



TEST REPORT

No.I22N02158-RF LTE

for

Guangdong OPPO Mobile Telecommunications Corp., Ltd.

Mobile Phone

Model Name: CPH2437

FCC ID: R9C-CPH2437

with

Hardware Version: 11

Software Version: ColorOS 13.0

Issued Date: 2022-11-30

Note:

The test results in this test report relate only to the devices specified in this report. This report shall not be reproduced except in full without the written approval of SAICT.

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No.I22N02158-RF LTE

REPORT HISTORY

Report Number	Revision	Description	Issue Date
I22N02158-RF LTE	Rev.0	1st edition	2022-11-30

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1. SUMMARY OF TEST REPORT

1.1. Test Items

Description	Mobile Phone
Model Name	CPH2437
Brand Name	OPPO
Applicant's name	Guangdong OPPO Mobile Telecommunications Corp., Ltd.
Manufacturer's Name	Guangdong OPPO Mobile Telecommunications Corp., Ltd.

1.2. Test Standards

FCC Part 2/22/24/27/90	10-1-20 Edition
ANSI C63.26	2015
KDB971168 D01	v03r01

1.3. Test Result

All test items are passed. Please refer to "6 Summary of Test Results" for detail.

1.4. Testing Location

Address: Building G, Shenzhen International Innovation Center, No.1006 Shennan Road, Futian District, Shenzhen, Guangdong, P. R. China 518000

1.5. Project Data

Testing Start Date: 2022-10-13

Testing End Date: 2022-11-30

1.6. Signature

Wang Ping
(Prepared this test report)

Huang Qiuqin
(Reviewed this test report)

Zhang Hao
(Approved this test report)



2. CLIENT INFORMATION

2.1. Applicant Information

Company Name: Guangdong OPPO Mobile Telecommunications Corp., Ltd.
Address /Post: NO.18 Haibin Road, Wusha Village, Chang'an Town, Dongguan City,
Guangdong, China
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2.2. Manufacturer Information

Company Name: Guangdong OPPO Mobile Telecommunications Corp., Ltd.
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Guangdong, China
Contact: Mei XiLi
Email: (86)76986076999
Telephone: meixili@oppo.com
Fax: /



3. EQUIPMENT UNDER TEST (EUT) AND ANCILLARY EQUIPMENT

(AE)

3.1. About EUT

Description	Mobile Phone
Model Name	CPH2437
FCC ID	R9C-CPH2437
Frequency Bands	LTE Bands 2/4/5/7/12/17/25/26/66/38/41/CA_7C/CA_38C/CA_41C
Antenna	Integrated
Extreme vol. Limits	3.60V to 4.48V (nominal: 3.89V)
Condition of EUT as received	No abnormality in appearance

Note1: Components list, please refer to documents of the manufacturer; it is also included in the original test record of SAICT.

3.2. Internal Identification of EUT used during the test

EUT ID*	SN or IMEI	HW Version	SW Version	Date of receipt
UT01aa	869315060027812	11	ColorOS 13.0	2022-10-19
UT07aa	869315060020718	11	ColorOS 13.0	2022-10-19
	869315060020700			

*EUT ID: is used to identify the test sample in the lab internally.

UT01aa is used for conduction test, UT28aa is used for radiation test.

3.3. Internal Identification of AE used during the test

AE ID*	Description
AE1	Battery
AE2	Charger
AE3	USB Cable
AE1-1	
Model	BLP971
Manufacturer	Dongguan NVT Techonology Co., Ltd.
Capacity	3110mAh
Nominal Voltage	3.89 V
AE1-2	
Model	BLP969
Manufacturer	Dongguan NVT Techonology Co., Ltd.
Capacity	1190mAh
Nominal Voltage	3.89 V
AE2	
Model	VCB7CAUH
Manufacturer	Jiangsu ChenYang Electronics Co., Ltd.
Specification	American Standard Charger
AE3	
Model	DL152



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Manufacturer /

*AE ID: is used to identify the test sample in the lab internally.

AE: ancillary equipment

3.4. General Description

The Equipment Under Test (EUT) is a model Mobile Phone with integrated antenna. The Mobile Phone CPH2437 is a folding phone. It consists of normal options: lithium battery, charger. Manual and specifications of the EUT were provided to fulfil the test. Samples undergoing test were selected by the Client.



4. REFERENCE DOCUMENTS

The following documents listed in this section are referred for testing.

Reference	Title	Version
FCC Part 22	PUBLIC MOBILE SERVICES	10-1-20 Edition
FCC Part 24	PERSONAL COMMUNICATIONS SERVICES	10-1-20 Edition
FCC Part 2	FREQUENCY ALLOCATIONS AND RADIO TREATY MATTERS; GENERAL RULES AND REGULATIONS	10-1-20 Edition
FCC Part 27	MISCELLANEOUS WIRELESS COMMUNICATIONS SERVICES	10-1-20 Edition
FCC Part 90	PRIVATE LAND MOBILE RADIO SERVICES	10-1-20 Edition
ANSI C63.26	American National Standard for Compliance Testing of Transmitters Used in Licensed Radio Services	2015
KDB971168 D01	Power Meas License Digital Systems	v03r01

5. LABORATORY ENVIRONMENT

Shielded room did not exceed following limits along the RF testing:

Temperature	Min. = 15 °C, Max. = 35 °C
Relative humidity	Min. = 20 %, Max. = 75 %
Shielding effectiveness	0.014MHz-1MHz>60 dB; 1MHz-18000MHz>90 dB
Electrical insulation	>2 M Ω
Ground system resistance	< 4 Ω

