASS
LTE Band 7	20MHz	QPSK	20850	100RB#0	17.799	18.36	PASS
LTE Band 7	20MHz	16QAM	20850	100RB#0	17.793	18.34	PASS
LTE Band 7	20MHz	QPSK	21100	100RB#0	17.786	18.35	PASS
LTE Band 7	20MHz	16QAM	21100	100RB#0	17.785	18.39	PASS
LTE Band 7	20MHz	QPSK	21350	100RB#0	17.765	18.38	PASS
LTE Band 7	20MHz	16QAM	21350	100RB#0	17.766	18.39	PASS



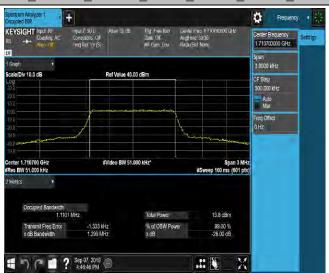




Test Report No.: R1908A0502-R3

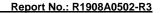
LTE Band 4_1.4MHz_QPSK_19957_6RB#0_1.1121_1.274_PASS | Comparison | C

LTE Band 4_1.4MHz_16QAM_19957_6RB#0_1.1101_1.299_PASS

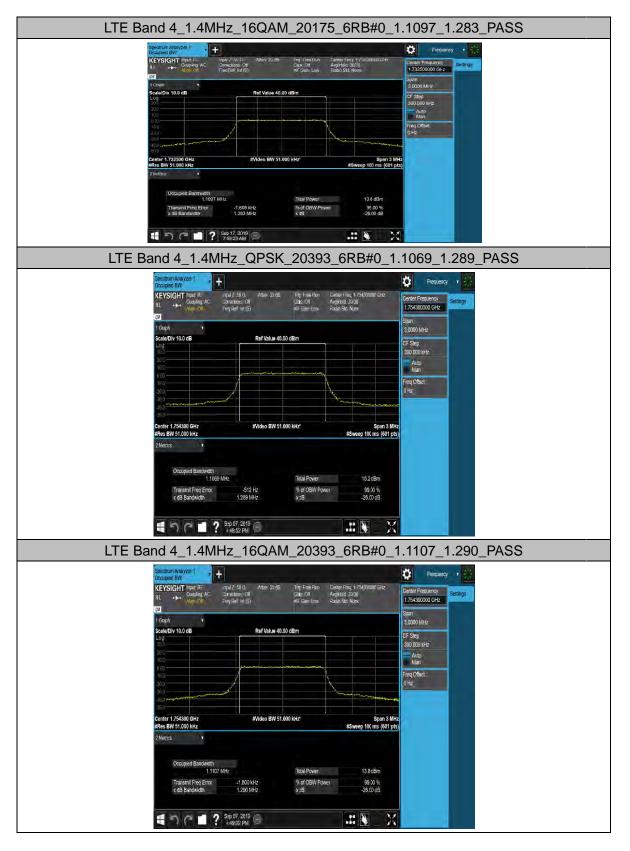


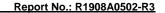
LTE Band 4_1.4MHz_QPSK_20175_6RB#0_1.1077_1.283_PASS



