

FCC TEST REPORT

(PART 27)

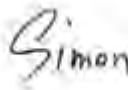

Applicant:	Xiaomi Communications Co., Ltd.
Address:	#019, 9th Floor, Building 6, 33 Xi'erqi Middle Road, Haidian District, Beijing, China, 100085

Manufacturer or Supplier:	Xiaomi Communications Co., Ltd.
Address:	#019, 9th Floor, Building 6, 33 Xi'erqi Middle Road, Haidian District, Beijing, China, 100085
Product:	Mobile Phone
Brand Name:	Redmi
Model Name:	2201117SG
FCC ID:	2AFZZ117SG
Date of tests:	Nov. 01, 2021 ~ Nov. 29, 2021

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

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

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

Prepared by Simon Wang Engineer / Mobile Department	Approved by Luke Lu Manager / Mobile Department
	
Date: Nov. 29, 2021	Date: Nov. 29, 2021

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TABLE OF CONTENTS

RELEASE CONTROL RECORD	11
1 SUMMARY OF TEST RESULTS	12
1.1 MEASUREMENT UNCERTAINTY	12
1.2 TEST SITE AND INSTRUMENTS	13
2 GENERAL INFORMATION	14
2.1 GENERAL DESCRIPTION OF EUT	14
2.2 CONFIGURATION OF SYSTEM UNDER TEST	20
2.3 DESCRIPTION OF SUPPORT UNITS	21
2.4 TEST ITEM AND TEST CONFIGURATION	21
2.5 GENERAL DESCRIPTION OF APPLIED STANDARDS	31
3 TEST TYPES AND RESULTS	32
3.1 OUTPUT POWER MEASUREMENT	32
3.1.1 LIMITS OF OUTPUT POWER MEASUREMENT	32
3.1.2 TEST PROCEDURES	32
3.1.3 TEST SETUP	33
3.1.4 TEST RESULTS	34
3.2 FREQUENCY STABILITY MEASUREMENT	130
3.2.1 LIMITS OF FREQUENCY STABILITY MEASUREMENT	130
3.2.2 TEST PROCEDURE	130
3.2.3 TEST SETUP	130
3.2.4 TEST RESULTS	131
3.3 OCCUPIED BANDWIDTH MEASUREMENT	133
3.3.1 LIMITS OF OCCUPIED BANDWIDTH MEASUREMENT	133
3.3.2 TEST SETUP	133
3.3.3 TEST PROCEDURES	133
3.3.4 TEST RESULTS	134
3.4 BAND EDGE MEASUREMENT	135
3.4.1 LIMITS OF BAND EDGE MEASUREMENT	135
3.4.2 TEST SETUP	135
3.4.3 TEST PROCEDURES	136
3.4.4 TEST RESULTS	137
3.5 CONDUCTED SPURIOUS EMISSIONS	138
3.5.1 LIMITS OF CONDUCTED SPURIOUS EMISSIONS MEASUREMENT	138
3.5.2 TEST PROCEDURE	138
3.5.3 TEST SETUP	138
3.5.4 TEST RESULTS	139
3.6 RADIATED EMISSION MEASUREMENT	140
3.6.1 LIMITS OF RADIATED EMISSION MEASUREMENT	140
3.6.2 TEST PROCEDURES	140
3.6.3 DEVIATION FROM TEST STANDARD	140
3.6.4 TEST SETUP	141
3.6.5 TEST RESULTS	142
3.7 PEAK TO AVERAGE RATIO	220
3.7.1 LIMITS OF PEAK TO AVERAGE RATIO MEASUREMENT	220
3.7.2 TEST SETUP	220
3.7.3 TEST PROCEDURES	220
3.7.4 TEST RESULTS	221



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Test Report No.: W7L-P21100026RF15

4 INFORMATION ON THE TESTING LABORATORIES 222

5 APPENDIX A – MODIFICATIONS RECORDERS FOR ENGINEERING CHANGES TO THE EUT BY THE LAB 223

APPENDIX D 223

WCDMA BAND4 223

FREQUENCY STABILITY 223

BAND4 223

TEST RESULT 223

99% & 26DB BANDWIDTH 224

BAND4_OBW 224

TEST RESULT 224

TEST GRAPH 225

BAND4_XDB 227

TEST RESULT 227

TEST GRAPH 228

PEAK-AVERAGE RATIO 230

BAND4 230

TEST RESULT 230

TEST GRAPH 231

SPURIOUS EMISSION 233

BAND4 233

TEST RESULT 233

TEST GRAPH 234

LTE BAND 4 237

FREQUENCY STABILITY 237

B4_1.4MHZ 237

TEST RESULT 237

B4_3MHZ 239



**BUREAU
VERITAS**

Test Report No.: W7L-P21100026RF15

TEST RESULT..... 239

B4_5MHZ..... 241

TEST RESULT..... 241

B4_10MHZ 244

TEST RESULT..... 244

B4_15MHZ 248

TEST RESULT..... 248

B4_20MHZ 251

TEST RESULT..... 251

99% & 26DB BANDWIDTH 255

BAND4_OBW 255

TEST RESULT..... 255

TEST GRAPH..... 257

BAND4_XDB 284

TEST RESULT..... 284

TEST GRAPH..... 286

PEAK-AVERAGE RATIO..... 313

B4_1.4MHZ 313

TEST RESULT..... 313

TEST GRAPH..... 314

B4_3MHZ..... 319

TEST RESULT..... 319

TEST GRAPH..... 320

B4_5MHZ..... 325

TEST RESULT..... 325

TEST GRAPH..... 326

B4_10MHZ 331

TEST RESULT..... 331



**BUREAU
VERITAS**

Test Report No.: W7L-P21100026RF15

TEST GRAPH..... 332

B4_15MHZ 337

TEST RESULT..... 337

TEST GRAPH..... 338

B4_20MHZ 343

TEST RESULT..... 343

TEST GRAPH..... 344

SPURIOUS EMISSION 349

B4_1.4MHZ 349

TEST RESULT..... 349

TEST GRAPH..... 350

B4_3MHZ..... 361

TEST RESULT..... 361

TEST GRAPH..... 362

B4_5MHZ..... 373

TEST RESULT..... 373

TEST GRAPH..... 374

B4_10MHZ 385

TEST RESULT..... 385

TEST GRAPH..... 386

B4_15MHZ 397

TEST RESULT..... 397

TEST GRAPH..... 398

B4_20MHZ 409

TEST RESULT..... 409

TEST GRAPH..... 410

LTE BAND 7 421

FREQUENCY STABILITY 421



**BUREAU
VERITAS**

Test Report No.: W7L-P21100026RF15

B7_5MHZ..... 421

TEST RESULT..... 421

B7_10MHZ 424

TEST RESULT..... 424

B7_15MHZ 428

TEST RESULT..... 428

B7_20MHZ 431

TEST RESULT..... 431

99% & 26DB BANDWIDTH 435

BAND7_OBW 435

TEST RESULT..... 435

TEST GRAPH..... 437

BAND7_XDB 455

TEST RESULT..... 455

TEST GRAPH..... 457

PEAK-AVERAGE RATIO..... 475

B7_5MHZ..... 475

TEST RESULT..... 475

TEST GRAPH..... 476

B7_10MHZ 481

TEST RESULT..... 481

TEST GRAPH..... 482

B7_15MHZ 487

TEST RESULT..... 487

TEST GRAPH..... 488

B7_20MHZ 493

TEST RESULT..... 493

TEST GRAPH..... 494



**BUREAU
VERITAS**

Test Report No.: W7L-P21100026RF15

SPURIOUS EMISSION 499

B7_5MHZ..... 499

TEST RESULT..... 499

TEST GRAPH..... 500

B7_10MHZ 511

TEST RESULT..... 511

TEST GRAPH..... 512

B7_15MHZ 523

TEST RESULT..... 523

TEST GRAPH..... 524

B7_20MHZ 535

TEST RESULT..... 535

TEST GRAPH..... 536

LTE BAND7C..... 547

99% & 26DB BANDWIDTH 547

LTE BAND7C_OBW 547

TEST RESULT..... 547

TEST GRAPH..... 550

SPURIOUS EMISSION 585

TEST RESULT..... 585

LTE BAND 38 666

FREQUENCY STABILITY 666

B38_5MHZ 666

TEST RESULT..... 666

B38_10MHZ 669

TEST RESULT..... 669

B38_15MHZ 673

TEST RESULT..... 673



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Test Report No.: W7L-P21100026RF15

B38_20MHZ 676

TEST RESULT..... 676

99% & 26DB BANDWIDTH 680

BAND38_OBW 680

TEST RESULT..... 680

TEST GRAPH..... 682

BAND38_XDB 700

TEST RESULT..... 700

TEST GRAPH..... 702

PEAK-AVERAGE RATIO 720

B38_5MHZ 720

TEST RESULT..... 720

B38_10MHZ 726

TEST RESULT..... 726

TEST GRAPH..... 727

B38_15MHZ 732

TEST RESULT..... 732

TEST GRAPH..... 733

B38_20MHZ 738

TEST RESULT..... 738

TEST GRAPH..... 739

SPURIOUS EMISSION 744

B38_5MHZ 744

TEST RESULT..... 744

TEST GRAPH..... 745

B38_10MHZ 756

TEST RESULT..... 756

TEST GRAPH..... 757



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Test Report No.: W7L-P21100026RF15

B38_15MHZ 768

TEST RESULT..... 768

TEST GRAPH..... 769

B38_20MHZ 780

TEST RESULT..... 780

TEST GRAPH..... 781

LTE BAND 38C..... 792

99% & 26DB BANDWIDTH 792

LTE BAND38C_OBW 792

TEST RESULT..... 792

SPURIOUS EMISSION 803

TEST RESULT..... 803

TEST GRAPH..... 805

LTE BAND 41 827

FREQUENCY STABILITY 827

B41_5MHZ 827

TEST RESULT..... 827

B41_10MHZ 830

TEST RESULT..... 830

B41_15MHZ 834

TEST RESULT..... 834

B41_20MHZ 837

TEST RESULT..... 837

99% & 26DB BANDWIDTH 841

BAND41_OBW 841

TEST RESULT..... 841

TEST GRAPH..... 843

BAND41_XDB 861



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Test Report No.: W7L-P21100026RF15

TEST RESULT..... 861

TEST GRAPH..... 863

PEAK-AVERAGE RATIO 881

B41_5MHZ 881

TEST RESULT..... 881

TEST GRAPH..... 882

B41_10MHZ 887

TEST RESULT..... 887

TEST GRAPH..... 888

B41_15MHZ 893

TEST RESULT..... 893

TEST GRAPH..... 894

B41_20MHZ 899

TEST RESULT..... 899

TEST GRAPH..... 900

SPURIOUS EMISSION 905

B41_5MHZ 905

TEST RESULT..... 905

TEST GRAPH..... 906

B41_10MHZ 917

TEST RESULT..... 917

TEST GRAPH..... 918

B41_15MHZ 929

TEST RESULT..... 929

TEST GRAPH..... 930

B41_20MHZ 941

TEST RESULT..... 941

TEST GRAPH..... 942



Test Report No.: W7L-P21100026RF15

RELEASE CONTROL RECORD

ISSUE NO.	REASON FOR CHANGE	DATE ISSUED
W7L-P21100026RF15	Original release	Nov. 29, 2021

1 SUMMARY OF TEST RESULTS

The EUT has been tested according to the following specifications:

APPLIED STANDARD: FCC PART 27 & PART 2		
STANDARD SECTION	1.1.1.1.1 TEST TYPE AND LIMIT	RESULT
2.1046 27.50(h)(2)	Equivalent Isotropically Radiated Power	Compliance
2.1055 27.54	Frequency Stability	Compliance
2.1049 27.53(m)(6)	Occupied Bandwidth	Compliance
2.1051 27.53(m)(4)(6)	Band Edge Measurements	Compliance
2.1051 27.53(m)(4)(6)	Conducted Spurious Emissions	Compliance
2.1053 27.53(m)(4)(6)	Radiated Spurious Emissions	Compliance

1.1 MEASUREMENT UNCERTAINTY

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

MEASUREMENT	UNCERTAINTY
Frequency Stability	$\pm 76.97\text{Hz}$
Radiated emissions & Radiated Power (30MHz~1GMHz)	$\pm 4.98\text{dB}$
Radiated emissions & Radiated Power (1GMHz ~6GMHz)	$\pm 4.70\text{dB}$
Radiated emissions (6GMHz ~18GMHz)	$\pm 4.60\text{dB}$
Radiated emissions (18GMHz ~40GMHz)	$\pm 4.12\text{dB}$
Conducted emissions	$\pm 4.01\text{dB}$
Occupied Channel Bandwidth	$\pm 43.58\text{KHz}$
Conducted Output power	$\pm 2.06\text{dB}$
Band Edge Measurements	$\pm 4.70\text{dB}$

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



Test Report No.: W7L-P21100026RF15

1.2 TEST SITE AND INSTRUMENTS

Equipment	Manufacturer	Model No.	Serial No.	Last Cal.	Next Cal.
MXE EMI Receiver	KEYSIGHT	N9038A-544	MY54450026	Apr. 22,21	Apr. 21,22
EXA Signal Analyzer	KEYSIGHT	N9010A-544	MY54510355	Jun. 03,21	Jun. 02,22
Bilog Antenna 2	ETS-LINDGREN	3143B	00161965	Mar. 05,21	Mar. 04,22
Horn Antenna 2	ETS-LINDGREN	3117	00168692	Apr. 02,21	Apr. 01,22
Horn Antenna (18GHz-40GHz)	N/A	QWH-SL-18-40-K-SG/QMS-00361	15433	Aug. 25, 21	Aug. 24, 22
Radio Communication Analyzer	ANRITSU	MT8820C	6201465426	Feb. 25,21	Feb. 24,22
Signal Pre-Amplifier	EMSI	EMC 9135	980249	Jun. 02,21	Jun. 01,22
Signal Pre-Amplifier	EMSI	EMC 012645B	980257	Jun. 03,21	Jun. 02,22
Signal Pre-Amplifier	EMSI	EMC 184045B	980259	Apr. 22,21	Apr. 21,22
3m Semi-anechoic Chamber	ETS-LINDGREN	9m*6m*6m	Euroshieldpn-CT0001143-1216	May. 19,20	May. 18,23
Test Software	E3	V 9.160323	N/A	N/A	N/A
Test Software	ADT	ADT_Radiated_V 7.6.15.9.2	N/A	N/A	N/A
10dB Attenuator	JFW/USA	50HF-010-SMA	1505	Jun. 03,21	Jun. 02,22
Power Meter	Anritsu	ML2495A	1506002	Apr. 07,21	Apr. 06,22
Power Sensor	Anritsu	MA2411B	1339352	May. 07,21	May. 06,22
Temperature Chamber	ESPEC	SH-242	93000855	Jun. 02,21	Jun. 01,22
MXG Analog Microwave Signal Generator	KEYSIGHT	N5183A	MY50143024	Mar. 05,21	Mar. 04,22
Power Divider	MCLI/USA	PS2-15	24880	N/A	N/A

- NOTE:**
1. The calibration interval of the above test instruments is 12 months or 36 months and the calibrations are traceable to CEPREI/CHINA, GRGT/CHINA and NIM/CHINA.
 2. The test was performed in 3m Semi-anechoic Chamber and RF Oven Room.
 3. The horn antenna is used only for the measurement of emission frequency above 1GHz if tested.
 4. The FCC Site Registration No. is 525120; The Designation No. is CN1171.