Shielded room did not exceed following limits along the EMC testing

Temperature	Min. = 15 °C, Max. = 35 °C
Relative humidity	Min. = 20 %, Max. = 75 %
Shielding effectiveness	0.014MHz-1MHz> 60 dB; 1MHz-18000MHz>90 dB
Electrical insulation	> 2M Ω
Ground system resistance	< 4 Ω
Voltage Standing Wave Ratio (VSWR)	$\leq$ 6 dB, from 1 to 18 GHz, 3 m distance
Uniformity of field strength	Between 0 and 6 dB, from 80 to 6000 MHz

6. SUMMARY OF TEST RESULTS

Abbreviations used in this clause:		
Verdict Column	P	Pass
	F	Fail
	NA	Not applicable
	NM	Not measured

LTE Band 2

Items	Test Name	Clause in FCC rules	Section in this report	Verdict
1	Output Power	2.1046/24.232	A.1	P
2	Field Strength of Spurious Radiation	2.1053/24.238	A.2	P
3	Frequency Stability	2.1055/24.235	A.3	P
4	Occupied Bandwidth	2.1049/24.238	A.4	P
5	Emission Bandwidth	2.1049/24.238	A.5	P
6	Band Edge Compliance	2.1051/24.238	A.6	P
7	Conducted Spurious Emission	2.1051/24.238	A.7	P
8	Peak-to-Average Power Ratio	24.232/ KDB971168 D01	A.8	P

LTE Band 4

Items	Test Name	Clause in FCC rules	Section in this report	Verdict
1	Output Power	2.1046/27.50(d)	A.1	P
2	Field Strength of Spurious Radiation	2.1053/27.53(h)	A.2	P
3	Frequency Stability	2.1055/27.54	A.3	P
4	Occupied Bandwidth	2.1049/27.53(g)	A.4	P
5	Emission Bandwidth	2.1049/27.53(g)	A.5	P
6	Band Edge Compliance	2.1051/27.53(h)	A.6	P
7	Conducted Spurious Emission	2.1051/27.53(h)	A.7	P
8	Peak-to-Average Power Ratio	27.50(d)/KDB971168 D01	A.8	P

LTE band 5

Items	Test Name	Clause in FCC rules	Section in this report	Verdict
1	Output Power	2.1046/22.913	A.1	P
2	Field Strength of Spurious Radiation	2.1053/22.917	A.2	P
3	Frequency Stability	2.1055/22.355	A.3	P
4	Occupied Bandwidth	2.1049/22.917	A.4	P
5	Emission Bandwidth	2.1049/22.917	A.5	P
6	Band Edge Compliance	2.1051/22.917	A.6	P
7	Conducted Spurious Emission	2.1051/22.917	A.7	P
8	Peak-to-Average Power Ratio	KDB971168 D01	A.8	P

**LTE Band 7(CA_7C)**

Items	Test Name	Clause in FCC rules	Section in this report	Verdict
1	Output Power	2.1046/27.50(h)	A.1	P
2	Field Strength of Spurious Radiation	2.1053/27.53(m)	A.2	P
3	Frequency Stability	2.1055/27.54	A.3	P
4	Occupied Bandwidth	2.1049/27.53(m)	A.4	P
5	Emission Bandwidth	2.1049/27.53(m)	A.5	P
6	Band Edge Compliance	2.1051/27.53(m)	A.6	P
7	Conducted Spurious Emission	2.1051/27.53(m)	A.7	P
8	Peak-to-Average Power Ratio	27.50(a)/ KDB971168 D01	A.8	P

LTE Band 12

Items	Test Name	Clause in FCC rules	Section in this report	Verdict
1	Output Power	2.1046/27.50(c)	A.1	P
2	Field Strength of Spurious Radiation	2.1053/27.53(g)	A.2	P
3	Frequency Stability	2.1055/27.54	A.3	P
4	Occupied Bandwidth	2.1049/27.53(g)	A.4	P
5	Emission Bandwidth	2.1049/27.53(g)	A.5	P
6	Band Edge Compliance	2.1051/27.53(g)	A.6	P
7	Conducted Spurious Emission	2.1051/27.53(g)	A.7	P
8	Peak-to-Average Power Ratio	27.50(a)/KDB971168 D01	A.8	P

LTE Band 17

Items	Test Name	Clause in FCC rules	Section in this report	Verdict
1	Output Power	2.1046/27.50(c)	A.1	P
2	Field Strength of Spurious Radiation	2.1053/27.53(g)	A.2	P
3	Frequency Stability	2.1055/27.54	A.3	P
4	Occupied Bandwidth	2.1049/27.53(g)	A.4	P
5	Emission Bandwidth	2.1049/27.53(g)	A.5	P
6	Band Edge Compliance	2.1051/27.53(g)	A.6	P
7	Conducted Spurious Emission	2.1051/27.53(g)	A.7	P
8	Peak-to-Average Power Ratio	27.50(a)/ KDB971168 D01	A.8	P

**LTE Band 25**

Items	Test Name	Clause in FCC rules	Section in this report	Verdict
1	Output Power	2.1046/24.232	A.1	P
2	Field Strength of Spurious Radiation	2.1053/24.238	A.2	P
3	Frequency Stability	2.1055/24.235	A.3	P
4	Occupied Bandwidth	2.1049/24.238	A.4	P
5	Emission Bandwidth	2.1049/24.238	A.5	P
6	Band Edge Compliance	2.1051/24.238	A.6	P
7	Conducted Spurious Emission	2.1051/24.238	A.7	P
8	Peak-to-Average Power Ratio	24.232/ KDB971168 D01	A.8	P

LTE Band 26(814MHz-824MHz)