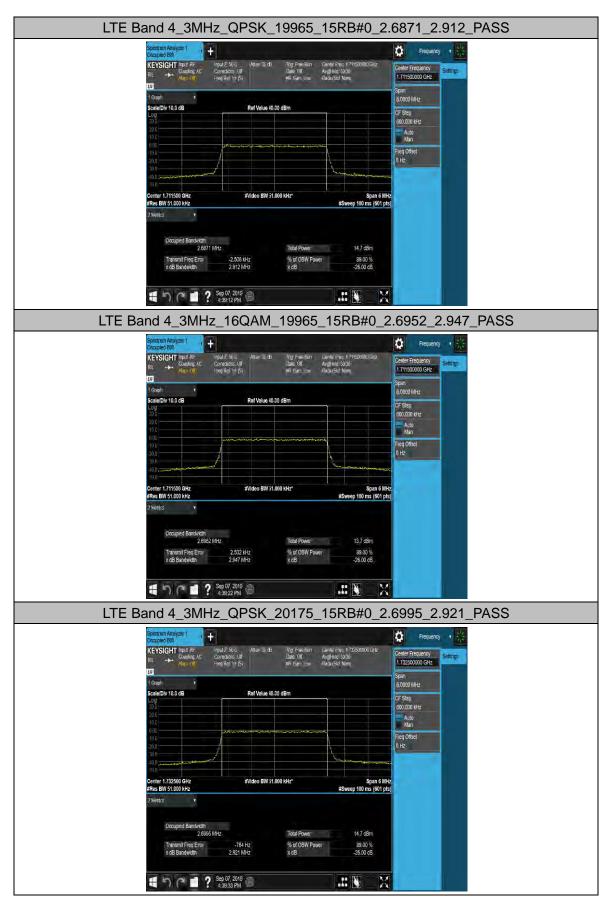








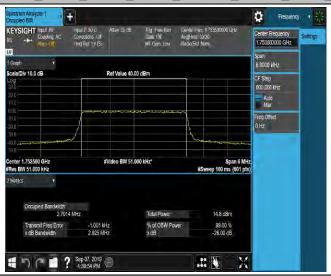




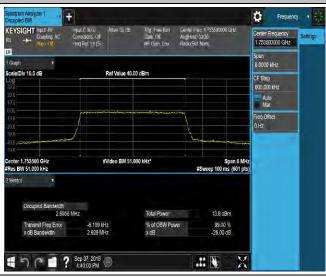
LTE Band 4_3MHz_16QAM_20175_15RB#0_2.6919_2.941_PASS



LTE Band 4_3MHz_QPSK_20385_15RB#0_2.7014_2.925_PASS



LTE Band 4_3MHz_16QAM_20385_15RB#0_2.6958_2.928_PASS



LTE Band 4_5MHz_QPSK_19975_25RB#0_4.4780_4.859_PASS



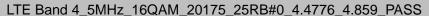
LTE Band 4_5MHz_16QAM_19975_25RB#0_4.4744_4.829_PASS



LTE Band 4_5MHz_QPSK_20175_25RB#0_4.4709_4.834_PASS





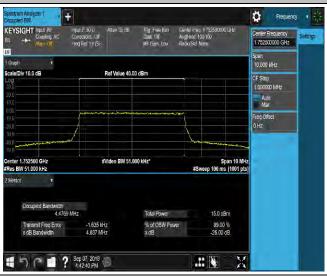




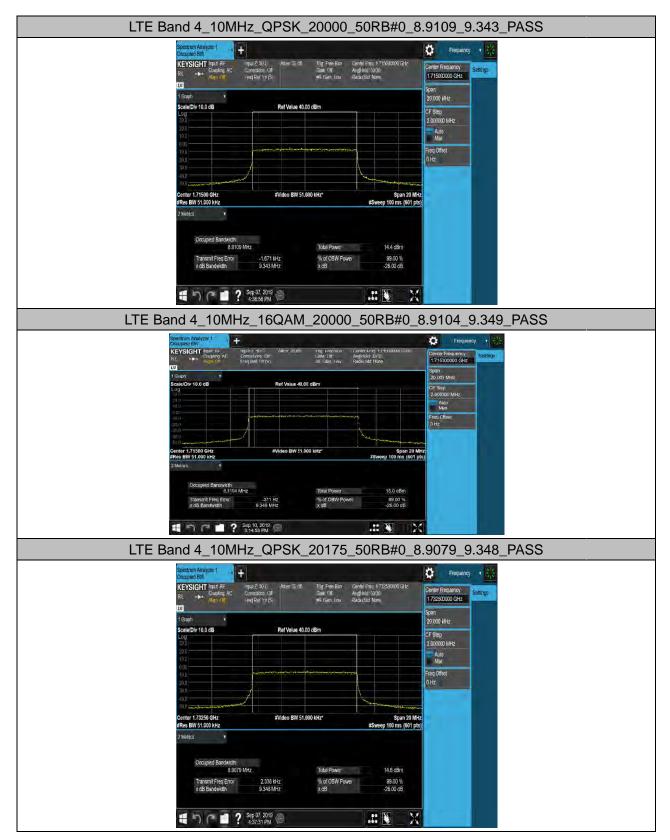
LTE Band 4_5MHz_QPSK_20375_25RB#0_4.4771_4.805_PASS