2 GENERAL INFORMATION

2.1 GENERAL DESCRIPTION OF EUT

PRODUCT	Mobile Phone	
BRAND NAME	Redmi	
MODEL NAME	2201117SG	
NOMINAL VOLTAGE	5.0V/9.0V/11.0V/12.0V/20.0Vdc(adapter or host equipment) 3.87Vdc (Li-ion, battery)	
MODULATION TECHNOLOGY	WCDMA IV	HSDPA, HSUPA, DC-HSDPA
	LTE	QPSK, 16QAM, 64QAM
FREQUENCY RANGE	WCDMA IV	1712.4MHz ~ 1752.6MHz
	LTE Band 4 Channel Bandwidth: 1.4MHz	1710.7MHz ~ 1754.3MHz
	LTE Band 4 Channel Bandwidth: 3MHz	1711.5MHz ~ 1753.5MHz
	LTE Band 4 Channel Bandwidth: 5MHz	1712.5MHz ~ 1752.5MHz
	LTE Band 4 Channel Bandwidth: 10MHz	1715MHz ~ 1750MHz
	LTE Band 4 Channel Bandwidth: 15MHz	1717.5MHz ~ 1747.5 MHz
	LTE Band 4 Channel Bandwidth: 20MHz	1720MHz ~ 1745MHz
	LTE Band 7 Channel Bandwidth: 5MHz	2502.5MHz ~ 2567.5MHz
	LTE Band 7 Channel Bandwidth: 10MHz	2505MHz ~ 2565MHz
	LTE Band 7 Channel Bandwidth: 15MHz	2507.5MHz ~ 2562.5MHz
	LTE Band 7 Channel Bandwidth: 20MHz	2510MHz ~ 2560MHz
	LTE Band CA_7C Channel Bandwidth: 10MHz+20MHz	2505.5MHz ~ 2560MHz
	LTE Band CA_7C Channel Bandwidth: 15MHz+10MHz	2507.5MHz ~ 2564.7MHz
	LTE Band CA_7C Channel Bandwidth: 15MHz+15MHz	2507.5MHz ~ 2562.5MHz
	LTE Band CA_7C Channel Bandwidth: 15MHz+20MHz	2507.8MHz ~ 2560MHz



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Test Report No.: W7L-P21100026RF15

FREQUENCY RANGE	LTE Band CA_7C Channel Bandwidth: 20MHz+10MHz	2510MHz ~ 2564.5MHz
	LTE Band CA_7C Channel Bandwidth: 20MHz+15MHz	2510MHz ~ 2562.5MHz
	LTE Band CA_7C Channel Bandwidth: 20MHz+20MHz	2510MHz ~ 2560MHz
	LTE Band 38 Channel Bandwidth: 5MHz	2572.5MHz ~ 2617.5MHz
	LTE Band 38 Channel Bandwidth: 10MHz	2575MHz ~ 2615MHz
	LTE Band 38 Channel Bandwidth: 15MHz	2577.5MHz ~ 2612.5MHz
	LTE Band 38 Channel Bandwidth: 20MHz	2580MHz ~ 2610MHz
	LTE Band CA_38C Channel Bandwidth: 15MHz+15MHz	2580.0MHz ~ 2590.2MHz
	LTE Band CA_38C Channel Bandwidth: 20MHz+20MHz	2577.5MHz ~ 2597.5MHz
	LTE Band 41 Channel Bandwidth: 5MHz	2537.5MHz ~ 2652.5MHz
	LTE Band 41 Channel Bandwidth: 10MHz	2540MHz ~ 2650MHz
	LTE Band 41 Channel Bandwidth: 15MHz	2542.5MHz ~ 2647.5MHz
	LTE Band 41 Channel Bandwidth: 20MHz	2545MHz ~ 2645MHz
	EMISSION DESIGNATOR	WCDMA IV
LTE Band 4 Channel Bandwidth: 1.4MHz		QPSK: 1M12G7D
		16QAM: 1M12W7D
		64QAM: 1M11W7D
LTE Band 4 Channel Bandwidth: 3MHz		QPSK: 2M73G7D
		16QAM: 2M74W7D
		64QAM: 2M75W7D
LTE Band 4 Channel Bandwidth: 5MHz		QPSK: 4M56G7D
		16QAM: 4M57W7D
		64QAM: 4M55W7D
LTE Band 4 Channel Bandwidth: 10MHz		QPSK: 9M04G7D
		16QAM: 9M04W7D
		64QAM: 9M06W7D
LTE Band 4 Channel Bandwidth: 15MHz		QPSK: 13M6G7D
	16QAM: 13M6W7D	



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Test Report No.: W7L-P21100026RF15

EMISSION DESIGNATOR		64QAM: 13M6W7D
	LTE Band 4 Channel Bandwidth: 20MHz	QPSK: 18M1G7D
		16QAM: 18M1W7D
		64QAM: 18M1W7D
	LTE Band 7 Channel Bandwidth: 5MHz	QPSK: 4M55G7D
		16QAM: 4M56W7D
		64QAM: 4M55W7D
	LTE Band 7 Channel Bandwidth: 10MHz	QPSK: 9M08G7D
		16QAM: 9M06W7D
		64QAM: 9M04W7D
	LTE Band 7 Channel Bandwidth: 15MHz	QPSK: 13M6G7D
		16QAM: 13M6W7D
		64QAM: 13M6W7D
	LTE Band 7 Channel Bandwidth: 20MHz	QPSK: 18M1G7D
		16QAM: 18M1W7D
		64QAM: 18M1W7D
	LTE Band CA_7C Channel Bandwidth: 10MHz+20MHz	QPSK: 28M1G7D
		16QAM: 28M1W7D
		64QAM: 28M1W7D
	LTE Band CA_7C Channel Bandwidth: 15MHz +10MHz	QPSK: 23M7G7D
		16QAM: 23M6W7D
		64QAM: 23M6W7D
	LTE Band CA_7C Channel Bandwidth: 15MHz +15MHz	QPSK: 28M7G7D
		16QAM: 28M7W7D
		64QAM: 28M7W7D
	LTE Band CA_7C Channel Bandwidth: 15MHz +20MHz	QPSK: 33M0G7D
		16QAM: 32M9W7D
		64QAM: 32M9W7D
	LTE Band CA_7C Channel Bandwidth: 20MHz +10MHz	QPSK: 28M2G7D
		16QAM: 28M1W7D
64QAM: 28M1W7D		
LTE Band CA_7C Channel Bandwidth: 20MHz +15MHz	QPSK: 32M9G7D	
	16QAM: 33M0W7D	
	64QAM: 33M0W7D	
LTE Band CA_7C Channel Bandwidth: 20MHz +20MHz	QPSK: 37M7G7D	
	16QAM: 37M7W7D	
	64QAM: 37M7W7D	
LTE Band 38 Channel Bandwidth: 5MHz	QPSK: 4M55G7D	
	16QAM: 4M54W7D	
	64QAM: 4M55W7D	
LTE Band 38 Channel Bandwidth: 10MHz	QPSK: 9M06G7D	
	16QAM: 9M03W7D	



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Test Report No.: W7L-P21100026RF15

EMISSION DESIGNATOR		64QAM: 9M05W7D
	LTE Band 38 Channel Bandwidth: 15MHz	QPSK: 13M6G7D
		16QAM: 13M6W7D
		64QAM: 13M6W7D
	LTE Band 38 Channel Bandwidth: 20MHz	QPSK: 18M1G7D
		64QAM: 18M1W7D
		16QAM: 18M1W7D
	LTE Band CA_38C Channel Bandwidth: 15MHz +15MHz	QPSK: 28M7G7D
		16QAM: 28M7W7D
		64QAM: 28M7W7D
	LTE Band CA_38C Channel Bandwidth: 20MHz +20MHz	QPSK: 37M9G7D
		16QAM: 37M9W7D
		64QAM: 37M9W7D
	LTE Band 41 Channel Bandwidth: 5MHz	QPSK: 4M56G7D
		16QAM: 4M55W7D
64QAM: 4M56W7D		
LTE Band 41 Channel Bandwidth: 10MHz	QPSK: 9M06G7D	
	16QAM: 9M05W7D	
	64QAM: 9M07W7D	
LTE Band 41 Channel Bandwidth: 15MHz	QPSK: 13M6G7D	
	16QAM: 13M6W7D	
	64QAM: 13M6W7D	
LTE Band 41 Channel Bandwidth: 20MHz	QPSK: 18M1G7D	
	16QAM: 18M1W7D	
	64QAM: 18M1W7D	
MAX. EIRP POWER	WCDMA IV	127.94mW
	LTE Band 4 Channel Bandwidth: 1.4MHz	211.35mW
	LTE Band 4 Channel Bandwidth: 3MHz	203.70mW
	LTE Band 4 Channel Bandwidth: 5MHz	205.59mW
	LTE Band 4 Channel Bandwidth: 10MHz	205.59mW
	LTE Band 4 Channel Bandwidth: 15MHz	204.64mW
	LTE Band 4 Channel Bandwidth: 20MHz	206.54mW
	LTE Band 7 Channel Bandwidth: 5MHz	211.84mW
	LTE Band 7 Channel Bandwidth: 10MHz	212.32mW



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MAX. EIRP POWER	LTE Band 7 Channel Bandwidth: 15MHz	209.89mW
	LTE Band 7 Channel Bandwidth: 20MHz	212.81mW
	LTE Band CA_7C Channel Bandwidth: 10MHz+20MHz	198.15mW
	LTE Band CA_7C Channel Bandwidth: 15MHz+10MHz	197.70mW
	LTE Band CA_7C Channel Bandwidth: 15MHz+15MHz	195.88mW
	LTE Band CA_7C Channel Bandwidth: 15MHz+20MHz	199.07mW
	LTE Band CA_7C Channel Bandwidth: 20MHz+10MHz	198.15mW
	LTE Band CA_7C Channel Bandwidth: 20MHz+15MHz	199.53mW
	LTE Band CA_7C Channel Bandwidth: 20MHz+20MHz	200.45mW
	LTE Band 38 Channel Bandwidth: 5MHz	219.79mW
LTE Band 38 Channel Bandwidth: 10MHz	219.79mW	
LTE Band 38 Channel Bandwidth: 15MHz	218.78mW	
LTE Band 38 Channel Bandwidth: 20MHz	220.80mW	
LTE Band CA_38C Channel Bandwidth: 15MHz+15MHz	207.01mW	
LTE Band CA_38C Channel Bandwidth: 20MHz+20MHz	212.81mW	
LTE Band 41 Channel Bandwidth: 5MHz	230.67mW	
LTE Band 41 Channel Bandwidth: 10MHz	230.67mW	
LTE Band 41 Channel Bandwidth: 15MHz	229.61mW	
LTE Band 41 Channel Bandwidth: 20MHz	231.74mW	
MAX. EIRP POWER		



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Test Report No.: W7L-P21100026RF15

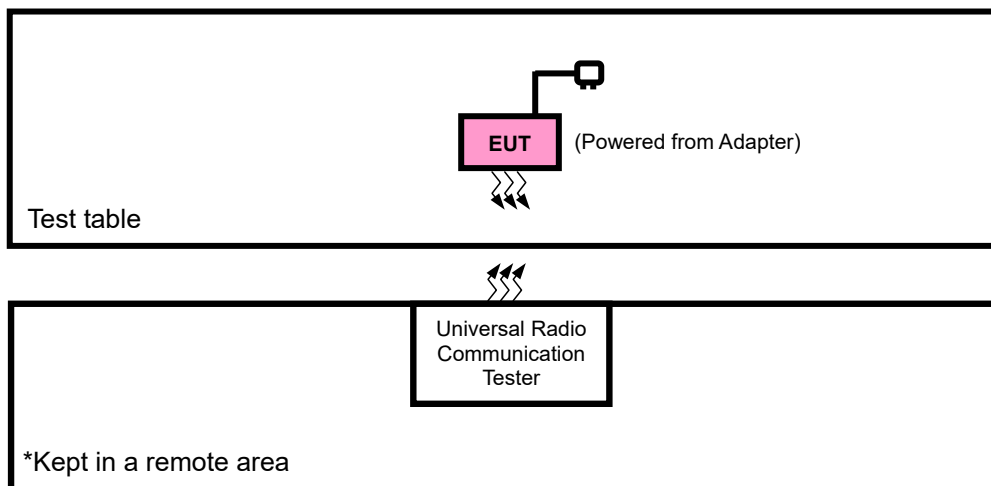
ANTENNA TYPE	Ant0:PIFA Antenna with -1 dBi gain for WCDMA IV/ LTE4 Ant1:Fixed Internal Antenna -1.1 dBi gain for WCDMA IV/ LTE4 Ant0:PIFA Antenna with -0.9 dBi gain for LTE7/7C Ant1:Fixed Internal Antenna -0.7 dBi gain for LTE7/7C Ant0:PIFA Antenna with -0.8 dBi gain for LTE38/38C Ant1:Fixed Internal Antenna -0.7 dBi gain for LTE38/38C Ant0:PIFA Antenna with -0.5 dBi gain for LTE41 Ant1:Fixed Internal Antenna -0.7 dBi gain for LTE41
HW VERSION	P1.1
SW VERSION	MIUI12.5
IMEI	868909050035248
I/O PORTS	Refer to user's manual
CABLE SUPPLIED	USB1 cable: unshielded without ferrite, 1.0meter USB2 cable: unshielded without ferrite, 1.0meter
EXTREME TEMPERATURE	0-40 °C
EXTREME VOLTAGE	EUT 3.6V - EUT 4.2V

NOTE:

1. For a more detailed features description, please refer to the manufacturer's specifications or the user's manual.
2. For the test results, the EUT had been tested with all conditions. But only the worst case was shown in test report.