Items	Test Name	Clause in FCC rules	Section in this report	Verdict
1	Output Power	2.1046/90.635	A.1	P
2	Field Strength of Spurious Radiation	2.1053/90.691	A.2	P
3	Frequency Stability	2.1055/90.213	A.3	P
4	Occupied Bandwidth	2.1049/90.1215	A.4	P
5	Emission Bandwidth	2.1049/90.1215	A.5	P
6	Band Edge Compliance	2.1051/90.691	A.6	P
7	Conducted Spurious Emission	2.1051/90.691	A.7	P
8	Peak-to-Average Power Ratio	KDB971168 D01	A.8	P

LTE band 26(824MHz-849MHz)

Items	Test Name	Clause in FCC rules	Section in this report	Verdict
1	Output Power	2.1046/22.913	A.1	P
2	Field Strength of Spurious Radiation	2.1053/22.917	A.2	P
3	Frequency Stability	2.1055/22.355	A.3	P
4	Occupied Bandwidth	2.1049/22.917	A.4	P
5	Emission Bandwidth	2.1049/22.917	A.5	P
6	Band Edge Compliance	2.1051/22.917	A.6	P
7	Conducted Spurious Emission	2.1051/22.917	A.7	P
8	Peak-to-Average Power Ratio	KDB971168 D01	A.8	P

**LTE Band 38(CA_38C)**

Items	Test Name	Clause in FCC rules	Section in this report	Verdict
1	Output Power	2.1046/27.50(h)	A.1	P
2	Field Strength of Spurious Radiation	2.1053/27.53(m)	A.2	P
3	Frequency Stability	2.1055/27.54	A.3	P
4	Occupied Bandwidth	2.1049/27.53(m)	A.4	P
5	Emission Bandwidth	2.1049/27.53(m)	A.5	P
6	Band Edge Compliance	2.1051/27.53(m)	A.6	P
7	Conducted Spurious Emission	2.1051/27.53(m)	A.7	P
8	Peak-to-Average Power Ratio	27.50(a)/ KDB971168 D01	A.8	P

LTE Band 41(CA_41C)

Items	Test Name	Clause in FCC rules	Section in this report	Verdict
1	Output Power	2.1046/27.50(h)	A.1	P
2	Field Strength of Spurious Radiation	2.1053/27.53(m)	A.2	P
3	Frequency Stability	2.1055/27.54	A.3	P
4	Occupied Bandwidth	2.1049/27.53(m)	A.4	P
5	Emission Bandwidth	2.1049/27.53(m)	A.5	P
6	Band Edge Compliance	2.1051/27.53(m)	A.6	P
7	Conducted Spurious Emission	2.1051/27.53(m)	A.7	P
8	Peak-to-Average Power Ratio	27.50(a)/ KDB971168 D01	A.8	P

LTE Band 66

Items	Test Name	Clause in FCC rules	Section in this report	Verdict
1	Output Power	2.1046/27.50(d)	A.1	P
2	Field Strength of Spurious Radiation	2.1053/27.53(h)	A.2	P
3	Frequency Stability	2.1055/27.54	A.3	P
4	Occupied Bandwidth	2.1049/27.53(h)	A.4	P
5	Emission Bandwidth	2.1049/27.53(h)	A.5	P
6	Band Edge Compliance	2.1051/27.53(h)	A.6	P
7	Conducted Spurious Emission	2.1051/27.53(h)	A.7	P
8	Peak-to-Average Power Ratio	27.50(a)/ KDB971168 D01	A.8	P



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7. STATEMENT

Since the information of samples in this report is provided by the client, the laboratory is not responsible for the authenticity of sample information.

This report takes measured values as criterion of test conclusion. The test conclusion meets the limit requirements.

8. TEST EQUIPMENTS UTILIZED

NO.	Description	TYPE	Manufacture	series number	Cal Due Date
1	Test Receiver	ESR7	R&S	101676	2023-11-23
2	BiLog Antenna	3142E	ETS-Lindgren	0224831	2024-05-27
3	Horn Antenna	3117	ETS-Lindgren	00066577	2025-04-17
4	Horn Antenna	QSH-SL-18-26-S-20	Q-par	17013	2023-01-06
5	Antenna	BBHA 9120D	Schwarzbeck	1593	2022-12-05
6	Antenna	VUBA 9117	Schwarzbeck	207	2023-07-15
7	Antenna	QWH-SL-18-40-K-SG	Q-par	15979	2023-01-06
8	preamplifier	83017A	Agilent	MY39501110	/
9	Signal Generator	SMB100A	R&S	179725	2023-11-24
10	Fully Anechoic Chamber	FACT3-2.0	ETS-Lindgren	1285	2023-05-29
11	Spectrum Analyzer	FSV40	R&S	101192	2023-01-12
12	Universal Radio Communication Tester	CMU200	R&S	114545	2023-01-12
13	Universal Radio Communication Tester	CMW500	R&S	152499	2023-07-14
14	Universal Radio Communication Tester	E7515B	Keysight	MY59322022	2023-04-14
15	Universal Radio Communication Tester	MT8821C	Anritsu	6262025268	2023-03-29
16	Universal Radio Communication Tester	MT8000A	Anritsu	6261987936	2023-03-29
17	Universal Radio Communication Tester	CMW500	R&S	129146	2023-04-24
18	Spectrum Analyzer	FSU	R&S	101506	2022-12-13
19	Temperature Chamber	SH-241	ESPEC	92007516	2023-10-15
20	DC Power Supply	U3606A	Agilent Technologies	MY50450012	2023-11-13
21	Spectrum Analyzer	FSW26	R&S	102197	2023-11-24

Test software

Item	Name	Vesion
Radiated	EMC32	V10.50.40

ANNEX A: MEASUREMENT RESULTS

A.1 OUTPUT POWER

Reference

FCC: CFR Part 2.1046, 22.913, 24.232, 27.50,90.635.