LTE Band 4_5MHz_16QAM_20375_25RB#0_4.4769_4.837_PASS

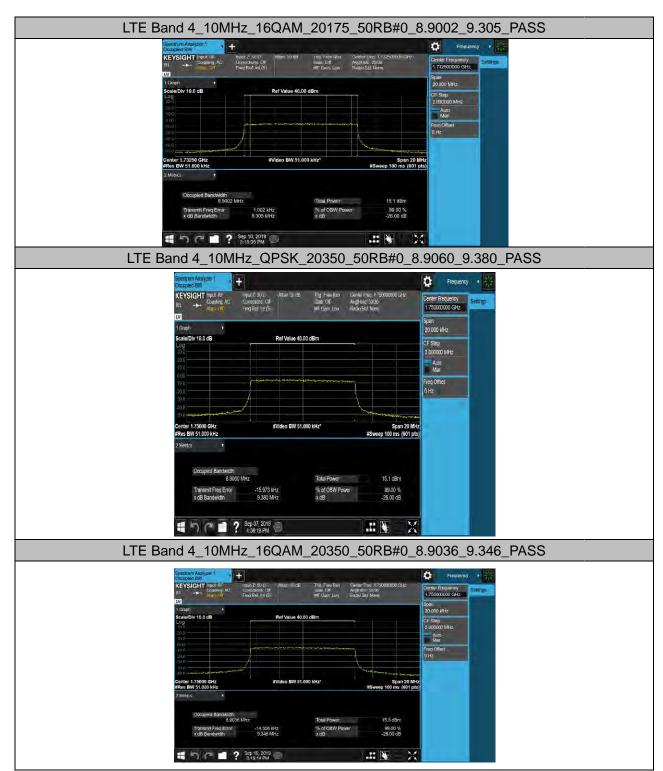


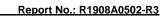




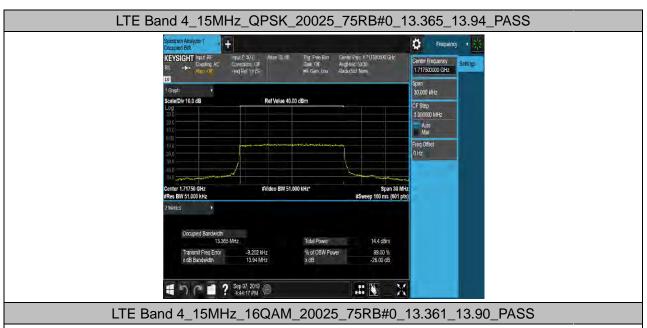


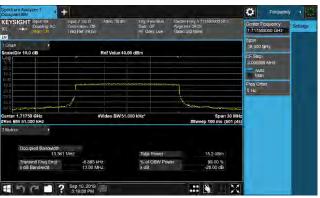




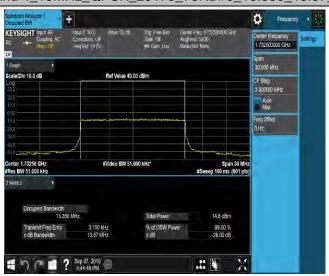






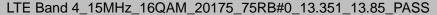


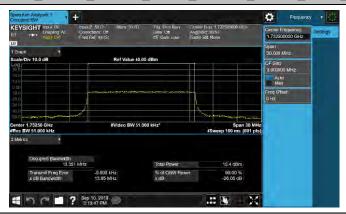
LTE Band 4_15MHz_QPSK_20175_75RB#0_13.358_13.87_PASS