2.2 CONFIGURATION OF SYSTEM UNDER TEST

FOR RADIATION EMISSION TEST



2.3 DESCRIPTION OF SUPPORT UNITS

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

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

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

2.4 TEST ITEM AND TEST CONFIGURATION

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

EUT CONFIGURE MODE	1.1.1.1.2DESCRIPTION
A	EUT + Adapter + USB Cable with LTE link
B	EUT + Battery with LTE link

WCDMA MODE

EUT CONFIGURE MODE	TEST ITEM	AVAILABLE CHANNEL	TESTED CHANNEL	MODE
B	EIRP	1312 to 1513	1312, 1413, 1513	WCDMA
B	FREQUENCY STABILITY	1312 to 1513	1312, 1513	WCDMA
B	OCCUPIED BANDWIDTH	1312 to 1513	1312, 1413, 1513	WCDMA
B	BAND EDGE	1312 to 1513	1312, 1513	WCDMA
B	PEAK TO AVERAGE RATIO	1312 to 1513	1312, 1413, 1513	WCDMA
B	CONDCUDED EMISSION	1312 to 1513	1312, 1413, 1513	WCDMA
A	RADIATED EMISSION	1312 to 1513	1312, 1413, 1513	WCDMA

LTE BAND 4 MODE

EUT CONFIGURE MODE	TEST ITEM	AVAILABLE CHANNEL	TESTED CHANNEL	CHANNEL BANDWIDTH	MODULATION	MODE	
B	EIRP	19957 to 20393	19957, 20175, 20393	1.4MHz	QPSK, 16QAM, 64QAM	1 RB / 0 RB Offset	
		19965 to 20385	19965, 20175, 20385	3MHz	QPSK, 16QAM, 64QAM	1 RB / 0 RB Offset	
		19975 to 20375	19975, 20175, 20375	5MHz	QPSK, 16QAM, 64QAM	1 RB / 0 RB Offset	
		20000 to 20350	20000, 20175, 20350	10MHz	QPSK, 16QAM, 64QAM	1 RB / 0 RB Offset	
		20025 to 20325	20025, 20175, 20325	15MHz	QPSK, 16QAM, 64QAM	1 RB / 0 RB Offset	
		20050 to 20300	20050, 20175, 20300	20MHz	QPSK, 16QAM, 64QAM	1 RB / 0 RB Offset	
B	FREQUENCY STABILITY	19957 to 20393	19957, 20393	1.4MHz	QPSK	1 RB / 0 RB Offset	
		19965 to 20385	19965, 20385	3MHz	QPSK	1 RB / 0 RB Offset	
		19975 to 20375	19975, 20375	5MHz	QPSK	1 RB / 0 RB Offset	
		20000 to 20350	20000, 20350	10MHz	QPSK	1 RB / 0 RB Offset	
		20025 to 20325	20025, 20325	15MHz	QPSK	1 RB / 0 RB Offset	
		20050 to 20300	20050, 20300	20MHz	QPSK	1 RB / 0 RB Offset	
B	OCCUPIED BANDWIDTH	19957 to 20393	19957, 20175, 20393	1.4MHz	QPSK, 16QAM, 64QAM	6 RB / 0 RB Offset	
		19965 to 20385	19965, 20175, 20385	3MHz	QPSK, 16QAM, 64QAM	15 RB / 0 RB Offset	
		19975 to 20375	19975, 20175, 20375	5MHz	QPSK, 16QAM, 64QAM	25 RB / 0 RB Offset	
		20000 to 20350	20000, 20175, 20350	10MHz	QPSK, 16QAM, 64QAM	50 RB / 0 RB Offset	
		20025 to 20325	20025, 20175, 20325	15MHz	QPSK, 16QAM, 64QAM	75 RB / 0 RB Offset	
		20050 to 20300	20050, 20175, 20300	20MHz	QPSK, 16QAM, 64QAM	100 RB / 0 RB Offset	
B	PEAK TO AVERAGE RATIO	19957 to 20393	19957, 20175, 20393	1.4MHz	QPSK, 16QAM, 64QAM	1 RB / 0 RB Offset	
		19965 to 20385	19965, 20175, 20385	3MHz	QPSK, 16QAM, 64QAM	1 RB / 0 RB Offset	
		19975 to 20375	19975, 20175, 20375	5MHz	QPSK, 16QAM, 64QAM	1 RB / 0 RB Offset	
		20000 to 20350	20000, 20175, 20350	10MHz	QPSK, 16QAM, 64QAM	1 RB / 0 RB Offset	
		20025 to 20325	20025, 20175, 20325	15MHz	QPSK, 16QAM, 64QAM	1 RB / 0 RB Offset	
		20050 to 20300	20050, 20175, 20300	20MHz	QPSK, 16QAM, 64QAM	1 RB / 0 RB Offset	
B	BAND EDGE	19957 to 20393	19957	1.4MHz	QPSK, 16QAM, 64QAM	1 RB / 0 RB Offset	
			20393	1.4MHz	QPSK, 16QAM, 64QAM	6 RB / 0 RB Offset	
		19965 to 20385	19965	3MHz	QPSK, 16QAM, 64QAM	1 RB / 0 RB Offset	
			20385	3MHz	QPSK, 16QAM, 64QAM	15 RB / 0 RB Offset	
		19975 to 20375	19975	5MHz	QPSK, 16QAM, 64QAM	1 RB / 0 RB Offset	
			20375	5MHz	QPSK, 16QAM, 64QAM	25 RB / 0 RB Offset	
		20000 to 20350	20000	10MHz	QPSK, 16QAM, 64QAM	1 RB / 0 RB Offset	
			20350	10MHz	QPSK, 16QAM, 64QAM	50 RB / 0 RB Offset	
							1 RB / 5 RB Offset
							6 RB / 0 RB Offset
							15 RB / 0 RB Offset
							25 RB / 0 RB Offset
					25 RB / 0 RB Offset		
					50 RB / 0 RB Offset		
					1 RB / 49 RB Offset		
					50 RB / 0 RB Offset		

B	BAND EDGE	20025 to 20325	20025	15MHz	QPSK, 16QAM, 64QAM	1 RB / 0 RB Offset
			20325	15MHz	QPSK, 16QAM, 64QAM	75 RB / 0 RB Offset
		20050 to 20300	20050	20MHz	QPSK, 16QAM, 64QAM	1 RB / 74 RB Offset
			20300	20MHz	QPSK, 16QAM, 64QAM	75 RB / 0 RB Offset
						1 RB / 0 RB Offset
						100 RB / 0 RB Offset
B	CONDCUDETED EMISSION	19957 to 20393	19957, 20175, 20393	1.4MHz	QPSK	1 RB / 0 RB Offset
		19965 to 20385	19965, 20175, 20385	3MHz	QPSK	1 RB / 0 RB Offset
		19975 to 20375	19975, 20175, 20375	5MHz	QPSK	1 RB / 0 RB Offset
		20000 to 20350	20000, 20175, 20350	10MHz	QPSK	1 RB / 0 RB Offset
		20025 to 20325	20025, 20175, 20325	15MHz	QPSK	1 RB / 0 RB Offset
		20050 to 20300	20050, 20175, 20300	20MHz	QPSK	1 RB / 0 RB Offset
A	RADIATED EMISSION	19957 to 20393	19957, 20175, 20393	1.4MHz	QPSK	1 RB / 0 RB Offset
		19965 to 20385	20175	3MHz	QPSK	1 RB / 0 RB Offset
		19975 to 20375	20175	5MHz	QPSK	1 RB / 0 RB Offset
		20000 to 20350	20175	10MHz	QPSK	1 RB / 0 RB Offset
		20025 to 20325	20175	15MHz	QPSK	1 RB / 0 RB Offset
		20050 to 20300	20175	20MHz	QPSK	1 RB / 0 RB Offset

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

LTE BAND 7 MODE

EUT CONFIGURE MODE	TEST ITEM	AVAILABLE CHANNEL	TESTED CHANNEL	CHANNEL BANDWIDT H	MODULATION	MODE		
B	EIRP	20775 to 21425	20775, 21100, 21425	5MHz	QPSK, 16QAM, 64QAM	1 RB / 0 RB Offset		
		20800 to 21400	20800, 21100, 21400	10MHz	QPSK, 16QAM, 64QAM	1 RB / 0RB Offset		
		20825 to 21375	20825, 21100, 21375	15MHz	QPSK, 16QAM, 64QAM	1 RB / 0 RB Offset		
		20850 to 21350	20850, 21100, 21350	20MHz	QPSK, 16QAM, 64QAM	1 RB / 0 RB Offset		
B	FREQUENCY STABILITY	20775 to 21425	20775, 21425	5MHz	QPSK	1 RB / 0 RB Offset		
		20800 to 21400	20800, 21400	10MHz	QPSK	1 RB / 0RB Offset		
		20825 to 21375	20825, 21375	15MHz	QPSK	1 RB / 0 RB Offset		
		20850 to 21350	20850, 21350	20MHz	QPSK	1 RB / 0 RB Offset		
B	OCCUPIED BANDWIDTH	20775 to 21425	20775, 21100, 21425	5MHz	QPSK, 16QAM, 64QAM	25 RB / 0 RB Offset		
		20800 to 21400	20800, 21100, 21400	10MHz	QPSK, 16QAM, 64QAM	50 RB / 0 RB Offset		
		20825 to 21375	20825, 21100, 21375	15MHz	QPSK, 16QAM, 64QAM	75 RB / 0 RB Offset		
		20850 to 21350	20850, 21100, 21350	20MHz	QPSK, 16QAM, 64QAM	100 RB / 0 RB Offset		
B	BAND EDGE	20775 to 21425	20775	5MHz	QPSK, 16QAM, 64QAM	1 RB / 0 RB Offset 25 RB / 0 RB Offset		
			21425	5MHz	QPSK, 16QAM, 64QAM	1 RB / 24 RB Offset 25 RB / 0 RB Offset		
		20800 to 21400	20800	10MHz	QPSK, 16QAM, 64QAM	1 RB / 0 RB Offset 50 RB / 0 RB Offset		
			21400	10MHz	QPSK, 16QAM, 64QAM	1 RB / 49 RB Offset 50 RB / 0 RB Offset		
		20825 to 21375	20825	15MHz	QPSK, 16QAM, 64QAM	1 RB / 0 RB Offset 75 RB / 0 RB Offset		
			21375	15MHz	QPSK, 16QAM, 64QAM	1 RB / 74 RB Offset 75 RB / 0 RB Offset		
		20850 to 21350	20850	20MHz	QPSK, 16QAM, 64QAM	1 RB / 0 RB Offset 100 RB / 0 RB Offset		
			21350	20MHz	QPSK, 16QAM, 64QAM	1 RB / 99 RB Offset 100 RB / 0 RB Offset		
		B	CONDCUDE TED EMISSION	20775 to 21425	20775, 21100, 21425	5MHz	QPSK	1 RB / 0 RB Offset
				20800 to 21400	20800, 21100, 21400	10MHz	QPSK	1 RB / 0RB Offset
				20825 to 21375	20825, 21100, 21375	15MHz	QPSK	1 RB / 0 RB Offset
				20850 to 21350	20850, 21100, 21350	20MHz	QPSK	1 RB / 0 RB Offset
A	RADIATED EMISSION	20775 to 21425	20775, 21100, 21425	5MHz	QPSK	1 RB / 0 RB Offset		
		20800 to 21400	21100	10MHz	QPSK	1 RB / 0 RB Offset		
		20825 to 21375	21100	15MHz	QPSK	1 RB / 0 RB Offset		
		20850 to 21350	21100	20MHz	QPSK	1 RB / 0 RB Offset		

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



Test Report No.: W7L-P21100026RF15

LTE BAND CA_7C MODE

EUT CONFIGURE MODE	TEST ITEM	AVAILABLE PCC CHANNEL	TESTED CHANNEL	CHANNEL BANDWIDTH	MODULATION	MODE
B	EIRP	20805 to 21206	Low, Middle, High	10MHz+20MHz	QPSK, 16QAM, 64QAM	1RB/ 49RB&1RB/ 0RB Offset
		20825 to 21277	Low, Middle, High	15MHz+10MHz	QPSK, 16QAM, 64QAM	1RB/ 74RB&1RB/ 0RB Offset
		20825 to 21225	Low, Middle, High	15MHz+15MHz	QPSK, 16QAM, 64QAM	1RB/ 74RB&1RB/ 0RB Offset
		20828 to 21179	Low, Middle, High	15MHz+20MHz	QPSK, 16QAM, 64QAM	1RB/ 74RB&1RB/ 0RB Offset
		20850 to 21251	Low, Middle, High	20MHz+10MHz	QPSK, 16QAM, 64QAM	1RB/ 99RB&1RB/ 0RB Offset
		20850 to 21201	Low, Middle, High	20MHz+15MHz	QPSK, 16QAM, 64QAM	1RB/ 99RB&1RB/ 0RB Offset
		20850 to 21152	Low, Middle, High	20MHz+20MHz	QPSK, 16QAM, 64QAM	1RB/ 99RB&1RB/ 0RB Offset
B	OCCUPIED BANDWIDTH	20805 to 21206	Low, Middle, High	10MHz+20MHz	QPSK, 16QAM, 64QAM	50RB/ 0RB&100RB/ 0RB Offset
		20825 to 21277	Low, Middle, High	15MHz+10MHz	QPSK, 16QAM, 64QAM	75RB/ 0RB&50RB/ 0RB Offset
		20825 to 21225	Low, Middle, High	15MHz+15MHz	QPSK, 16QAM, 64QAM	75RB/ 0RB&75RB/ 0RB Offset
		20828 to 21179	Low, Middle, High	15MHz+20MHz	QPSK, 16QAM, 64QAM	75RB/ 0RB&100RB/ 0RB Offset
		20850 to 21251	Low, Middle, High	20MHz+10MHz	QPSK, 16QAM, 64QAM	100RB/ 0RB&50RB/ 0RB Offset
		20850 to 21201	Low, Middle, High	20MHz+15MHz	QPSK, 16QAM, 64QAM	100RB/ 0RB&75RB/ 0RB Offset
		20850 to 21152	Low, Middle, High	20MHz+20MHz	QPSK, 16QAM, 64QAM	100RB/ 0RB&100RB/ 0RB Offset
B	BAND EDGE	20805 to 21206	Low	10MHz+20MHz	QPSK, 16QAM, 64QAM	1RB/ 0RB&1RB/ 99RB Offset
						1RB/ 49RB&1RB/ 0RB Offset
						50RB/ 0RB&100RB/ 0RB Offset
			High			1RB/ 0RB&1RB/ 99RB Offset
						1RB/ 49RB&1RB/ 0RB Offset
						50RB/ 0RB&100RB/ 0RB Offset
		20825 to 21277	Low	15MHz+10MHz	QPSK, 16QAM, 64QAM	1RB/ 0RB&1RB/ 49RB Offset
						1RB/ 74RB&1RB/ 0RB Offset
						75RB/ 0RB&50RB/ 0RB Offset
			High			1RB/ 0RB&1RB/ 49RB Offset
						1RB/ 74RB&1RB/ 0RB Offset
						75RB/ 0RB&50RB/ 0RB Offset
		20825 to 21225	Low	15MHz+15MHz	QPSK, 16QAM, 64QAM	1RB/ 0RB&1RB/ 74RB Offset
						1RB/ 74RB&1RB/ 0RB Offset
						75RB/ 0RB&75RB/ 0RB Offset
			High			1RB/ 0RB&1RB/ 74RB Offset
						1RB/ 74RB&1RB/ 0RB Offset
						75RB/ 0RB&75RB/ 0RB Offset
		20828 to 21179	Low	15MHz+20MHz	QPSK, 16QAM, 64QAM	1RB/ 0RB&1RB/ 99RB Offset
						1RB/ 74RB&1RB/ 0RB Offset
						75RB/ 0RB&100RB/ 0RB Offset
			High			1RB/ 0RB&1RB/ 99RB Offset
						1RB/ 74RB&1RB/ 0RB Offset
						75RB/ 0RB&100RB/ 0RB Offset
20850 to 21251	Low	20MHz+10MHz	QPSK, 16QAM, 64QAM	1RB/ 0RB&1RB/ 49RB Offset		
				1RB/ 99RB&1RB/ 0RB Offset		
				100RB/ 0RB&50RB/ 0RB Offset		
	High			1RB/ 0RB&1RB/ 49RB Offset		
				1RB/ 99RB&1RB/ 0RB Offset		
				100RB/ 0RB&50RB/ 0RB Offset		
20850 to 21201	Low	20MHz+15MHz	QPSK, 16QAM, 64QAM	1RB/ 0RB&1RB/ 74RB Offset		
				1RB/ 99RB&1RB/ 0RB Offset		