A.1.1 Summary

During the process of testing, the EUT was controlled via Rhode & Schwarz Digital Radio Communication tester (CMW500) to ensure max power transmission and proper modulation.

This result contains peak output power and ERP/EIRP measurements for the EUT.

In all cases, output power is within the specified limits.

A.1.2 Conducted

A.1.2.1 Method of Measurements

The EUT was set up for the max output power with pseudo random data modulation.

These measurements were done at 3 frequencies (bottom, middle and top of operational frequency range) for each bandwidth.

A.1.2.2 Measurement result

LTE band 2

Bandwidth	RB size/offset	Frequency (MHz)	Power(dBm)			
			QPSK	16QAM	64QAM	256QAM
1.4MHz	1 RB high	1909.3	21.51	21.73	21.13	18.03
		1880.0	21.61	21.84	21.27	18.10
		1850.7	21.52	21.82	21.24	18.07
	1 RB low	1909.3	21.50	21.64	21.18	17.99
		1880.0	21.61	21.86	21.26	18.12
		1850.7	21.53	21.83	21.25	18.05
	50% RB mid	1909.3	21.54	21.55	21.11	18.09
		1880.0	21.58	21.63	21.18	18.13
		1850.7	21.56	21.56	21.20	18.11
	100% RB	1909.3	21.54	21.12	20.01	18.07
		1880.0	21.58	21.23	20.13	18.06
		1850.7	21.57	21.18	20.09	18.10
3MHz	1 RB high	1908.5	21.53	21.73	21.11	18.06
		1880.0	21.58	21.91	21.24	18.09
		1851.5	21.54	21.77	21.21	18.05
	1 RB low	1908.5	21.45	21.68	21.07	18.01
		1880.0	21.58	21.85	21.23	18.09
		1851.5	21.56	21.83	21.26	18.07
	50% RB mid	1908.5	21.49	21.11	20.10	18.04
		1880.0	21.57	21.15	20.17	18.10
		1851.5	21.54	21.11	20.08	18.09
	100% RB	1908.5	21.50	21.07	20.08	18.05
		1880.0	21.58	21.21	20.11	18.11



Bandwidth	RB size/offset	Frequency (MHz)	Power(dBm)			
			QPSK	16QAM	64QAM	256QAM
5MHz	1 RB high	1851.5	21.56	21.09	20.07	18.09
		1907.5	21.60	21.77	21.13	18.10
		1880.0	21.62	21.98	21.31	18.13
		1852.5	21.57	21.84	21.20	18.12
	1 RB low	1907.5	21.62	21.79	21.11	18.18
		1880.0	21.65	22.01	21.33	18.21
		1852.5	21.63	21.89	21.31	18.17
	50% RB mid	1907.5	21.64	21.05	20.05	18.19
		1880.0	21.63	21.13	20.21	18.18
		1852.5	21.54	21.06	20.08	18.08
	100% RB	1907.5	21.64	21.07	20.06	18.16
		1880.0	21.64	21.18	20.15	18.18
		1852.5	21.57	21.11	20.08	18.07
10MHz	1 RB high	1905.0	21.53	21.75	21.11	18.01
		1880.0	21.67	21.89	21.25	18.20
		1855.0	21.65	21.83	21.32	18.16
	1 RB low	1905.0	21.60	21.87	21.17	18.15
		1880.0	21.70	21.98	21.37	18.23
		1855.0	21.71	21.87	21.35	18.23
	50% RB mid	1905.0	21.52	21.09	20.06	18.05
		1880.0	21.61	21.08	20.16	18.12
		1855.0	21.58	21.13	20.10	18.11
	100% RB	1905.0	21.56	21.11	20.06	18.06
		1880.0	21.66	21.15	20.15	18.14
		1855.0	21.59	21.13	20.14	18.13
15MHz	1 RB high	1902.5	21.60	21.71	21.13	18.15
		1880.0	21.56	21.77	21.21	18.10
		1857.5	21.59	21.95	21.28	18.11
	1 RB low	1902.5	21.59	21.77	21.16	18.10
		1880.0	21.67	22.04	21.33	18.15
		1857.5	21.61	22.00	21.32	18.10
	50% RB mid	1902.5	21.53	21.06	20.12	18.01
		1880.0	21.61	21.18	20.21	18.13
		1857.5	21.58	21.14	20.14	18.11
	100% RB	1902.5	21.56	21.01	20.07	18.12
		1880.0	21.62	21.17	20.11	18.11
		1857.5	21.61	21.13	20.12	18.11
20MHz	1 RB high	1900.0	21.64	21.85	21.34	18.16
		1880.0	21.56	21.81	21.28	18.10
		1860.0	21.59	21.75	21.31	18.12



Bandwidth	RB size/offset	Frequency (MHz)	Power(dBm)			
			QPSK	16QAM	64QAM	256QAM
	1 RB low	1900.0	21.69	21.98	21.37	18.19
		1880.0	21.68	21.93	21.41	18.22
		1860.0	21.62	21.89	21.25	18.15
	50% RB mid	1900.0	21.59	21.13	20.13	18.08
		1880.0	21.65	21.17	20.13	18.19
		1860.0	21.62	21.16	20.18	18.11
	100% RB	1900.0	21.56	21.11	20.14	18.06
		1880.0	21.62	21.17	20.16	18.16
		1860.0	21.55	21.12	20.12	18.06