LTE Band 4_15MHz_QPSK_20325_75RB#0_13.351_13.89_PASS

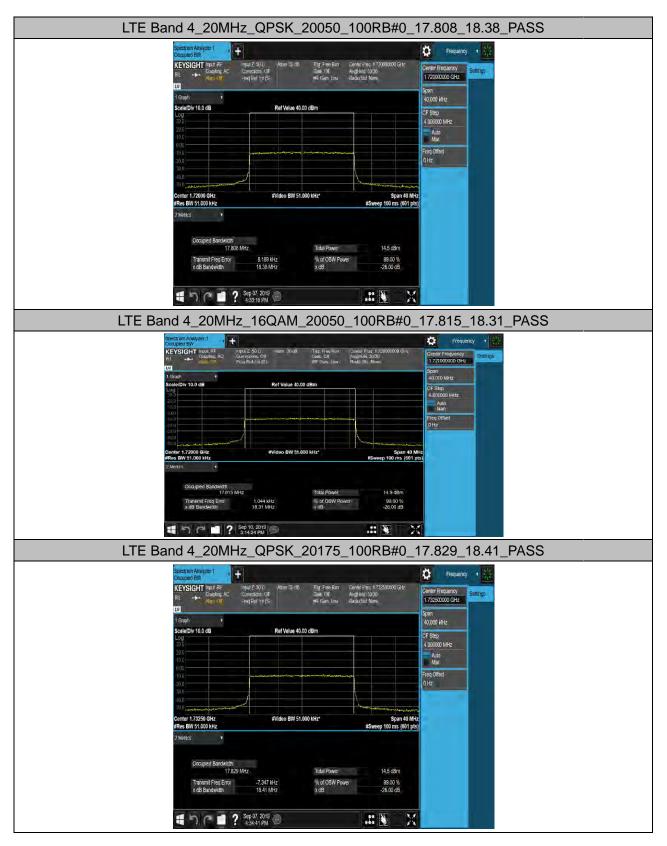


LTE Band 4_15MHz_16QAM_20325_75RB#0_13.339_13.83_PASS



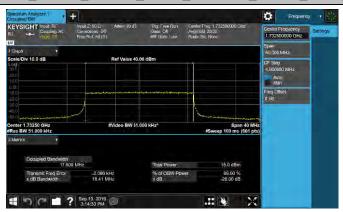




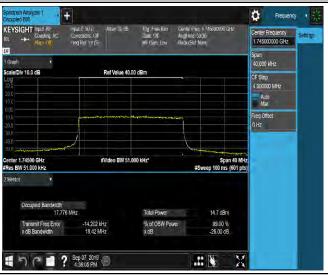




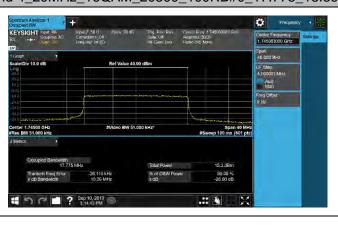
LTE Band 4_20MHz_16QAM_20175_100RB#0_17.809_18.41_PASS



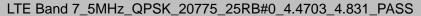
LTE Band 4_20MHz_QPSK_20300_100RB#0_17.776_18.42_PASS