Test Report No.: W7L-P21100026RF15

		20850 to 21152	High	20MHz+15MHz	QPSK, 16QAM, 64QAM	100RB/ 0RB&75RB/ 0RB Offset		
						1RB/ 0RB&1RB/ 74RB Offset		
						1RB/ 99RB&1RB/ 0RB Offset		
			Low	20MHz+20MHz	QPSK, 16QAM, 64QAM	100RB/ 0RB&75RB/ 0RB Offset		
						1RB/ 0RB&1RB/ 99RB Offset		
						1RB/ 99RB&1RB/ 0RB Offset		
		High	20MHz+20MHz	QPSK, 16QAM, 64QAM	100RB/ 0RB&100RB/ 0RB Offset			
					1RB/ 0RB&1RB/ 99RB Offset			
					1RB/ 99RB&1RB/ 0RB Offset			
		B	CONDCUED EMISSION	20805 to 21206	Low, Middle, High	10MHz+20MHz	QPSK	1RB/ 0RB&1RB/ 99RB Offset
								1RB/ 49RB&1RB/ 0RB Offset
								50RB/ 0RB&100RB/ 0RB Offset
20825 to 21277	Low, Middle, High			15MHz+10MHz	QPSK	1RB/ 0RB&1RB/ 49RB Offset		
						1RB/ 74RB&1RB/ 0RB Offset		
						75RB/ 0RB&50RB/ 0RB Offset		
20825 to 21225	Low, Middle, High			15MHz+15MHz	QPSK	1RB/ 0RB&1RB/ 74RB Offset		
						1RB/ 74RB&1RB/ 0RB Offset		
						75RB/ 0RB&75RB/ 0RB Offset		
20828 to 21179	Low, Middle, High			15MHz+20MHz	QPSK	1RB/ 0RB&1RB/ 99RB Offset		
						1RB/ 74RB&1RB/ 0RB Offset		
						75RB/ 0RB&100RB/ 0RB Offset		
20850 to 21251	Low, Middle, High			20MHz+10MHz	QPSK	1RB/ 0RB&1RB/ 49RB Offset		
						1RB/ 99RB&1RB/ 0RB Offset		
						100RB/ 0RB&50RB/ 0RB Offset		
20850 to 21201	Low, Middle, High			20MHz+15MHz	QPSK	1RB/ 0RB&1RB/ 74RB Offset		
						1RB/ 99RB&1RB/ 0RB Offset		
						100RB/ 0RB&75RB/ 0RB Offset		
20850 to 21152	Low, Middle, High			20MHz+20MHz	QPSK	1RB/ 0RB&1RB/ 99RB Offset		
						1RB/ 99RB&1RB/ 0RB Offset		
						100RB/ 0RB&100RB/ 0RB Offset		
A	RADIATED EMISSION			20805 to 21206	Low, Middle, High	10MHz+20MHz	QPSK	1RB/ 49RB&1RB/ 0RB Offset
				20825 to 21277	Low, Middle, High	15MHz+10MHz	QPSK	1RB/ 74RB&1RB/ 0RB Offset
				20825 to 21225	Low, Middle, High	15MHz+15MHz	QPSK	1RB/ 74RB&1RB/ 0RB Offset
		20828 to 21179	Low, Middle, High	15MHz+20MHz	QPSK	1RB/ 74RB&1RB/ 0RB Offset		
		20850 to 21251	Low, Middle, High	20MHz+10MHz	QPSK	1RB/ 99RB&1RB/ 0RB Offset		
		20850 to 21201	Low, Middle, High	20MHz+15MHz	QPSK	1RB/ 99RB&1RB/ 0RB Offset		
		20850 to 21152	Low, Middle, High	20MHz+20MHz	QPSK	1RB/ 99RB&1RB/ 0RB Offset		

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

LTE BAND 38 MODE

EUT CONFIGURE MODE	TEST ITEM	AVAILABLE CHANNEL	TESTED CHANNEL	CHANNEL BANDWIDTH	MODULATION	MODE		
B	EIRP	37775 to 38225	37775, 38000, 38225	5MHz	QPSK, 16QAM	1 RB / 0 RB Offset		
		37800 to 38200	37800, 38000, 38200	10MHz	QPSK, 16QAM	1 RB / 0RB Offset		
		37825 to 38175	37825, 38000, 38175	15MHz	QPSK, 16QAM	1 RB / 0 RB Offset		
		37850 to38150	37850, 38000, 38150	20MHz	QPSK, 16QAM	1 RB / 0 RB Offset		
B	FREQUENCY STABILITY	37775 to 38225	37775, 38225	5MHz	QPSK	1 RB / 0 RB Offset		
		37800 to 38200	37800, 38200	10MHz	QPSK	1 RB / 0RB Offset		
		37825 to 38175	37825, 38175	15MHz	QPSK	1 RB / 0 RB Offset		
		37850 to38150	37850, 38150	20MHz	QPSK	1 RB / 0 RB Offset		
B	OCCUPIED BANDWIDTH	37775 to 38225	37775, 38000, 38225	5MHz	QPSK, 16QAM	25 RB / 0 RB Offset		
		37800 to 38200	37800, 38000, 38200	10MHz	QPSK, 16QAM	50 RB / 0 RB Offset		
		37825 to 38175	37825, 38000, 38175	15MHz	QPSK, 16QAM	75 RB / 0 RB Offset		
		37850 to38150	37850, 38000, 38150	20MHz	QPSK, 16QAM	100 RB / 0 RB Offset		
B	BAND EDGE	37775 to 38225	37775	5MHz	QPSK, 16QAM	1 RB / 0 RB Offset		
			38825	5MHz	QPSK, 16QAM	25 RB / 0 RB Offset		
		37800 to 38200	37800	10MHz	QPSK, 16QAM	1 RB / 24 RB Offset		
			38200	10MHz	QPSK, 16QAM	25 RB / 0 RB Offset		
		37825 to 38175	37825	15MHz	QPSK, 16QAM	1 RB / 0 RB Offset		
			38175	15MHz	QPSK, 16QAM	1 RB / 49 RB Offset		
		37850 to38150	37850	20MHz	QPSK, 16QAM	50 RB / 0 RB Offset		
			38150	20MHz	QPSK, 16QAM	1 RB / 74 RB Offset		
		B	CONDCUDE TED EMISSION	37775 to 38225	37775, 38000, 38225	5MHz	QPSK	1 RB / 0 RB Offset
				37800 to 38200	37800, 38000, 38200	10MHz	QPSK	1 RB / 0RB Offset
				37825 to 38175	37825, 38000, 38175	15MHz	QPSK	1 RB / 0 RB Offset
				37850 to38150	37850, 38000, 38150	20MHz	QPSK	1 RB / 0 RB Offset
A	RADIATED EMISSION	37775 to 38225	38000	5MHz	QPSK	1 RB / 0 RB Offset		
		37800 to 38200	37800, 38000, 38200	10MHz	QPSK	1 RB / 0RB Offset		
		37825 to 38175	38000	15MHz	QPSK	1 RB / 0 RB Offset		
		37850 to38150	38000	20MHz	QPSK	1 RB / 0 RB Offset		

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



LTE BAND CA_38C MODE

EUT CONFIGURE MODE	TEST ITEM	AVAILABLE PCC CHANNEL	TESTED CHANNEL	CHANNEL BANDWIDTH	MODULATION	MODE
B	EIRP	37825 to 38025	Low, Middle, High	15MHz+15MHz	QPSK, 16QAM, 64QAM	1RB/ 49RB&1RB/ 0RB Offset
		37850 to 37952	Low, Middle, High	20MHz+20MHz	QPSK, 16QAM, 64QAM	1RB/ 99RB&1RB/ 0RB Offset
B	OCCUPIED BANDWIDTH	37825 to 38025	Low, Middle, High	15MHz+15MHz	QPSK, 16QAM, 64QAM	50RB/ 0RB&100RB/ 0RB Offset
		37850 to 37952	Low, Middle, High	20MHz+20MHz	QPSK, 16QAM, 64QAM	100RB/ 0RB&100RB/ 0RB Offset
B	BAND EDGE	37825 to 38025	Low	15MHz+15MHz	QPSK, 16QAM, 64QAM	1RB/ 0RB&1RB/ 99RB Offset
						1RB/ 49RB&1RB/ 0RB Offset
						50RB/ 0RB&100RB/ 0RB Offset
			High	15MHz+15MHz	QPSK, 16QAM, 64QAM	1RB/ 0RB&1RB/ 99RB Offset
						1RB/ 49RB&1RB/ 0RB Offset
						50RB/ 0RB&100RB/ 0RB Offset
		37850 to 37952	Low	20MHz+20MHz	QPSK, 16QAM, 64QAM	1RB/ 99RB&1RB/ 0RB Offset
						100RB/ 0RB&100RB/ 0RB Offset
						100RB/ 0RB&100RB/ 0RB Offset
			High	20MHz+20MHz	QPSK, 16QAM, 64QAM	1RB/ 0RB&1RB/ 99RB Offset
						1RB/ 99RB&1RB/ 0RB Offset
						100RB/ 0RB&100RB/ 0RB Offset
B	CONDCUDE TED EMISSION	37825 to 38025	Low, Middle, High	15MHz+15MHz	QPSK	1RB/ 0RB&1RB/ 99RB Offset
						1RB/ 49RB&1RB/ 0RB Offset
						50RB/ 0RB&100RB/ 0RB Offset
						1RB/ 99RB&1RB/ 0RB Offset
						100RB/ 0RB&75RB/ 0RB Offset
						100RB/ 0RB&100RB/ 0RB Offset
		37850 to 37952	Low, Middle, High	20MHz+20MHz	QPSK	1RB/ 0RB&1RB/ 99RB Offset
						1RB/ 99RB&1RB/ 0RB Offset
						100RB/ 0RB&100RB/ 0RB Offset
						1RB/ 0RB&1RB/ 99RB Offset
						1RB/ 99RB&1RB/ 0RB Offset
						100RB/ 0RB&100RB/ 0RB Offset
A	RADIATED EMISSION	37825 to 38025	Low, Middle, High	15MHz+15MHz	QPSK	1RB/ 49RB&1RB/ 0RB Offset
		37850 to 37952	Low, Middle, High	20MHz+20MHz	QPSK	1RB/ 99RB&1RB/ 0RB Offset

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

LTE BAND 41 MODE

TEST ITEM	AVAILABLE CHANNEL	TESTED CHANNEL	CHANNEL BANDWIDTH	MODULATION	MODE	
EIRP	40065 to 41215	40065, 40340, 41215	5MHz	QPSK, 16QAM, 64QAM	1 RB / 0 RB Offset	
	40090 to 41190	40090, 40340, 41190	10MHz	QPSK, 16QAM, 64QAM	1 RB / 0RB Offset	
	40115 to 41165	40115, 40340, 41165	15MHz	QPSK, 16QAM, 64QAM	1 RB / 0 RB Offset	
	40140 to 41140	40140, 40340, 41140	20MHz	QPSK, 16QAM, 64QAM	1 RB / 0 RB Offset	
FREQUENCY STABILITY	40065 to 41215	40065, 41215	5MHz	QPSK	1 RB / 0 RB Offset	
	40090 to 41190	40090, 41190	10MHz	QPSK	1 RB / 0RB Offset	
	40115 to 41165	40115, 41165	15MHz	QPSK	1 RB / 0 RB Offset	
	40140 to 41140	40140, 41140	20MHz	QPSK	1 RB / 0 RB Offset	
OCCUPIED BANDWIDTH	40065 to 41215	40065, 40340, 41215	5MHz	QPSK, 16QAM, 64QAM	25 RB / 0 RB Offset	
	40090 to 41190	40090, 40340, 41190	10MHz	QPSK, 16QAM, 64QAM	50 RB / 0 RB Offset	
	40115 to 41165	40115, 40340, 41165	15MHz	QPSK, 16QAM, 64QAM	75 RB / 0 RB Offset	
	40140 to 41140	40140, 40340, 41140	20MHz	QPSK, 16QAM, 64QAM	100 RB / 0 RB Offset	
BAND EDGE	40065 to 41215	40065	5MHz	QPSK, 16QAM, 64QAM	1 RB / 0 RB Offset 25 RB / 0 RB Offset 1 RB / 24 RB Offset 25 RB / 0 RB Offset	
		41215	5MHz	QPSK, 16QAM, 64QAM	1 RB / 0 RB Offset 50 RB / 0 RB Offset	
		40090 to 41190	40090	10MHz	QPSK, 16QAM, 64QAM	1 RB / 49 RB Offset 50 RB / 0 RB Offset
			41190	10MHz	QPSK, 16QAM, 64QAM	1 RB / 0 RB Offset 75 RB / 0 RB Offset
	40115 to 41165	40115	15MHz	QPSK, 16QAM, 64QAM	1 RB / 74 RB Offset 75 RB / 0 RB Offset	
		41165	15MHz	QPSK, 16QAM, 64QAM	1 RB / 0 RB Offset 100 RB / 0 RB Offset	
	40140 to 41140	40140	20MHz	QPSK, 16QAM, 64QAM	1 RB / 99 RB Offset 100 RB / 0 RB Offset	
		41140	20MHz	QPSK, 16QAM, 64QAM	1 RB / 0 RB Offset	
	CONDUCTED EMISSION	40065 to 41215	40065, 40340, 41215	5MHz	QPSK	1 RB / 0 RB Offset
		40090 to 41190	40090, 40340, 41190	10MHz	QPSK	1 RB / 0RB Offset
		40115 to 41165	40115, 40340, 41165	15MHz	QPSK	1 RB / 0 RB Offset
		40140 to 41140	40140, 40340, 41140	20MHz	QPSK	1 RB / 0 RB Offset
RADIATED EMISSION	40065 to 41215	40340	5MHz	QPSK	1 RB / 0 RB Offset	
	40090 to 41190	40340	10MHz	QPSK	1 RB / 0RB Offset	
	40115 to 41165	40340	15MHz	QPSK	1 RB / 0 RB Offset	
	40140 to 41140	40140, 40340, 41140	20MHz	QPSK	1 RB / 0 RB Offset	

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



Test Report No.: W7L-P21100026RF15

TEST CONDITION:

TEST ITEM	ENVIRONMENTAL CONDITIONS	INPUT POWER	TESTED BY
ERP	23deg. C, 70%RH	DC 5V/9V/11V/12V/20V By Adapter	Jace Hu
FREQUENCY STABILITY	23deg. C, 70%RH	DC 5V/9V/11V/12V/20V By Adapter	James Fu
OCCUPIED BANDWIDTH	23deg. C, 70%RH	DC 5V/9V/11V/12V/20V By Adapter	James Fu
BAND EDGE	23deg. C, 70%RH	DC 5V/9V/11V/12V/20V By Adapter	James Fu
CONDCUDED EMISSION	23deg. C, 70%RH	DC 5V/9V/11V/12V/20V By Adapter	James Fu
RADIATED EMISSION	23deg. C, 70%RH	DC 5V/9V/11V/12V/20V By Adapter	Jace Hu
PEAK TO AVERAGE RATIO	23deg. C, 70%RH	DC 3.87 By Battery	James Fu



Test Report No.: W7L-P21100026RF15

2.5 GENERAL DESCRIPTION OF APPLIED STANDARDS

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

FCC 47 CFR Part 2

FCC 47 CFR Part 27

KDB 971168 D01 Power Meas License Digital Systems v03r01

ANSI/TIA/EIA-603-D

ANSI/TIA/EIA-603-E

ANSI C63.26-2015

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



3 TEST TYPES AND RESULTS

3.1 OUTPUT POWER MEASUREMENT

3.1.1 LIMITS OF OUTPUT POWER MEASUREMENT

The radiated peak output power shall be according to the specific rule Part 27.50(h)(2) that “User stations are limited to 2 watts” and 27.50(i) specific that “Peak transmit power must be measure over any interval of continuous transmission using instrumentation calibration in terms of rms-equivalent voltage.”