Note: Expanded measurement uncertainty is U = 0.49dB, k = 1.96



LTE band 4

Bandwidth	RB size/offset	Frequency (MHz)	Power(dBm)			
			QPSK	16QAM	64QAM	256QAM
1.4MHz	1 RB high	1754.3	20.67	20.89	20.88	18.01
		1732.5	20.73	20.92	20.92	18.10
		1710.7	20.67	20.94	20.79	17.99
	1 RB low	1754.3	20.68	20.92	20.90	18.06
		1732.5	20.80	20.92	20.89	18.09
		1710.7	20.68	20.95	20.80	17.98
	50% RB mid	1754.3	20.75	20.77	20.86	18.03
		1732.5	20.74	20.75	20.88	18.04
		1710.7	20.81	20.75	20.88	18.03
	100% RB	1754.3	20.76	20.84	19.69	18.13
		1732.5	20.76	20.87	19.74	18.14
		1710.7	20.76	20.84	19.74	18.14
3MHz	1 RB high	1753.5	20.69	20.99	20.77	17.94
		1732.5	20.81	20.96	20.91	18.09
		1711.5	20.72	21.01	20.84	18.11
	1 RB low	1753.5	20.74	21.07	20.85	17.90
		1732.5	20.82	21.00	20.93	18.02
		1711.5	20.76	21.07	20.90	18.04
	50% RB mid	1753.5	20.79	20.86	19.85	18.13
		1732.5	20.76	20.84	19.81	18.13
		1711.5	20.72	20.83	19.82	18.11
	100% RB	1753.5	20.80	20.82	19.76	18.16
		1732.5	20.80	20.82	19.78	18.19
		1711.5	20.74	20.80	19.80	18.11
5MHz	1 RB high	1752.5	20.73	20.93	20.95	18.01
		1732.5	20.80	20.97	20.92	18.12
		1712.5	20.75	20.88	20.77	18.15
	1 RB low	1752.5	20.81	21.07	21.04	17.99
		1732.5	20.81	20.99	20.92	18.04
		1712.5	20.86	20.96	20.85	18.04
	50% RB mid	1752.5	20.83	20.86	19.86	18.13
		1732.5	20.81	20.87	19.81	18.18
		1712.5	20.81	20.77	19.78	18.14
	100% RB	1752.5	20.85	20.85	19.83	18.20
		1732.5	20.79	20.87	19.85	18.18
		1712.5	20.77	20.79	19.78	18.16
10MHz	1 RB high	1750.0	20.73	21.06	20.86	18.07
		1732.5	20.80	21.08	20.97	18.13
		1715.0	20.77	21.07	20.89	18.09



Bandwidth	RB size/offset	Frequency (MHz)	Power(dBm)			
			QPSK	16QAM	64QAM	256QAM
	1 RB low	1750.0	20.87	21.18	21.01	18.06
		1732.5	20.81	21.13	21.03	17.99
		1715.0	20.86	21.04	20.97	17.99
	50% RB mid	1750.0	20.87	20.90	19.88	18.15
		1732.5	20.80	20.85	19.87	18.15
		1715.0	20.74	20.80	19.80	18.19
	100% RB	1750.0	20.87	20.87	19.86	18.14
		1732.5	20.87	20.88	19.85	18.23
		1715.0	20.79	20.81	19.77	18.16
15MHz	1 RB high	1747.5	20.76	20.88	20.89	18.05
		1732.5	20.86	20.94	20.89	18.09
		1717.5	20.82	21.04	20.98	18.17
	1 RB low	1747.5	20.88	20.99	21.03	18.06
		1732.5	20.89	21.12	20.95	18.04
		1717.5	20.86	21.06	21.00	18.03
	50% RB mid	1747.5	20.86	20.83	19.82	18.15
		1732.5	20.82	20.83	19.84	18.20
		1717.5	20.76	20.77	19.81	18.23
20MHz	1 RB high	1745.0	20.79	20.98	20.93	18.05
		1732.5	20.85	21.10	20.98	18.09
		1720.0	20.87	21.11	20.88	18.17
	1 RB low	1745.0	20.96	21.15	21.11	18.06
		1732.5	20.95	21.16	21.05	18.04
		1720.0	20.93	21.07	20.94	18.03
	50% RB mid	1745.0	20.88	20.89	19.89	18.15
		1732.5	20.88	20.90	19.87	18.20
		1720.0	20.82	20.81	19.83	18.23
	100% RB	1745.0	20.88	20.86	19.86	18.20
		1732.5	20.87	20.87	19.85	18.20
		1720.0	20.83	20.83	19.78	18.19

Note: Expanded measurement uncertainty is U = 0.49dB, k = 1.96



LTE band 5

Bandwidth	RB size/offset	Frequency (MHz)	Power(dBm)			
			QPSK	16QAM	64QAM	256QAM
1.4MHz	1 RB high	848.3	23.90	23.13	22.00	19.13
		836.5	23.92	23.06	21.99	19.18
		824.7	23.91	23.09	22.10	19.11
	1 RB low	848.3	23.88	23.06	21.99	19.08
		836.5	23.98	23.01	22.08	19.20
		824.7	23.97	23.17	22.15	19.22
	50% RB mid	848.3	24.00	23.02	22.06	19.23
		836.5	23.90	22.97	21.95	19.12
		824.7	23.98	23.00	22.01	19.21
	100% RB	848.3	22.97	22.03	20.91	19.34
		836.5	22.92	22.00	20.87	19.24
		824.7	22.99	21.97	20.94	19.34
3MHz	1 RB high	847.5	23.90	23.22	22.17	19.15
		836.5	23.90	23.23	22.07	19.11
		825.5	23.99	23.06	22.10	19.22
	1 RB low	847.5	23.85	23.13	22.10	19.03
		836.5	23.86	23.17	22.09	19.06
		825.5	24.01	23.12	22.10	19.25
	50% RB mid	847.5	22.95	22.01	21.01	19.30
		836.5	22.91	21.99	20.95	19.29
		825.5	22.91	22.01	20.92	19.28
	100% RB	847.5	22.97	21.99	21.01	19.33
		836.5	22.93	21.96	20.98	19.29
		825.5	22.94	21.96	20.93	19.32
5MHz	1 RB high	846.5	23.97	23.19	22.09	19.19
		836.5	23.98	23.23	22.10	19.21
		826.5	24.00	23.19	22.13	19.25
	1 RB low	846.5	23.90	23.22	21.96	19.12
		836.5	24.03	23.15	22.12	19.27
		826.5	23.95	23.21	22.13	19.16
	50% RB mid	846.5	22.94	21.92	20.97	19.30
		836.5	22.93	21.91	20.92	19.30
		826.5	22.99	21.96	20.97	19.37
	100% RB	846.5	22.95	21.99	20.94	19.31
		836.5	22.94	21.95	20.98	19.28
		826.5	22.96	21.99	20.95	19.32
10MHz	1 RB high	844.0	24.05	23.17	22.11	19.23
		836.5	24.03	23.05	22.11	19.25
		829.0	23.97	23.12	22.00	19.18