LTE Band 4_20MHz_16QAM_20300_100RB#0_17.775_18.39_PASS





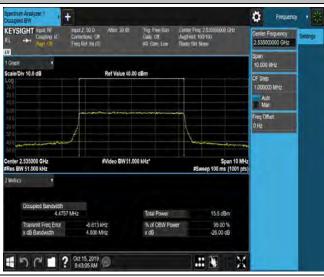




LTE Band 7_5MHz_16QAM_20775_25RB#0_4.4749_4.855_PASS

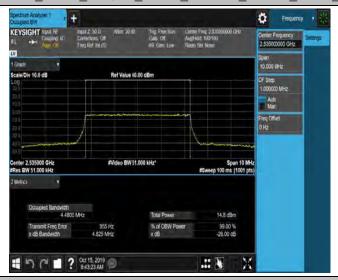


LTE Band 7_5MHz_QPSK_21100_25RB#0_4.4757_4.806_PASS









LTE Band 7_5MHz_QPSK_21425_25RB#0_4.4730_4.846_PASS



LTE Band 7_5MHz_16QAM_21425_25RB#0_4.4749_4.798_PASS

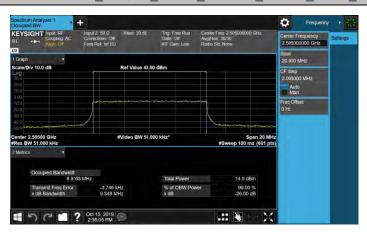




LTE Band 7_10MHz_QPSK_20800_50RB#0_8.9132_9.328_PASS

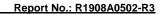


LTE Band 7-10MHz_16QAM_20800_50RB#0_8.9168_9.348_PASS

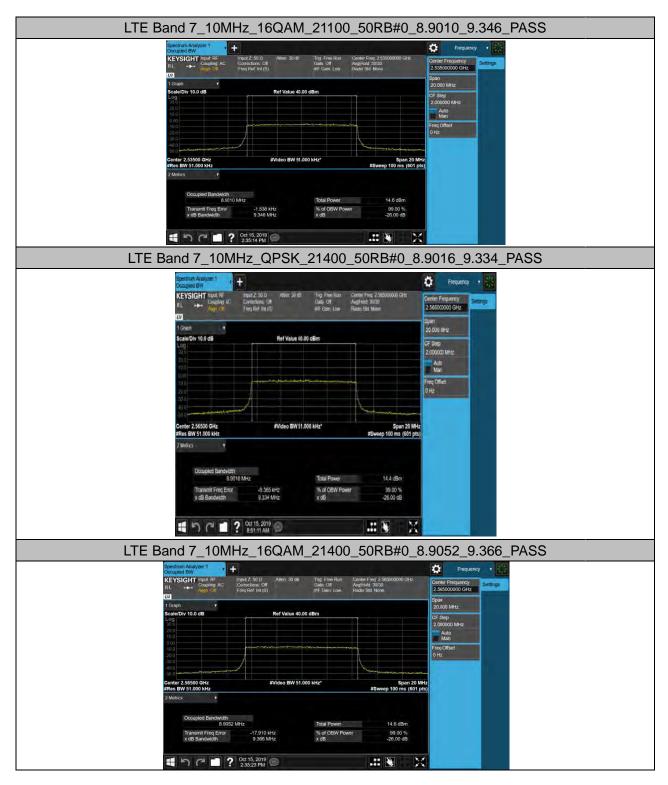


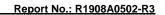
LTE Band 7_10MHz_QPSK_21100_50RB#0_8.9102_9.314_PASS