Fixed, mobile, and portable (hand-held) stations operating in the 1710-1755 MHz band and mobile and portable stations operating in the 1695-1710 MHz and 1755-1780 MHz bands are limited to 1 watt EIRP

3.1.2 TEST PROCEDURES

EIRP MEASUREMENT:

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

$$\text{ERP or EIRP} = P_{\text{Meas}} + G_{\text{T}} - L_{\text{C}}$$

Where:

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

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

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

G_{T} = gain of the transmitting antenna, in dBd (ERP) or dBi (EIRP);

L_{C} = signal attenuation in the connecting cable between the transmitter and antenna, in dB.

CONDUCTED POWER MEASUREMENT:

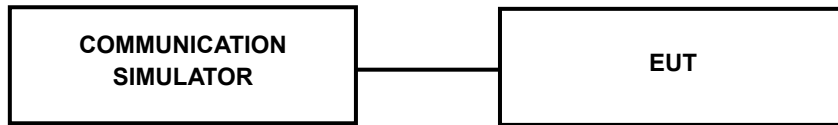
- a. The EUT was set up for the maximum power with LTE link data modulation and link up with simulator.
- b. Set the EUT to transmit under low, middle and high channel and record the power level shown on simulator.



Test Report No.: W7L-P21100026RF15

3.1.3 TEST SETUP

CONDUCTED POWER MEASUREMENT:



For the actual test configuration, please refer to the attached file (Test Setup Photo).



3.1.4 TEST RESULTS

AVERAGE CONDUCTED OUTPUT POWER (dBm)

Ant0:

Band	WCDMA IV		
	1312	1413	1513
Channel	1712.4	1732.6	1752.6
Frequency (MHz)	1712.4	1732.6	1752.6
RMC 12.2K	24.22	24.20	24.09
HSDPA Subtest-1	23.25	23.21	23.14
HSDPA Subtest-2	23.22	23.19	23.14
HSDPA Subtest-3	22.81	22.85	23.74
HSDPA Subtest-4	22.74	22.76	22.73
DC-HSDPA Subtest-1	23.27	23.22	23.16
DC-HSDPA Subtest-2	23.21	23.18	23.11
DC-HSDPA Subtest-3	22.81	22.78	22.70
DC-HSDPA Subtest-4	22.80	22.78	22.67
HSUPA Subtest-1	21.45	21.44	21.36
HSUPA Subtest-2	21.83	21.85	21.88
HSUPA Subtest-3	22.17	22.15	22.12
HSUPA Subtest-4	21.40	21.32	21.34
HSUPA Subtest-5	22.53	22.46	22.40



**BUREAU
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Test Report No.: W7L-P21100026RF15

LTE Band 4

Band/BW	Modulation	RB Size	RB Offset	Low CH 19957	Mid CH 20175	High CH 20393	MPR
				Frequency 1710.7 MHz	Frequency 1732.5 MHz	Frequency 1754.3 MHz	
4/ 1.4	QPSK	1	0	23.94	23.93	23.85	0
		1	2	24.12	24.08	24.06	0
		1	5	23.96	23.90	23.86	0
		3	0	24.09	24.06	23.24	0
		3	1	24.25	24.21	24.09	0
		3	3	24.11	24.07	24.11	0
		6	0	23.20	23.10	23.12	1
	16QAM	1	0	23.28	23.26	23.20	1
		1	2	23.44	23.35	23.41	1
		1	5	23.24	23.23	23.26	1
		3	0	23.18	23.09	23.13	1
		3	1	23.15	23.24	23.16	1
		3	3	23.22	23.16	23.21	1
		6	0	22.15	22.13	22.04	2
	64QAM	1	0	22.13	22.16	22.15	2
		1	2	22.37	22.36	22.32	2
		1	5	22.21	22.11	22.20	2
		3	0	22.15	21.14	21.03	2
		3	1	22.16	21.17	21.12	2
		3	3	22.20	21.16	21.17	2
		6	0	21.16	21.07	21.11	3



Test Report No.: W7L-P21100026RF15

Band/BW	Modulation	RB Size	RB Offset	Low CH 19965	Mid CH 20175	High CH 20385	MPR
				Frequency 1711.5 MHz	Frequency 1732.5 MHz	Frequency 1753.5 MHz	
4/3	QPSK	1	0	23.96	23.95	23.84	0
		1	7	24.08	24.09	24.06	0
		1	14	23.92	23.90	23.86	0
		8	0	23.08	23.09	23.13	1
		8	3	23.18	23.21	23.11	1
		8	7	23.08	23.14	23.15	1
		15	0	23.17	23.11	23.06	1
	16QAM	1	0	23.25	23.32	23.23	1
		1	7	23.41	23.38	23.39	1
		1	14	23.27	23.23	23.26	1
		8	0	22.14	22.10	22.13	2
		8	3	22.20	22.19	22.19	2
		8	7	22.24	22.14	22.17	2
		15	0	22.15	22.07	22.07	2
	64QAM	1	0	22.19	22.19	22.09	2
		1	7	22.40	22.30	22.31	2
		1	14	22.22	22.13	22.20	2
		8	0	21.18	21.18	21.04	3
		8	3	21.20	21.11	21.17	3
		8	7	21.17	21.20	21.13	3
		15	0	21.18	21.04	21.15	3

Band/BW	Modulation	RB Size	RB Offset	Low CH 19975	Mid CH 20175	High CH 20375	MPR
				Frequency 1712.5 MHz	Frequency 1732.5 MHz	Frequency 1752.5 MHz	
4/ 5	QPSK	1	0	23.97	23.90	23.85	0
		1	12	24.13	24.06	24.06	0
		1	24	23.93	23.89	23.90	0
		12	0	23.11	23.09	23.10	1
		12	6	23.18	23.22	23.12	1
		12	13	23.12	23.10	23.16	1
		25	0	23.15	23.14	23.09	1
	16QAM	1	0	23.26	23.28	23.23	1
		1	12	23.38	23.41	23.38	1
		1	24	23.27	23.23	23.25	1
		12	0	22.14	22.08	22.10	2
		12	6	22.17	22.23	22.15	2
		12	13	22.19	22.16	22.20	2
		25	0	22.15	22.08	22.04	2
	64QAM	1	0	22.13	22.16	22.15	2
		1	12	22.37	22.36	22.31	2
		1	24	22.15	22.18	22.20	2
		12	0	21.19	21.15	21.03	3
		12	6	21.14	21.18	21.16	3
		12	13	21.21	21.19	21.10	3
		25	0	21.14	21.10	21.13	3

Band/BW	Modulation	RB Size	RB Offset	Low CH 20000	Mid CH 20175	High CH 20350	MPR
				Frequency 1715 MHz	Frequency 1732.5 MHz	Frequency 1750 MHz	
4/ 10	QPSK	1	0	23.94	23.93	23.85	0
		1	24	24.13	24.06	24.07	0
		1	49	23.90	23.93	23.86	0
		25	0	23.12	23.08	23.13	1
		25	12	23.24	23.16	23.12	1
		25	25	23.10	23.07	23.15	1
		50	0	23.20	23.14	23.06	1
	16QAM	1	0	23.26	23.25	23.19	1
		1	24	23.43	23.37	23.41	1
		1	49	23.27	23.24	23.22	1
		25	0	22.16	22.06	22.16	2
		25	12	22.21	22.17	22.20	2
		25	25	22.18	22.17	22.17	2
		50	0	22.19	22.07	22.08	2
	64QAM	1	0	22.12	22.17	22.12	2
		1	24	22.42	22.32	22.35	2
		1	49	22.21	22.12	22.17	2
		25	0	21.17	21.12	21.09	3
		25	12	21.21	21.17	21.10	3
		25	25	21.20	21.16	21.12	3
		50	0	21.19	21.06	21.14	3



Test Report No.: W7L-P21100026RF15

Band/BW	Modulation	RB Size	RB Offset	Low CH 20025	Mid CH 20175	High CH 20325	MPR
				Frequency 1717.5 MHz	Frequency 1732.5 MHz	Frequency 1747.5 MHz	
4/ 15	QPSK	1	0	24.01	23.93	23.82	0
		1	37	24.11	24.11	24.02	0
		1	74	23.96	23.96	23.87	0
		36	0	23.09	23.09	23.14	1
		36	19	23.25	23.21	23.12	1
		36	39	23.08	23.08	23.15	1
		75	0	23.20	23.12	23.11	1
	16QAM	1	0	23.30	23.32	23.19	1
		1	37	23.42	23.38	23.41	1
		1	74	23.23	23.29	23.24	1
		36	0	22.20	22.06	22.17	2
		36	19	22.15	22.21	22.16	2
		36	39	22.23	22.15	22.20	2
		75	0	22.20	22.10	22.01	2
	64QAM	1	0	22.14	22.18	22.13	2
		1	37	22.43	22.31	22.32	2
		1	74	22.17	22.11	22.20	2
		36	0	21.22	21.18	21.03	3
		36	19	21.15	21.11	21.12	3
		36	39	21.23	21.23	21.14	3
		75	0	21.18	21.04	21.15	3



Test Report No.: W7L-P21100026RF15

Band/BW	Modulation	RB Size	RB Offset	Low CH 20050	Mid CH 20175	High CH 20300	MPR
				Frequency 1720 MHz	Frequency 1732.5 MHz	Frequency 1745 MHz	
4/ 20	QPSK	1	0	24.02	23.97	23.90	0
		1	50	24.15	24.14	24.08	0
		1	99	23.98	23.97	23.91	0
		50	0	23.15	23.14	23.15	1
		50	25	23.26	23.23	23.17	1
		50	50	23.16	23.15	23.17	1
		100	0	23.21	23.16	23.14	1
	16QAM	1	0	23.33	23.33	23.25	1
		1	50	23.46	23.43	23.43	1
		1	99	23.29	23.31	23.27	1
		50	0	22.22	22.14	22.18	2
		50	25	22.23	22.25	22.21	2
		50	50	22.26	22.21	22.22	2
		100	0	22.21	22.15	22.09	2
	64QAM	1	0	22.20	22.21	22.17	2
		1	50	22.45	22.38	22.37	2
		1	99	22.23	22.19	22.22	2
		50	0	21.23	21.20	21.11	3
		50	25	21.22	21.19	21.18	3
		50	50	21.25	21.24	21.18	3
		100	0	21.20	21.12	21.16	3

LTE Band 7

Band/BW	Modulation	RB Size	RB Offset	Low CH 20775	Mid CH 21100	High CH 21425	MPR
				Frequency 2502.5 MHz	Frequency 2535 MHz	Frequency 2567.5 MHz	
7/5	QPSK	1	0	23.89	23.81	23.86	0
		1	12	24.14	24.06	24.16	0
		1	24	24.07	24.02	24.13	0
		12	0	23.00	22.97	23.08	1
		12	6	23.15	23.18	23.18	1
		12	13	23.03	23.00	23.16	1
		25	0	23.04	23.02	23.07	1
	16QAM	1	0	23.17	23.18	23.23	1
		1	12	23.41	23.43	23.50	1
		1	24	23.31	23.26	23.38	1
		12	0	22.03	21.96	22.08	2
		12	6	22.07	22.12	22.14	2
		12	13	22.05	22.01	22.15	2
		25	0	22.06	21.98	22.04	2
	64QAM	1	0	22.03	22.05	22.14	2
		1	12	22.28	22.26	22.31	2
		1	24	22.20	22.22	22.34	2
		12	0	21.07	21.02	21.00	3
		12	6	21.08	21.11	21.19	3
		12	13	21.11	21.08	21.09	3
		25	0	21.03	20.98	21.11	3

Band/BW	Modulation	RB Size	RB Offset	Low CH 20800	Mid CH 21100	High CH 21400	MPR
				Frequency 2505 MHz	Frequency 2535 MHz	Frequency 2565 MHz	
7/ 10	QPSK	1	0	23.86	23.84	23.86	0
		1	24	24.14	24.06	24.17	0
		1	49	24.04	24.06	24.09	0
		25	0	23.01	22.96	23.11	1
		25	12	23.21	23.12	23.18	1
		25	25	23.01	22.97	23.15	1
		50	0	23.09	23.02	23.04	1
	16QAM	1	0	23.17	23.15	23.19	1
		1	24	23.46	23.39	23.53	1
		1	49	23.31	23.27	23.35	1
		25	0	22.05	21.94	22.14	2
		25	12	22.11	22.06	22.19	2
		25	25	22.04	22.02	22.12	2
		50	0	22.10	21.97	22.08	2
	64QAM	1	0	22.02	22.06	22.11	2
		1	24	22.33	22.22	22.35	2
		1	49	22.26	22.16	22.31	2
		25	0	21.05	20.99	21.06	3
		25	12	21.15	21.10	21.13	3
		25	25	21.10	21.05	21.11	3
		50	0	21.08	20.94	21.12	3

Band/BW	Modulation	RB Size	RB Offset	Low CH 20825	Mid CH 21100	High CH 21375	MPR
				Frequency 2507.5 MHz	Frequency 2535 MHz	Frequency 2562.5 MHz	
7/ 15	QPSK	1	0	23.93	23.84	23.83	0
		1	37	24.12	24.11	24.12	0
		1	74	24.10	24.09	24.10	0
		36	0	22.98	22.97	23.12	1
		36	19	23.22	23.17	23.18	1
		36	39	22.99	22.98	23.15	1
		75	0	23.09	23.00	23.09	1
	16QAM	1	0	23.21	23.22	23.19	1
		1	37	23.45	23.40	23.53	1
		1	74	23.27	23.32	23.37	1
		36	0	22.09	21.94	22.15	2
		36	19	22.05	22.10	22.15	2
		36	39	22.09	22.00	22.15	2
		75	0	22.11	22.00	22.01	2
	64QAM	1	0	22.04	22.07	22.12	2
		1	37	22.34	22.21	22.32	2
		1	74	22.22	22.15	22.34	2
		36	0	21.10	21.05	21.00	3
		36	19	21.09	21.04	21.15	3
		36	39	21.13	21.12	21.13	3
		75	0	21.07	20.92	21.13	3