Bandwidth	RB size/offset	Frequency (MHz)	Power(dBm)			
			QPSK	16QAM	64QAM	256QAM
	1 RB low	844.0	23.97	23.15	22.08	19.22
		836.5	24.04	22.93	22.11	19.27
		829.0	23.90	23.14	22.01	19.14
	50% RB mid	844.0	22.97	21.99	20.94	19.30
		836.5	22.92	21.93	20.92	19.29
		829.0	22.98	22.02	20.97	19.33
	100% RB	844.0	22.93	21.98	20.95	19.27
		836.5	22.99	21.99	20.99	19.32
		829.0	23.00	21.96	21.00	19.35

Note: Expanded measurement uncertainty is U = 0.49dB, k = 1.96

LTE band 7

Bandwidth	RB size/offset	Frequency (MHz)	Power(dBm)			
			QPSK	16QAM	64QAM	256QAM
5MHz	1 RB high	2567.5	20.72	20.77	20.85	18.21
		2535.0	20.76	20.88	20.87	18.21
		2502.5	20.67	20.92	20.84	18.10
	1 RB low	2567.5	20.71	20.85	20.87	18.18
		2535.0	20.74	20.87	20.83	18.19
		2502.5	20.57	20.80	20.76	18.01
	50% RB mid	2567.5	20.77	20.76	20.26	18.23
		2535.0	20.70	20.72	20.23	18.18
		2502.5	20.71	20.70	20.23	18.16
	100% RB	2567.5	20.81	20.74	20.23	18.30
		2535.0	20.68	20.69	20.19	18.18
		2502.5	20.71	20.72	20.17	18.18
10MHz	1 RB high	2565.0	20.81	20.99	20.75	18.24
		2535.0	20.72	20.95	20.87	18.15
		2505.0	20.75	21.01	20.86	18.24
	1 RB low	2565.0	20.72	20.89	20.72	18.20
		2535.0	20.68	20.87	20.71	18.14
		2505.0	20.62	20.85	20.75	18.08
	50% RB mid	2565.0	20.74	20.79	20.25	18.17
		2535.0	20.68	20.72	20.21	18.15
		2505.0	20.68	20.67	20.18	18.12
	100% RB	2565.0	20.80	20.75	20.22	18.25
		2535.0	20.70	20.75	20.19	18.16
		2505.0	20.73	20.73	20.24	18.17
15MHz	1 RB high	2562.5	20.81	20.85	20.80	18.28
		2535.0	20.76	21.01	20.89	18.21
		2507.5	20.82	21.00	20.97	18.27
	1 RB low	2562.5	20.63	20.76	20.72	18.12
		2535.0	20.68	20.87	20.79	18.16
		2507.5	20.69	20.82	20.83	18.11
	50% RB mid	2562.5	20.72	20.73	20.26	18.15
		2535.0	20.70	20.67	20.18	18.20
		2507.5	20.67	20.73	20.26	18.12
	100% RB	2562.5	20.76	20.75	20.21	18.25
		2535.0	20.74	20.67	20.19	18.22
		2507.5	20.72	20.70	20.20	18.14



Bandwidth	RB size/offset	Frequency (MHz)	Power(dBm)			
			QPSK	16QAM	64QAM	256QAM
20MHz	1 RB high	2560.0	20.82	20.99	20.82	18.30
		2535.0	20.86	21.07	20.98	18.31
		2510.0	20.88	21.04	21.02	18.33
	1 RB low	2560.0	20.62	20.87	20.64	18.11
		2535.0	20.69	20.84	20.76	18.15
		2510.0	20.64	20.87	20.80	18.13
	50% RB mid	2560.0	20.73	20.77	20.26	18.21
		2535.0	20.74	20.75	20.24	18.23
		2510.0	20.69	20.72	20.20	18.12
	100% RB	2560.0	20.76	20.71	20.20	18.22
		2535.0	20.76	20.73	20.22	18.25
		2510.0	20.76	20.75	20.21	18.24