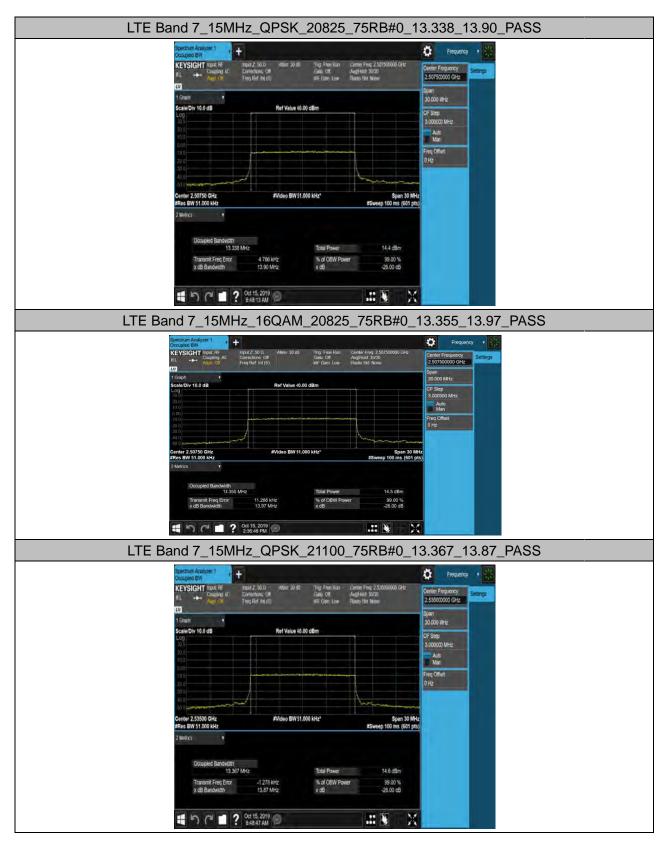


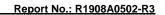




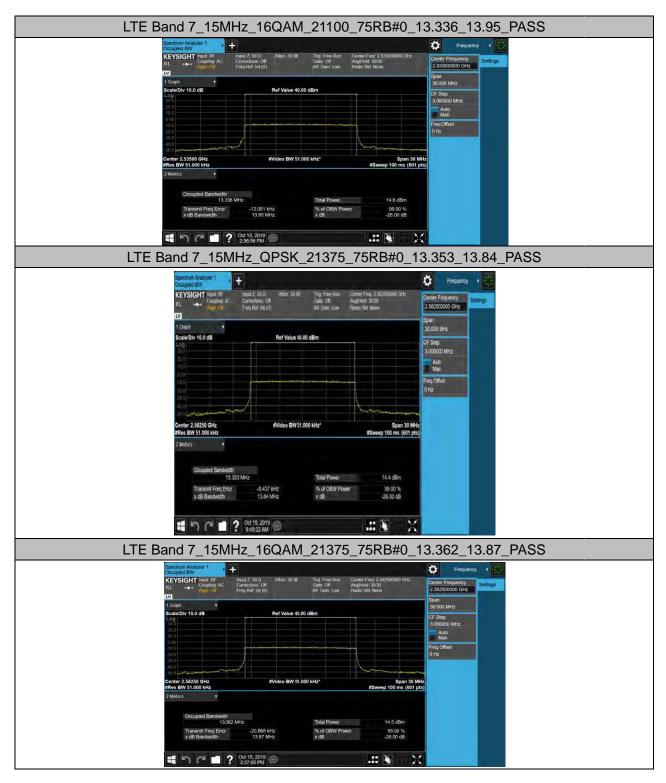








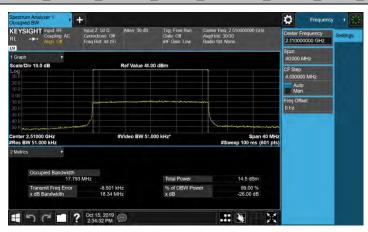




LTE Band 7_20MHz_QPSK_20850_100RB#0_17.799_18.36_PASS



LTE Band 7_20MHz_16QAM_20850_100RB#0_17.793_18.34_PASS

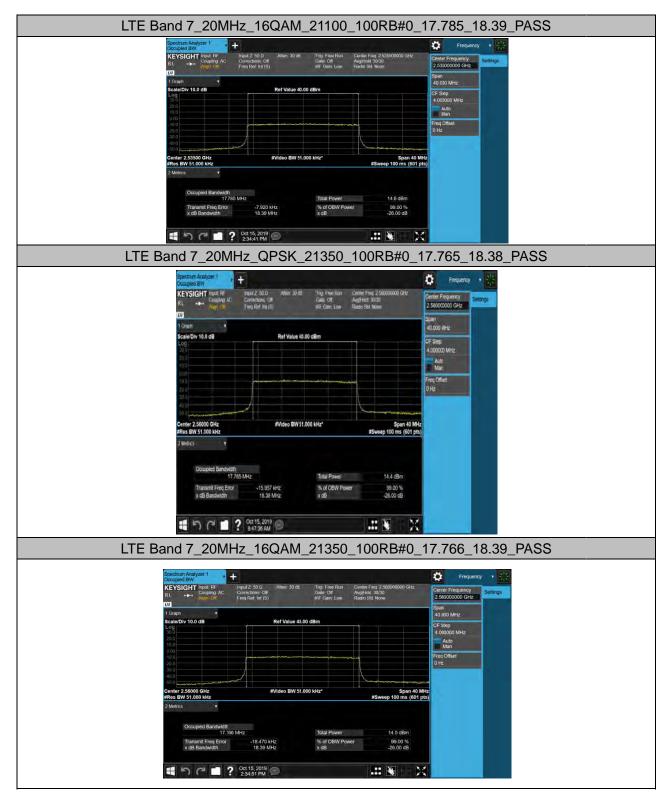


LTE Band 7_20MHz_QPSK_21100_100RB#0_17.786_18.35_PASS











5.4 Band Edge Compliance

Ambient condition

Temperature	Relative humidity	Pressure		
23°C ~25°C	45%~50%	101.5kPa		

Method of Measurement

The EUT was connected to Spectrum Analyzer and Base Station Simulator via power Splitter. The band edge of the lowest and highest channels were measured.

The testing follows KDB 971168 D01 v03r01 Section 6.0

The EUT was connected to spectrum analyzer and system simulator via a power divider.

The band edges of low and high channels for the highest RF powers were measured.

RBW is set to 51 kHz, VBW is set to 160 kHz for WCDMA Band IV.

RBW is set to 51 kHz, VBW is set to 150kHz for LTE Band 4 (1.4MHz/3MHz/5MHz).

RBW is set to 51 kHz, VBW is set to 150kHz for LTE Band 7 (5MHz).

RBW is set to 51 kHz, VBW is set to 150kHz for LTE Band 4/7(10MHz/15MHz/20MHz).

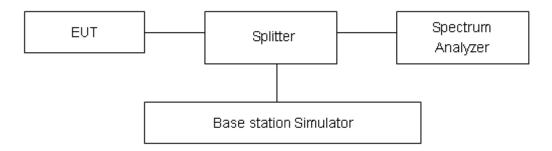
on spectrum analyzer.

Set spectrum analyzer with RMS detector.

The RF fundamental frequency should be excluded against the limit line in the operating frequency band.

Checked that all the results comply with the emission limit line.

Test Setup



Limits