Band/BW	Modulation	RB Size	RB Offset	Low CH 20850	Mid CH 21100	High CH 21350	MPR
				Frequency 2510 MHz	Frequency 2535 MHz	Frequency 2560 MHz	
7/20	QPSK	1	0	23.94	23.88	23.91	0
		1	50	24.16	24.14	24.18	0
		1	99	24.12	24.10	24.14	0
		50	0	23.04	23.02	23.13	1
		50	25	23.23	23.19	23.23	1
		50	50	23.07	23.05	23.17	1
		100	0	23.10	23.04	23.12	1
	16QAM	1	0	23.24	23.23	23.25	1
		1	50	23.49	23.45	23.55	1
		1	99	23.33	23.34	23.40	1
		50	0	22.11	22.02	22.16	2
		50	25	22.13	22.14	22.20	2
		50	50	22.12	22.06	22.17	2
		100	0	22.12	22.05	22.09	2
	64QAM	1	0	22.10	22.10	22.16	2
		1	50	22.36	22.28	22.37	2
		1	99	22.28	22.23	22.36	2
		50	0	21.11	21.07	21.08	3
		50	25	21.16	21.12	21.21	3
		50	50	21.15	21.13	21.17	3
		100	0	21.09	21.00	21.14	3



**BUREAU
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Test Report No.: W7L-P21100026RF15

LTE Band CA_7C

CA_7C								
Combination 10MHz+20MHz (50RB+100RB)								
PCC	SCC	Modulation	PCC		SCC		Total RB Size	Measured Power (dBm)
Channel	Channel		RB Size	RB offset	RB Size	RB offset		
20805	20949	QPSK	1	24	0	0	1	23.87
		16QAM	1	24	0	0	1	23.40
		64QAM	1	24	0	0	1	22.31
21006	21150	QPSK	1	24	0	0	1	23.80
		16QAM	1	24	0	0	1	23.26
		64QAM	1	24	0	0	1	22.29
21206	21350	QPSK	1	24	0	0	1	23.82
		16QAM	1	24	0	0	1	23.18
		64QAM	1	24	0	0	1	22.20
Combination 15MHz+15MHz (75RB+75RB)								
PCC	SCC	Modulation	PCC		SCC		Total RB Size	Measured Power (dBm)
Channel	Channel		RB Size	RB offset	RB Size	RB offset		
20825	20975	QPSK	1	37	0	0	1	23.88
		16QAM	1	37	0	0	1	23.37
		64QAM	1	37	0	0	1	22.33
21025	21175	QPSK	1	37	0	0	1	23.83
		16QAM	1	37	0	0	1	23.23
		64QAM	1	37	0	0	1	22.24
21225	21375	QPSK	1	37	0	0	1	23.83
		16QAM	1	37	0	0	1	23.13
		64QAM	1	37	0	0	1	22.18

CA_7C								
Combination 15MHz+10MHz (75RB+50RB)								
PCC	SCC	Modulation	PCC		SCC		Total RB Size	Measured Power (dBm)
Channel	Channel		RB Size	RB offset	RB Size	RB offset		
20825	20945	QPSK	1	37	0	0	1	23.86
		16QAM	1	37	0	0	1	23.40
		64QAM	1	37	0	0	1	22.31
21051	21171	QPSK	1	37	0	0	1	23.80
		16QAM	1	37	0	0	1	23.26
		64QAM	1	37	0	0	1	22.29
21277	21397	QPSK	1	37	0	0	1	23.83
		16QAM	1	37	0	0	1	23.14
		64QAM	1	37	0	0	1	22.24
Combination 15MHz+20MHz (75RB+100RB)								
PCC	SCC	Modulation	PCC		SCC		Total RB Size	Measured Power (dBm)
Channel	Channel		RB Size	RB offset	RB Size	RB offset		
20828	20999	QPSK	1	37	0	0	1	23.89
		16QAM	1	37	0	0	1	23.38
		64QAM	1	37	0	0	1	22.35
21003	21174	QPSK	1	37	0	0	1	23.83
		16QAM	1	37	0	0	1	23.27
		64QAM	1	37	0	0	1	22.25
21179	21350	QPSK	1	37	0	0	1	23.77
		16QAM	1	37	0	0	1	23.19
		64QAM	1	37	0	0	1	22.23



Test Report No.: W7L-P21100026RF15

CA_7C								
Combination 20MHz+10MHz (100RB+50RB)								
PCC	SCC	Modulation	PCC		SCC		Total RB Size	Measured Power (dBm)
Channel	Channel		RB Size	RB offset	RB Size	RB offset		
20850	20994	QPSK	1	50	0	0	1	23.87
		16QAM	1	50	0	0	1	23.41
		64QAM	1	50	0	0	1	22.31
21051	21195	QPSK	1	50	0	0	1	23.81
		16QAM	1	50	0	0	1	23.23
		64QAM	1	50	0	0	1	22.29
21251	21395	QPSK	1	50	0	0	1	23.84
		16QAM	1	50	0	0	1	23.13
		64QAM	1	50	0	0	1	22.24
Combination 20MHz+15MHz (100RB+75RB)								
PCC	SCC	Modulation	PCC		SCC		Total RB Size	Measured Power (dBm)
Channel	Channel		RB Size	RB offset	RB Size	RB offset		
20850	21021	QPSK	1	50	0	0	1	23.90
		16QAM	1	50	0	0	1	23.42
		64QAM	1	50	0	0	1	22.37
21026	21197	QPSK	1	50	0	0	1	23.87
		16QAM	1	50	0	0	1	23.29
		64QAM	1	50	0	0	1	22.31
21201	21372	QPSK	1	50	0	0	1	23.85
		16QAM	1	50	0	0	1	23.20
		64QAM	1	50	0	0	1	22.26



Test Report No.: W7L-P21100026RF15

CA_7C								
Combination 20MHz+20MHz (100RB+100RB)								
PCC	SCC	Modulation	PCC		SCC		Total RB Size	Measured Power (dBm)
Channel	Channel		RB Size	RB offset	RB Size	RB offset		
20850	21048	QPSK	1	50	0	0	1	23.86
		16QAM	1	50	0	0	1	23.26
		64QAM	1	50	0	0	1	22.42
21001	21199	QPSK	1	50	0	0	1	23.89
		16QAM	1	50	0	0	1	23.51
		64QAM	1	50	0	0	1	22.58
21152	21350	QPSK	1	50	0	0	1	23.92
		16QAM	1	50	0	0	1	23.29
		64QAM	1	50	0	0	1	22.49



**BUREAU
VERITAS**

Test Report No.: W7L-P21100026RF15

LTE Band 38

Band/BW	Modulation	RB Size	RB Offset	Low CH 37775	Mid CH 38000	High CH 38225	MPR
				Frequency 2572.5 MHz	Frequency 2595 MHz	Frequency 2617.5MHz	
38/ 5	QPSK	1	0	23.91	23.87	23.96	0
		1	12	24.00	23.88	23.98	0
		1	24	23.79	23.70	23.83	0
		12	0	23.03	22.96	22.95	1
		12	6	23.05	23.05	23.07	1
		12	13	23.04	22.97	22.99	1
		25	0	22.92	22.94	22.92	1
	16QAM	1	0	22.94	22.89	23.00	1
		1	12	23.05	23.07	23.04	1
		1	24	23.00	22.85	22.95	1
		12	0	22.03	22.06	22.00	2
		12	6	22.17	22.12	22.12	2
		12	13	22.04	22.04	22.06	2
		25	0	22.03	22.01	22.09	2
	64QAM	1	0	21.85	21.79	21.86	2
		1	12	21.79	21.85	21.82	2
		1	24	21.81	21.85	21.81	2
		12	0	21.08	21.03	21.09	3
		12	6	21.14	21.17	21.17	3
		12	13	21.06	20.99	21.02	3
		25	0	21.02	21.07	21.02	3

Band/BW	Modulation	RB Size	RB Offset	Low CH 37800	Mid CH 38000	High CH 38200	MPR
				Frequency 2575 MHz	Frequency 2595 MHz	Frequency 2615 MHz	
38/ 10	QPSK	1	0	23.88	23.90	23.96	0
		1	12	24.00	23.88	23.99	0
		1	24	23.76	23.74	23.79	0
		12	0	23.04	22.95	22.98	1
		12	6	23.11	22.99	23.07	1
		12	13	23.02	22.94	22.98	1
		25	0	22.97	22.94	22.89	1
	16QAM	1	0	22.94	22.86	22.96	1
		1	12	23.10	23.03	23.07	1
		1	24	23.00	22.86	22.92	1
		12	0	22.05	22.04	22.06	2
		12	6	22.21	22.06	22.17	2
		12	13	22.03	22.05	22.03	2
		25	0	22.07	22.00	22.13	2
	64QAM	1	0	21.84	21.80	21.83	2
		1	12	21.84	21.81	21.86	2
		1	24	21.87	21.79	21.78	2
		12	0	21.06	21.00	21.15	3
		12	6	21.21	21.16	21.11	3
		12	13	21.05	20.96	21.04	3
		25	0	21.07	21.03	21.03	3

Band/BW	Modulation	RB Size	RB Offset	Low CH 37825	Mid CH 38000	High CH 38175	MPR
				Frequency 2577.5 MHz	Frequency 2595 MHz	Frequency 2612.5MHz	
38/ 15	QPSK	1	0	23.95	23.90	23.93	0
		1	12	23.98	23.93	23.94	0
		1	24	23.82	23.77	23.80	0
		12	0	23.01	22.96	22.99	1
		12	6	23.12	23.04	23.07	1
		12	13	23.00	22.95	22.98	1
		25	0	22.97	22.92	22.94	1
	16QAM	1	0	22.98	22.93	22.96	1
		1	12	23.09	23.04	23.07	1
		1	24	22.96	22.91	22.94	1
		12	0	22.09	22.04	22.07	2
		12	6	22.15	22.10	22.13	2
		12	13	22.08	22.03	22.06	2
		25	0	22.08	22.03	22.06	2
	64QAM	1	0	21.86	21.81	21.84	2
		1	12	21.85	21.80	21.83	2
		1	24	21.83	21.78	21.81	2
		12	0	21.11	21.06	21.09	3
		12	6	21.15	21.10	21.13	3
		12	13	21.08	21.03	21.06	3
		25	0	21.06	21.01	21.04	3

Band/BW	Modulation	RB Size	RB Offset	Low CH 37850	Mid CH 38000	High CH 38150	MPR
				Frequency 2580 MHz	Frequency 2595 MHz	Frequency 2610 MHz	
38/ 20	QPSK	1	0	23.96	23.94	24.01	0
		1	12	24.02	23.96	24.00	0
		1	24	23.84	23.78	23.84	0
		12	0	23.07	23.01	23.00	1
		12	6	23.13	23.06	23.12	1
		12	13	23.08	23.02	23.00	1
		25	0	22.98	22.96	22.97	1
	16QAM	1	0	23.01	22.94	23.02	1
		1	12	23.13	23.09	23.09	1
		1	24	23.02	22.93	22.97	1
		12	0	22.11	22.12	22.08	2
		12	6	22.23	22.14	22.18	2
		12	13	22.11	22.09	22.08	2
		25	0	22.09	22.08	22.14	2
	64QAM	1	0	21.92	21.84	21.88	2
		1	12	21.87	21.87	21.88	2
		1	24	21.89	21.86	21.83	2
		12	0	21.12	21.08	21.17	3
		12	6	21.22	21.18	21.19	3
		12	13	21.10	21.04	21.10	3
		25	0	21.08	21.09	21.05	3



**BUREAU
VERITAS**

Test Report No.: W7L-P21100026RF15

LTE Band CA_38C

CA_38C								
Combination 15MHz+15MHz (75RB+75RB)								
PCC	SCC	Modulation	PCC		SCC		Total RB Size	Measured Power (dBm)
Channel	Channel		RB Size	RB offset	RB Size	RB offset		
37825	37975	QPSK	1	50	0	0	1	23.45
		16QAM	1	50	0	0	1	22.85
		64QAM	1	50	0	0	1	21.98
37925	38075	QPSK	1	50	0	0	1	23.91
		16QAM	1	50	0	0	1	22.88
		64QAM	1	50	0	0	1	22.00
38025	38175	QPSK	1	50	0	0	1	23.64
		16QAM	1	50	0	0	1	22.76
		64QAM	1	50	0	0	1	21.95
Combination 20MHz+20MHz (100RB+100RB)								
PCC	SCC	Modulation	PCC		SCC		Total RB Size	Measured Power (dBm)
Channel	Channel		RB Size	RB offset	RB Size	RB offset		
37850	38048	QPSK	1	37	0	0	1	23.38
		16QAM	1	37	0	0	1	22.71
		64QAM	1	37	0	0	1	21.94
37901	38099	QPSK	1	37	0	0	1	23.72
		16QAM	1	37	0	0	1	23.02
		64QAM	1	37	0	0	1	22.15
37952	38150	QPSK	1	37	0	0	1	23.55
		16QAM	1	37	0	0	1	22.87
		64QAM	1	37	0	0	1	22.01



**BUREAU
VERITAS**

Test Report No.: W7L-P21100026RF15

LTE Band 41

Band/BW	Modulation	RB Size	RB Offset	Low CH (39675)	Mid CH (40620)	High CH (41565)	MPR
				Frequency (2498.5)MHz	Frequency (2593)MHz	Frequency (2687.5)MHz	
41/ 5	QPSK	1	0	23.94	23.90	23.81	0
		1	12	24.13	24.07	23.88	0
		1	24	23.92	23.88	23.79	0
		12	0	23.10	22.98	22.85	1
		12	6	23.13	23.09	23.03	1
		12	13	23.18	23.11	22.96	1
		25	0	23.07	22.99	22.97	1
	16QAM	1	0	23.05	23.04	22.87	1
		1	12	23.21	23.14	23.18	1
		1	24	23.13	23.04	22.94	1
		12	0	22.12	22.01	21.96	2
		12	6	22.30	22.23	22.17	2
		12	13	22.19	22.14	22.04	2
		25	0	22.12	22.09	22.05	2
	64QAM	1	0	21.87	21.84	21.67	2
		1	12	21.97	21.92	21.92	2
		1	24	21.84	21.80	21.69	2
		12	0	21.12	21.04	20.96	3
		12	6	21.31	21.31	21.18	3
		12	13	21.23	21.11	21.03	3
		25	0	21.14	21.06	20.94	3