Note: Expanded measurement uncertainty is U = 0.49 dB, k = 1.96

LTE band 12

Bandwidth	RB size/offset	Frequency (MHz)	Power(dBm)			
			QPSK	16QAM	64QAM	256QAM
1.4MHz	1 RB high	715.3	23.66	22.81	21.72	18.94
		707.5	23.64	22.90	21.69	18.94
		699.7	23.63	22.89	21.79	18.93
	1 RB low	715.3	23.59	22.79	21.69	18.95
		707.5	23.62	22.90	21.72	18.97
		699.7	23.62	22.90	21.86	18.92
	50% RB mid	715.3	23.69	22.75	21.79	18.98
		707.5	23.73	22.77	21.73	19.06
		699.7	23.69	22.71	21.73	18.99
	100% RB	715.3	22.69	21.75	20.66	19.04
		707.5	22.72	21.75	20.68	19.07
		699.7	22.70	21.78	20.64	19.07
3MHz	1 RB high	714.5	23.71	22.91	21.74	19.02
		707.5	23.72	22.88	21.82	19.04
		700.5	23.60	22.80	21.82	18.88
	1 RB low	714.5	23.67	22.94	21.80	19.02
		707.5	23.71	22.84	21.81	19.01
		700.5	23.62	22.82	21.77	18.93
	50% RB mid	714.5	22.63	21.71	20.60	18.94
		707.5	22.67	21.81	20.73	19.03
		700.5	22.58	21.72	20.70	18.92
	100% RB	714.5	22.67	21.69	20.66	19.01
		707.5	22.66	21.67	20.67	19.01
		700.5	22.65	21.65	20.62	19.01
5MHz	1 RB high	713.5	23.73	22.94	21.82	19.08
		707.5	23.72	22.91	21.90	19.03
		701.5	23.77	23.05	21.90	19.11
	1 RB low	713.5	23.67	22.89	21.72	18.96
		707.5	23.76	22.94	21.93	19.05
		701.5	23.74	22.92	21.85	19.09
	50% RB mid	713.5	22.71	21.64	20.71	19.03
		707.5	22.71	21.67	20.75	19.10
		701.5	22.63	21.59	20.61	19.00
	100% RB	713.5	22.65	21.71	20.66	19.03
		707.5	22.67	21.68	20.71	19.06
		701.5	22.64	21.67	20.65	18.97



Bandwidth	RB size/offset	Frequency (MHz)	Power(dBm)			
			QPSK	16QAM	64QAM	256QAM
10MHz	1 RB high	711.0	23.82	23.00	21.93	19.14
		707.5	23.73	22.98	21.92	19.06
		704.0	23.75	22.93	21.93	19.03
	1 RB low	711.0	23.71	22.99	21.86	19.01
		707.5	23.63	22.92	21.83	18.94
		704.0	23.68	22.82	21.85	19.00
	50% RB mid	711.0	22.73	21.73	20.72	19.08
		707.5	22.66	21.70	20.67	19.01
		704.0	22.66	21.63	20.70	19.03
	100% RB	711.0	22.72	21.72	20.72	19.10
		707.5	22.71	21.66	20.68	19.08
		704.0	22.70	21.69	20.68	19.07

Note: Expanded measurement uncertainty is U = 0.49dB, k = 1.96

LTE band 17

Bandwidth	RB size/offset	Frequency (MHz)	Power(dBm)			
			QPSK	16QAM	64QAM	256QAM
5MHz	1RB-High (24)	713.5	23.78	22.98	21.94	19.17
		710.0	23.89	23.00	21.94	19.25
		706.5	23.89	23.01	21.92	19.28
	1RB-Low (0)	713.5	23.77	23.04	21.92	19.15
		710.0	23.75	22.85	21.81	19.12
		706.5	23.76	23.00	21.83	19.10
	12RB-Middle (6)	713.5	22.78	21.78	20.80	19.16
		710.0	22.81	21.81	20.82	19.20
		706.5	22.76	21.79	20.83	19.19
	25RB (0)	713.5	22.75	21.79	20.81	19.19
		710.0	22.80	21.83	20.82	19.20
		706.5	22.80	21.87	20.83	19.22
10MHz	1RB-High (49)	711.0	23.87	23.07	21.99	19.26
		710.0	23.89	23.01	22.02	19.29
		709.0	23.90	23.01	21.93	19.25
	1RB-Low (0)	711.0	23.73	22.99	21.95	19.11
		710.0	23.73	22.86	21.85	19.13
		709.0	23.74	22.89	21.84	19.12
	25RB-Middle (12)	711.0	22.80	21.84	20.77	19.21
		710.0	22.79	21.86	20.76	19.16
		709.0	22.81	21.79	20.80	19.23
	50RB (0)	711.0	22.78	21.80	20.76	19.22
		710.0	22.79	21.79	20.78	19.22
		709.0	22.76	21.74	20.82	19.17

Note: Expanded measurement uncertainty is U = 0.49dB, k = 1.96

LTE band 25

Bandwidth	RB size/offset	Frequency (MHz)	Power(dBm)			
			QPSK	16QAM	64QAM	256QAM
1.4MHz	1RB-High (5)	1914.3	21.36	21.58	21.02	18.01
		1882.5	21.47	21.75	21.05	18.04
		1850.7	21.45	21.80	21.07	18.06
	1RB-Low (0)	1914.3	21.37	21.63	21.00	18.05
		1882.5	21.45	21.71	21.09	18.03
		1850.7	21.52	21.85	21.13	18.01
	3RB-Middle (1)	1914.3	21.41	21.46	21.04	18.04
		1882.5	21.45	21.47	21.04	18.04
		1850.7	21.50	21.50	21.07	18.05
	6RB (0)	1914.3	21.44	21.05	19.92	18.04
		1882.5	21.46	21.03	19.95	18.03
		1850.7	21.52	21.12	20.00	18.03
3MHz	1RB-High (14)	1913.5	21.38	21.65	21.05	18.04
		1882.5	21.47	21.74	21.20	18.04
		1851.5	21.43	21.79	21.07	18.01
	1RB-Low (0)	1913.5	21.38	21.65	21.05	18.04
		1882.5	21.44	21.76	21.17	18.00
		1851.5	21.52	21.84	21.12	18.00
	8RB-Middle (4)	1913.5	21.44	21.05	20.03	18.01
		1882.5	21.46	21.00	20.00	18.04
		1851.5	21.48	21.03	19.99	18.01
	15RB (0)	1913.5	21.46	21.03	19.99	18.00
		1882.5	21.46	20.97	20.00	18.06
		1851.5	21.49	21.03	20.06	18.05
5MHz	1RB-High (24)	1912.5	21.47	21.73	21.09	18.08
		1882.5	21.48	21.71	21.18	18.09
		1852.5	21.50	21.73	21.12	18.04
	1RB-Low (0)	1912.5	21.48	21.74	21.11	18.10
		1882.5	21.50	21.79	21.25	18.19
		1852.5	21.57	21.76	21.27	18.16
	12RB-Middle (6)	1912.5	21.45	20.99	20.08	18.13
		1882.5	21.46	20.99	20.06	18.14
		1852.5	21.48	20.97	19.97	18.02
	25RB (0)	1912.5	21.49	20.98	20.01	18.10
		1882.5	21.49	21.04	20.03	18.13
		1852.5	21.52	21.07	20.01	18.09
10MHz	1RB-High (49)	1910.0	21.44	21.69	21.12	18.04
		1882.5	21.49	21.78	21.17	18.16
		1855.0	21.56	21.81	21.21	18.12