Rule Part 27.53(h) specifies that "for operations in the 1695-1710 MHz, 1710-1755 MHz, 1755-1780 MHz, 1915-1920 MHz, 1995-2000 MHz, 2000-2020 MHz, 2110-2155 MHz, 2155-2180 MHz, and 2180-2200 bands, the power of any emission outside a licensee's frequency block shall be attenuated below the transmitter power (P) in watts by at least 43 + 10 log₁₀ (P) dB"

Rule Part 27.53(m) (4)/ specifies that "for BRS and EBS stations. For mobile digital stations, the



attenuation factor shall be not less than 40 + 10 log (P) dB on all frequencies between the channel edge and 5 megahertz from the channel edge, 43 + 10 log (P) dB on all frequencies between 5 megahertz and X megahertz from the channel edge, and 55 + 10 log (P) dB on all frequencies more than X megahertz from the channel edge, where X is the greater of 6 megahertz or the actual emission bandwidth as defined in paragraph (m)(4) of this section. In addition, the attenuation factor shall not be less that 43 + 10 log (P) dB on all frequencies between 2490.5 MHz and 2496 MHz and 55 + 10 log (P) dB at or below 2490.5 MHz. Mobile Satellite Service licensees operating on frequencies below 2495 MHz may also submit a documented interference complaint against BRS licensees operating on channel BRS Channel 1 on the same terms and conditions as adjacent channel BRS or EBS licensees.

Example:

The limit line is derived from 43 + 10log (P) dB below the transmitter power P(Watts)

- = P(W)- [43 + 10log(P)] (dB)
- = [30 + 10log(P)](dBm) [43 + 10log(P)](dB) = -13dBm.

Measurement Uncertainty

The assessed measurement uncertainty to ensure 95% confidence level for the normal distribution is with the coverage factor k = 1.96, U=0.684dB.