Band/BW	Modulation	RB Size	RB Offset	Low CH (39700)	Mid CH (40620)	High CH (41540)	MPR
				Frequency (2501)MHz	Frequency (2593)MHz	Frequency (2685)MHz	
41/ 10	QPSK	1	0	23.91	23.90	23.79	0
		1	24	24.13	24.08	23.93	0
		1	49	23.89	23.84	23.77	0
		25	0	23.11	23.01	22.89	1
		25	12	23.19	23.09	23.09	1
		25	25	23.16	23.10	22.97	1
		50	0	23.12	22.96	22.97	1
	16QAM	1	0	23.05	23.00	22.87	1
		1	24	23.26	23.17	23.17	1
		1	49	23.13	23.01	22.91	1
		25	0	22.14	22.07	21.92	2
		25	12	22.34	22.28	22.16	2
		25	25	22.18	22.11	21.99	2
		50	0	22.16	22.13	21.98	2
	64QAM	1	0	21.86	21.81	21.70	2
		1	24	22.02	21.96	21.89	2
		1	49	21.90	21.77	21.64	2
		25	0	21.10	21.10	20.91	3
		25	12	21.38	21.25	21.20	3
		25	25	21.22	21.13	21.05	3
		50	0	21.19	21.07	20.96	3

Band/BW	Modulation	RB Size	RB Offset	Low CH (39725)	Mid CH (40620)	High CH (41515)	MPR
				Frequency (2503.5)MHz	Frequency (2593)MHz	Frequency (2682.5)MHz	
41/ 15	QPSK	1	0	23.98	23.87	23.81	0
		1	37	24.11	24.03	23.93	0
		1	74	23.95	23.85	23.79	0
		36	0	23.08	23.02	22.91	1
		36	19	23.20	23.09	23.04	1
		36	39	23.14	23.10	23.00	1
		75	0	23.12	23.01	22.94	1
	16QAM	1	0	23.09	23.00	22.90	1
		1	37	23.25	23.17	23.12	1
		1	74	23.09	23.03	22.95	1
		36	0	22.18	22.08	21.97	2
		36	19	22.28	22.24	22.17	2
		36	39	22.23	22.14	22.04	2
		75	0	22.17	22.06	22.00	2
	64QAM	1	0	21.88	21.82	21.71	2
		1	37	22.03	21.93	21.89	2
		1	74	21.86	21.80	21.69	2
		36	0	21.15	21.04	20.95	3
		36	19	21.32	21.27	21.19	3
		36	39	21.25	21.15	21.05	3
		75	0	21.18	21.08	20.99	3

Band/BW	Modulation	RB Size	RB Offset	Low CH (39750)	Mid CH (40620)	High CH (41490)	MPR
				Frequency (2506)MHz	Frequency (2593)MHz	Frequency (2680)MHz	
41/ 20	QPSK	1	0	23.99	23.95	23.87	0
		1	50	24.15	24.09	23.95	0
		1	99	23.97	23.89	23.85	0
		50	0	23.14	23.03	22.92	1
		50	25	23.23	23.14	23.11	1
		50	50	23.22	23.12	23.02	1
		100	0	23.13	23.04	22.99	1
	16QAM	1	0	23.12	23.06	22.92	1
		1	50	23.29	23.19	23.19	1
		1	99	23.15	23.06	22.99	1
		50	0	22.20	22.09	21.98	2
		50	25	22.36	22.29	22.22	2
		50	50	22.26	22.16	22.06	2
		100	0	22.18	22.14	22.06	2
	64QAM	1	0	21.94	21.86	21.72	2
		1	50	22.05	21.98	21.97	2
		1	99	21.92	21.82	21.70	2
		50	0	21.16	21.12	20.98	3
		50	25	21.39	21.33	21.23	3
		50	50	21.27	21.19	21.07	3
		100	0	21.20	21.09	21.02	3



**BUREAU
VERITAS**

Test Report No.: W7L-P21100026RF15

Ant1:

Band	WCDMA IV		
Channel	1312	1413	1513
Frequency (MHz)	1712.4	1732.6	1752.6
RMC 12.2K	23.07	23.01	22.97
HSDPA Subtest-1	22.07	21.98	22.02
HSDPA Subtest-2	22.03	22.03	21.94
HSDPA Subtest-3	21.60	21.62	22.60
HSDPA Subtest-4	21.57	21.51	21.52
DC-HSDPA Subtest-1	22.08	21.98	22.02
DC-HSDPA Subtest-2	22.08	21.99	21.88
DC-HSDPA Subtest-3	21.60	21.52	21.52
DC-HSDPA Subtest-4	21.68	21.60	21.47
HSUPA Subtest-1	20.23	20.24	20.13
HSUPA Subtest-2	20.68	20.61	20.75
HSUPA Subtest-3	20.96	20.95	20.95
HSUPA Subtest-4	20.21	20.09	20.18
HSUPA Subtest-5	21.31	21.30	21.20



**BUREAU
VERITAS**

Test Report No.: W7L-P21100026RF15

LTE Band 4

Band/BW	Modulation	RB Size	RB Offset	Low CH 19957	Mid CH 20175	High CH 20393	MPR
				Frequency 1710.7 MHz	Frequency 1732.5 MHz	Frequency 1754.3 MHz	
4/ 1.4	QPSK	1	0	22.96	22.91	22.72	0
		1	2	23.08	23.00	22.87	0
		1	5	22.89	22.79	22.64	0
		3	0	22.70	22.63	22.59	0
		3	1	22.84	22.76	22.53	0
		3	3	22.68	22.60	22.53	0
		6	0	22.80	22.66	22.57	1
	16QAM	1	0	22.70	22.64	22.47	1
		1	2	22.80	22.67	22.62	1
		1	5	22.53	22.48	22.40	1
		3	0	22.29	22.16	22.09	1
		3	1	22.27	22.32	22.13	1
		3	3	22.28	22.18	22.12	1
		6	0	22.26	22.20	22.00	2
	64QAM	1	0	22.35	22.34	22.22	2
		1	2	22.46	22.41	22.26	2
		1	5	22.29	22.15	22.13	2
		3	0	21.25	21.20	20.98	2
		3	1	21.27	21.24	21.08	2
		3	3	21.30	21.22	21.12	2
		6	0	21.29	21.16	21.09	3



Test Report No.: W7L-P21100026RF15

Band/BW	Modulation	RB Size	RB Offset	Low CH 19965	Mid CH 20175	High CH 20385	MPR
				Frequency 1711.5 MHz	Frequency 1732.5 MHz	Frequency 1753.5 MHz	
4/3	QPSK	1	0	22.98	22.93	22.71	0
		1	7	23.04	23.01	22.87	0
		1	14	22.85	22.79	22.64	0
		8	0	22.69	22.66	22.59	1
		8	3	22.77	22.76	22.55	1
		8	7	22.65	22.67	22.57	1
		15	0	22.77	22.67	22.51	1
	16QAM	1	0	22.67	22.70	22.50	1
		1	7	22.77	22.70	22.60	1
		1	14	22.56	22.48	22.40	1
		8	0	22.25	22.17	22.09	2
		8	3	22.32	22.27	22.16	2
		8	7	22.30	22.16	22.08	2
		15	0	22.26	22.14	22.03	2
	64QAM	1	0	22.41	22.37	22.16	2
		1	7	22.49	22.35	22.25	2
		1	14	22.30	22.17	22.13	2
		8	0	21.28	21.24	20.99	3
		8	3	21.31	21.18	21.13	3
		8	7	21.27	21.26	21.08	3
		15	0	21.31	21.13	21.13	3



Test Report No.: W7L-P21100026RF15

Band/BW	Modulation	RB Size	RB Offset	Low CH 19975	Mid CH 20175	High CH 20375	MPR
				Frequency 1712.5 MHz	Frequency 1732.5 MHz	Frequency 1752.5 MHz	
4/ 5	QPSK	1	0	22.99	22.88	22.72	0
		1	12	23.09	22.98	22.87	0
		1	24	22.86	22.78	22.68	0
		12	0	22.72	22.66	22.56	1
		12	6	22.77	22.77	22.56	1
		12	13	22.69	22.63	22.58	1
		25	0	22.75	22.70	22.54	1
	16QAM	1	0	22.68	22.66	22.50	1
		1	12	22.74	22.73	22.59	1
		1	24	22.56	22.48	22.39	1
		12	0	22.25	22.15	22.06	2
		12	6	22.29	22.31	22.12	2
		12	13	22.25	22.18	22.11	2
		25	0	22.26	22.15	22.00	2
	64QAM	1	0	22.35	22.34	22.22	2
		1	12	22.46	22.41	22.25	2
		1	24	22.23	22.22	22.13	2
		12	0	21.29	21.21	20.98	3
		12	6	21.25	21.25	21.12	3
		12	13	21.31	21.25	21.05	3
		25	0	21.27	21.19	21.11	3

Band/BW	Modulation	RB Size	RB Offset	Low CH 20000	Mid CH 20175	High CH 20350	MPR
				Frequency 1715 MHz	Frequency 1732.5 MHz	Frequency 1750 MHz	
4/ 10	QPSK	1	0	22.96	22.91	22.72	0
		1	24	23.09	22.98	22.88	0
		1	49	22.83	22.82	22.64	0
		25	0	22.73	22.65	22.59	1
		25	12	22.83	22.71	22.56	1
		25	25	22.67	22.60	22.57	1
		50	0	22.80	22.70	22.51	1
	16QAM	1	0	22.68	22.63	22.46	1
		1	24	22.79	22.69	22.62	1
		1	49	22.56	22.49	22.36	1
		25	0	22.27	22.13	22.12	2
		25	12	22.33	22.25	22.17	2
		25	25	22.24	22.19	22.08	2
		50	0	22.30	22.14	22.04	2
	64QAM	1	0	22.34	22.35	22.19	2
		1	24	22.51	22.37	22.29	2
		1	49	22.29	22.16	22.10	2
		25	0	21.27	21.18	21.04	3
		25	12	21.32	21.24	21.06	3
		25	25	21.30	21.22	21.07	3
		50	0	21.32	21.15	21.12	3

Band/BW	Modulation	RB Size	RB Offset	Low CH 20025	Mid CH 20175	High CH 20325	MPR
				Frequency 1717.5 MHz	Frequency 1732.5 MHz	Frequency 1747.5 MHz	
4/ 15	QPSK	1	0	23.03	22.91	22.69	0
		1	37	23.07	23.03	22.83	0
		1	74	22.89	22.85	22.65	0
		36	0	22.70	22.66	22.60	1
		36	19	22.84	22.76	22.56	1
		36	39	22.65	22.61	22.57	1
		75	0	22.80	22.68	22.56	1
	16QAM	1	0	22.72	22.70	22.46	1
		1	37	22.78	22.70	22.62	1
		1	74	22.52	22.54	22.38	1
		36	0	22.31	22.13	22.13	2
		36	19	22.27	22.29	22.13	2
		36	39	22.29	22.17	22.11	2
		75	0	22.31	22.17	21.97	2
	64QAM	1	0	22.36	22.36	22.20	2
		1	37	22.52	22.36	22.26	2
		1	74	22.25	22.15	22.13	2
		36	0	21.32	21.24	20.98	3
		36	19	21.26	21.18	21.08	3
		36	39	21.33	21.29	21.09	3
		75	0	21.31	21.13	21.13	3



Test Report No.: W7L-P21100026RF15

Band/BW	Modulation	RB Size	RB Offset	Low CH 20050	Mid CH 20175	High CH 20300	MPR
				Frequency 1720 MHz	Frequency 1732.5 MHz	Frequency 1745 MHz	
4/ 20	QPSK	1	0	23.04	22.95	22.77	0
		1	50	23.11	23.06	22.89	0
		1	99	22.91	22.86	22.69	0
		50	0	22.76	22.71	22.61	1
		50	25	22.85	22.78	22.61	1
		50	50	22.73	22.68	22.59	1
		100	0	22.81	22.72	22.59	1
	16QAM	1	0	22.75	22.71	22.52	1
		1	50	22.82	22.75	22.64	1
		1	99	22.58	22.56	22.41	1
		50	0	22.33	22.21	22.14	2
		50	25	22.35	22.33	22.18	2
		50	50	22.32	22.23	22.13	2
		100	0	22.32	22.22	22.05	2
	64QAM	1	0	22.42	22.39	22.24	2
		1	50	22.54	22.43	22.31	2
		1	99	22.31	22.23	22.15	2
		50	0	21.33	21.26	21.06	3
		50	25	21.33	21.26	21.14	3
		50	50	21.35	21.30	21.13	3
		100	0	21.33	21.21	21.14	3

LTE Band 7

Band/BW	Modulation	RB Size	RB Offset	Low CH 20775	Mid CH 21100	High CH 21425	MPR
				Frequency 2502.5 MHz	Frequency 2535 MHz	Frequency 2567.5 MHz	
7/5	QPSK	1	0	22.65	22.53	22.63	0
		1	12	22.90	22.78	22.93	0
		1	24	22.79	22.70	22.86	0
		12	0	22.38	22.31	22.47	1
		12	6	22.55	22.54	22.59	1
		12	13	22.43	22.36	22.57	1
		25	0	22.44	22.38	22.48	1
	16QAM	1	0	22.30	22.27	22.37	1
		1	12	22.54	22.52	22.64	1
		1	24	22.43	22.34	22.51	1
		12	0	21.89	21.78	21.95	2
		12	6	22.02	22.03	22.10	2
		12	13	21.98	21.90	22.09	2
		25	0	21.94	21.82	21.93	2
	64QAM	1	0	21.96	21.94	22.08	2
		1	12	22.29	22.23	22.33	2
		1	24	22.13	22.11	22.28	2
		12	0	21.01	20.92	20.95	3
		12	6	21.05	21.04	21.17	3
		12	13	21.07	21.00	21.06	3
		25	0	20.97	20.88	21.06	3

Band/BW	Modulation	RB Size	RB Offset	Low CH 20800	Mid CH 21100	High CH 21400	MPR
				Frequency 2505 MHz	Frequency 2535 MHz	Frequency 2565 MHz	
7/ 10	QPSK	1	0	22.62	22.56	22.63	0
		1	24	22.90	22.78	22.94	0
		1	49	22.76	22.74	22.82	0
		25	0	22.39	22.30	22.50	1
		25	12	22.61	22.48	22.59	1
		25	25	22.41	22.33	22.56	1
		50	0	22.49	22.38	22.45	1
	16QAM	1	0	22.30	22.24	22.33	1
		1	24	22.59	22.48	22.67	1
		1	49	22.43	22.35	22.48	1
		25	0	21.91	21.76	22.01	2
		25	12	22.06	21.97	22.15	2
		25	25	21.97	21.91	22.06	2
		50	0	21.98	21.81	21.97	2
	64QAM	1	0	21.95	21.95	22.05	2
		1	24	22.34	22.19	22.37	2
		1	49	22.19	22.05	22.25	2
		25	0	20.99	20.89	21.01	3
		25	12	21.12	21.03	21.11	3
		25	25	21.06	20.97	21.08	3
		50	0	21.02	20.84	21.07	3

Band/BW	Modulation	RB Size	RB Offset	Low CH 20825	Mid CH 21100	High CH 21375	MPR
				Frequency 2507.5 MHz	Frequency 2535 MHz	Frequency 2562.5 MHz	
7/ 15	QPSK	1	0	22.69	22.56	22.60	0
		1	37	22.88	22.83	22.89	0
		1	74	22.82	22.77	22.83	0
		36	0	22.36	22.31	22.51	1
		36	19	22.62	22.53	22.59	1
		36	39	22.39	22.34	22.56	1
		75	0	22.49	22.36	22.50	1
	16QAM	1	0	22.34	22.31	22.33	1
		1	37	22.58	22.49	22.67	1
		1	74	22.39	22.40	22.50	1
		36	0	21.95	21.76	22.02	2
		36	19	22.00	22.01	22.11	2
		36	39	22.02	21.89	22.09	2
		75	0	21.99	21.84	21.90	2
	64QAM	1	0	21.97	21.96	22.06	2
		1	37	22.35	22.18	22.34	2
		1	74	22.15	22.04	22.28	2
		36	0	21.04	20.95	20.95	3
		36	19	21.06	20.97	21.13	3
		36	39	21.09	21.04	21.10	3
		75	0	21.01	20.82	21.08	3

Band/BW	Modulation	RB Size	RB Offset	Low CH 20850	Mid CH 21100	High CH 21350	MPR
				Frequency 2510 MHz	Frequency 2535 MHz	Frequency 2560 MHz	
7/20	QPSK	1	0	22.70	22.60	22.68	0
		1	50	22.92	22.86	22.95	0
		1	99	22.84	22.78	22.87	0
		50	0	22.42	22.36	22.52	1
		50	25	22.63	22.55	22.64	1
		50	50	22.47	22.41	22.58	1
		100	0	22.50	22.40	22.53	1
	16QAM	1	0	22.37	22.32	22.39	1
		1	50	22.62	22.54	22.69	1
		1	99	22.45	22.42	22.53	1
		50	0	21.97	21.84	22.03	2
		50	25	22.08	22.05	22.16	2
		50	50	22.05	21.95	22.11	2
		100	0	22.00	21.89	21.98	2
	64QAM	1	0	22.03	21.99	22.10	2
		1	50	22.37	22.25	22.39	2
		1	99	22.21	22.12	22.30	2
		50	0	21.05	20.97	21.03	3
		50	25	21.13	21.05	21.19	3
		50	50	21.11	21.05	21.14	3
		100	0	21.03	20.90	21.09	3



Test Report No.: W7L-P21100026RF15

LTE Band CA_7C

CA_7C								
Combination 10MHz+20MHz (50RB+100RB)								
PCC	SCC	Modulation	PCC		SCC		Total RB Size	Measured Power (dBm)
Channel	Channel		RB Size	RB offset	RB Size	RB offset		
20805	20949	QPSK	1	24	0	0	1	22.78
		16QAM	1	24	0	0	1	22.70
		64QAM	1	24	0	0	1	21.87
21006	21150	QPSK	1	24	0	0	1	22.76
		16QAM	1	24	0	0	1	22.82
		64QAM	1	24	0	0	1	22.04
21206	21350	QPSK	1	24	0	0	1	22.68
		16QAM	1	24	0	0	1	22.45
		64QAM	1	24	0	0	1	21.77
Combination 15MHz+15MHz (75RB+75RB)								
PCC	SCC	Modulation	PCC		SCC		Total RB Size	Measured Power (dBm)
Channel	Channel		RB Size	RB offset	RB Size	RB offset		
20825	20975	QPSK	1	37	0	0	1	22.79
		16QAM	1	37	0	0	1	22.67
		64QAM	1	37	0	0	1	21.89
21025	21175	QPSK	1	37	0	0	1	22.79
		16QAM	1	37	0	0	1	22.79
		64QAM	1	37	0	0	1	21.99
21225	21375	QPSK	1	37	0	0	1	22.69
		16QAM	1	37	0	0	1	22.40
		64QAM	1	37	0	0	1	21.75



Test Report No.: W7L-P21100026RF15

CA_7C								
Combination 15MHz+10MHz (75RB+50RB)								
PCC	SCC	Modulation	PCC		SCC		Total RB Size	Measured Power (dBm)
Channel	Channel		RB Size	RB offset	RB Size	RB offset		
20825	20945	QPSK	1	37	0	0	1	22.77
		16QAM	1	37	0	0	1	22.70
		64QAM	1	37	0	0	1	21.87
21051	21171	QPSK	1	37	0	0	1	22.76
		16QAM	1	37	0	0	1	22.82
		64QAM	1	37	0	0	1	22.04
21277	21397	QPSK	1	37	0	0	1	22.69
		16QAM	1	37	0	0	1	22.41
		64QAM	1	37	0	0	1	21.81
Combination 15MHz+20MHz (75RB+100RB)								
PCC	SCC	Modulation	PCC		SCC		Total RB Size	Measured Power (dBm)
Channel	Channel		RB Size	RB offset	RB Size	RB offset		
20828	20999	QPSK	1	37	0	0	1	22.80
		16QAM	1	37	0	0	1	22.68
		64QAM	1	37	0	0	1	21.91
21003	21174	QPSK	1	37	0	0	1	22.79
		16QAM	1	37	0	0	1	22.83
		64QAM	1	37	0	0	1	22.00
21179	21350	QPSK	1	37	0	0	1	22.63
		16QAM	1	37	0	0	1	22.46
		64QAM	1	37	0	0	1	21.80



Test Report No.: W7L-P21100026RF15

CA_7C								
Combination 20MHz+10MHz (100RB+50RB)								
PCC	SCC	Modulation	PCC		SCC		Total RB Size	Measured Power (dBm)
Channel	Channel		RB Size	RB offset	RB Size	RB offset		
20850	20994	QPSK	1	50	0	0	1	22.78
		16QAM	1	50	0	0	1	22.71
		64QAM	1	50	0	0	1	21.87
21051	21195	QPSK	1	50	0	0	1	22.77
		16QAM	1	50	0	0	1	22.79
		64QAM	1	50	0	0	1	22.04
21251	21395	QPSK	1	50	0	0	1	22.70
		16QAM	1	50	0	0	1	22.40
		64QAM	1	50	0	0	1	21.81
Combination 20MHz+15MHz (100RB+75RB)								
PCC	SCC	Modulation	PCC		SCC		Total RB Size	Measured Power (dBm)
Channel	Channel		RB Size	RB offset	RB Size	RB offset		
20850	21021	QPSK	1	50	0	0	1	22.81
		16QAM	1	50	0	0	1	22.72
		64QAM	1	50	0	0	1	21.93
21026	21197	QPSK	1	50	0	0	1	22.83
		16QAM	1	50	0	0	1	22.85
		64QAM	1	50	0	0	1	22.06
21201	21372	QPSK	1	50	0	0	1	22.71
		16QAM	1	50	0	0	1	22.47
		64QAM	1	50	0	0	1	21.83



Test Report No.: W7L-P21100026RF15

CA_7C								
Combination 20MHz+20MHz (100RB+100RB)								
PCC	SCC	Modulation	PCC		SCC		Total RB Size	Measured Power (dBm)
Channel	Channel		RB Size	RB offset	RB Size	RB offset		
20850	21048	QPSK	1	50	0	0	1	22.85
		16QAM	1	50	0	0	1	22.81
		64QAM	1	50	0	0	1	22.05
21001	21199	QPSK	1	50	0	0	1	22.78
		16QAM	1	50	0	0	1	22.51
		64QAM	1	50	0	0	1	21.75
21152	21350	QPSK	1	50	0	0	1	22.72
		16QAM	1	50	0	0	1	22.49
		64QAM	1	50	0	0	1	21.89



**BUREAU
VERITAS**

Test Report No.: W7L-P21100026RF15

LTE Band 38

Band/BW	Modulation	RB Size	RB Offset	Low CH 37775	Mid CH 38000	High CH 38225	MPR
				Frequency 2572.5 MHz	Frequency 2595 MHz	Frequency 2617.5MHz	
38/ 5	QPSK	1	0	23.96	23.89	23.79	0
		1	12	24.12	24.05	24.00	0
		1	24	23.97	23.93	23.89	0
		12	0	23.07	23.05	23.01	1
		12	6	23.09	23.13	22.98	1
		12	13	23.16	23.14	23.15	1
		25	0	23.12	23.11	23.01	1
	16QAM	1	0	23.06	23.08	22.98	1
		1	12	23.20	23.23	23.15	1
		1	24	23.11	23.07	23.04	1
		12	0	22.17	22.11	22.08	2
		12	6	22.22	22.28	22.15	2
		12	13	22.20	22.17	22.16	2
		25	0	22.18	22.11	22.02	2
	64QAM	1	0	21.77	21.80	21.74	2
		1	12	21.94	21.93	21.83	2
		1	24	21.80	21.83	21.80	2
		12	0	21.22	21.18	21.01	3
		12	6	21.19	21.23	21.16	3
		12	13	21.25	21.23	21.09	3
		25	0	21.14	21.10	21.08	3

Band/BW	Modulation	RB Size	RB Offset	Low CH 37800	Mid CH 38000	High CH 38200	MPR
				Frequency 2575 MHz	Frequency 2595 MHz	Frequency 2615 MHz	
38/ 10	QPSK	1	0	23.93	23.92	23.79	0
		1	12	24.12	24.05	24.01	0
		1	24	23.94	23.97	23.85	0
		12	0	23.08	23.04	23.04	1
		12	6	23.15	23.07	22.98	1
		12	13	23.14	23.11	23.14	1
		25	0	23.17	23.11	22.98	1
	16QAM	1	0	23.06	23.05	22.94	1
		1	12	23.25	23.19	23.18	1
		1	24	23.11	23.08	23.01	1
		12	0	22.19	22.09	22.14	2
		12	6	22.26	22.22	22.20	2
		12	13	22.19	22.18	22.13	2
		25	0	22.22	22.10	22.06	2
	64QAM	1	0	21.76	21.81	21.71	2
		1	12	21.99	21.89	21.87	2
		1	24	21.86	21.77	21.77	2
		12	0	21.20	21.15	21.07	3
		12	6	21.26	21.22	21.10	3
		12	13	21.24	21.20	21.11	3
		25	0	21.19	21.06	21.09	3



Test Report No.: W7L-P21100026RF15

Band/BW	Modulation	RB Size	RB Offset	Low CH 37825	Mid CH 38000	High CH 38175	MPR
				Frequency 2577.5 MHz	Frequency 2595 MHz	Frequency 2612.5MHz	
38/ 15	QPSK	1	0	24.00	23.92	23.76	0
		1	12	24.10	24.10	23.96	0
		1	24	24.00	24.00	23.86	0
		12	0	23.05	23.05	23.05	1
		12	6	23.16	23.12	22.98	1
		12	13	23.12	23.12	23.14	1
		25	0	23.17	23.09	23.03	1
	16QAM	1	0	23.10	23.12	22.94	1
		1	12	23.24	23.20	23.18	1
		1	24	23.07	23.13	23.03	1
		12	0	22.23	22.09	22.15	2
		12	6	22.20	22.26	22.16	2
		12	13	22.24	22.16	22.16	2
		25	0	22.23	22.13	21.99	2
	64QAM	1	0	21.78	21.82	21.72	2
		1	12	22.00	21.88	21.84	2
		1	24	21.82	21.76	21.80	2
		12	0	21.25	21.21	21.01	3
		12	6	21.20	21.16	21.12	3
		12	13	21.27	21.27	21.13	3
		25	0	21.18	21.04	21.10	3

Band/BW	Modulation	RB Size	RB Offset	Low CH 37850	Mid CH 38000	High CH 38150	MPR
				Frequency 2580 MHz	Frequency 2595 MHz	Frequency 2610 MHz	
38/ 20	QPSK	1	0	24.01	23.96	23.84	0
		1	12	24.14	24.13	24.02	0
		1	24	24.02	24.01	23.90	0
		12	0	23.11	23.10	23.06	1
		12	6	23.17	23.14	23.03	1
		12	13	23.20	23.19	23.16	1
		25	0	23.18	23.13	23.06	1
	16QAM	1	0	23.13	23.13	23.00	1
		1	12	23.28	23.25	23.20	1
		1	24	23.13	23.15	23.06	1
		12	0	22.25	22.17	22.16	2
		12	6	22.28	22.30	22.21	2
		12	13	22.27	22.22	22.18	2
		25	0	22.24	22.18	22.07	2
	64QAM	1	0	21.84	21.85	21.76	2
		1	12	22.02	21.95	21.89	2
		1	24	21.88	21.84	21.82	2
		12	0	21.26	21.23	21.09	3
		12	6	21.27	21.24	21.18	3
		12	13	21.29	21.28	21.17	3
		25	0	21.20	21.12	21.11	3



**BUREAU
VERITAS**

Test Report No.: W7L-P21100026RF15

LTE Band CA_38C

CA_38C								
Combination 15MHz+15MHz (75RB+75RB)								
PCC	SCC	Modulation	PCC		SCC		Total RB Size	Measured Power (dBm)
Channel	Channel		RB Size	RB offset	RB Size	RB offset		
37825	37975	QPSK	1	37	0	0	1	20.39
		16QAM	1	37	0	0	1	20.31
		64QAM	1	37	0	0	1	20.27
37925	38075	QPSK	1	37	0	0	1	20.51
		16QAM	1	37	0	0	1	20.25
		64QAM	1	37	0	0	1	20.02
38025	38175	QPSK	1	37	0	0	1	20.55
		16QAM	1	37	0	0	1	20.23
		64QAM	1	37	0	0	1	20.11
Combination 20MHz+20MHz (100RB+100RB)								
PCC	SCC	Modulation	PCC		SCC		Total RB Size	Measured Power (dBm)
Channel	Channel		RB Size	RB offset	RB Size	RB offset		
37850	38048	QPSK	1	50	0	0	1	20.65
		16QAM	1	50	0	0	1	20.51
		64QAM	1	50	0	0	1	20.47
37901	38099	QPSK	1	50	0	0	1	20.58
		16QAM	1	50	0	0	1	20.39
		64QAM	1	50	0	0	1	20.27
37952	38150	QPSK	1	50	0	0	1	20.62
		16QAM	1	50	0	0	1	20.44
		64QAM	1	50	0	0	1	20.39



**BUREAU
VERITAS**

Test Report No.: W7L-P21100026RF15

LTE Band 41

Band/BW	Modulation	RB Size	RB Offset	Low CH (39675)	Mid CH (40620)	High CH (41565)	MPR
				Frequency (2498.5)MHz	Frequency (2593)MHz	Frequency (2687.5)MHz	
41/ 5	QPSK	1	0	24.00	23.85	23.74	0
		1	12	24.16	24.06	23.93	0
		1	24	24.00	23.94	23.75	0
		12	0	23.07	23.03	22.89	1
		12	6	23.21	23.12	22.95	1
		12	13	23.11	23.12	22.95	1
		25	0	23.13	23.04	22.93	1
	16QAM	1	0	23.09	23.03	22.92	1
		1	12	23.23	23.20	23.07	1
		1	24	23.09	23.04	22.88	1
		12	0	22.18	22.11	22.05	2
		12	6	22.27	22.22	22.11	2
		12	13	22.22	22.20	22.08	2
		25	0	22.20	22.06	22.00	2
	64QAM	1	0	21.81	21.80	21.68	2
		1	12	22.08	21.99	21.85	2
		1	24	21.82	21.84	21.74	2
		12	0	21.20	21.01	21.00	3
		12	6	21.23	21.22	21.09	3
		12	13	21.23	21.09	21.03	3
		25	0	21.18	21.14	20.95	3