Bandwidth	RB size/offset	Frequency (MHz)	Power(dBm)			
			QPSK	16QAM	64QAM	256QAM
	1RB-Low (0)	1910.0	21.49	21.72	21.09	18.10
		1882.5	21.53	21.84	21.20	18.15
		1855.0	21.63	21.88	21.33	18.18
	25RB-Middle (12)	1910.0	21.45	21.02	20.00	18.02
		1882.5	21.51	21.05	20.04	18.05
		1855.0	21.48	21.04	20.01	18.09
	50RB (0)	1910.0	21.51	21.02	19.99	18.00
		1882.5	21.55	21.03	20.03	18.07
		1855.0	21.55	21.03	19.99	18.06
15MHz	1RB-High (74)	1907.5	21.43	21.59	21.23	18.13
		1882.5	21.42	21.67	21.17	18.01
		1857.5	21.46	21.77	21.15	18.08
	1RB-Low (0)	1907.5	21.52	21.72	21.27	18.01
		1882.5	21.53	21.85	21.29	18.10
		1857.5	21.60	21.84	21.30	18.07
	36RB-Middle (19)	1907.5	21.42	20.98	19.95	18.05
		1882.5	21.49	21.07	20.08	18.04
		1857.5	21.45	21.02	20.10	18.06
	75RB (0)	1907.5	21.44	20.96	19.92	18.04
		1882.5	21.51	21.01	19.97	18.06
		1857.5	21.56	21.03	20.01	18.09
20MHz	1RB-High (99)	1905.0	21.51	21.73	21.07	18.11
		1882.5	21.50	21.75	21.13	18.08
		1860.0	21.57	21.89	21.28	18.09
	1RB-Low (0)	1905.0	21.61	21.88	21.12	18.11
		1882.5	21.61	21.89	21.22	18.14
		1860.0	21.61	21.85	21.32	18.10
	50RB-Middle (25)	1905.0	21.57	21.03	19.99	18.00
		1882.5	21.59	21.06	20.04	18.13
		1860.0	21.58	21.03	20.08	18.05
	100RB (0)	1905.0	21.50	21.03	19.98	18.00
		1882.5	21.55	21.01	19.98	18.13
		1860.0	21.54	21.03	20.07	18.05

Note: Expanded measurement uncertainty is U = 0.49dB, k = 1.96

LTE band 26(814MHz-824MHz)

Bandwidth	RB size/offset	Frequency (MHz)	Power(dBm)			
			QPSK	16QAM	64QAM	256QAM
1.4MHz	1 RB high	823.3	23.79	23.01	21.86	17.37
		819.0	23.81	23.03	21.84	17.44
		814.7	23.82	23.01	21.9	17.38
	1 RB low	823.3	23.77	22.97	21.83	17.46
		819.0	23.8	22.99	21.86	17.38
		814.7	23.84	23.09	21.94	17.29
	50% RB mid	823.3	23.88	22.91	21.9	17.37
		819.0	23.84	22.82	21.83	17.43
		814.7	23.88	22.94	21.91	17.36
	100% RB	823.3	22.86	21.92	20.81	17.48
		819.0	22.79	21.92	20.77	17.51
		814.7	22.86	21.88	20.82	17.42
3MHz	1 RB high	822.5	23.84	23.02	21.97	17.27
		819.0	23.85	22.92	21.96	17.44
		815.5	23.83	23	22.09	17.43
	1 RB low	822.5	23.78	22.99	21.91	17.28
		819.0	23.81	22.82	21.94	17.33
		815.5	23.84	23.01	22.04	17.38
	50% RB mid	822.5	22.85	21.91	20.89	17.45
		819.0	22.78	21.89	20.83	17.45
		815.5	22.81	21.86	20.82	17.48
	100% RB	822.5	22.86	21.85	20.87	17.51
		819.0	22.8	21.85	20.83	17.49
		815.5	22.82	21.84	20.85	17.47
5MHz	1 RB high	821.5	23.95	23.03	22.06	17.37
		819.0	23.86	23.01	21.97	17.50
		816.5	23.97	23.13	22.01	17.48
	1 RB low	821.5	23.91	23.01	22.01	17.31
		819.0	23.88	22.94	21.89	17.44
		816.5	23.92	23.09	21.89	17.41
	50% RB mid	821.5	22.83	21.81	20.82	17.45
		819.0	22.82	21.84	20.86	17.51
		816.5	22.89	21.87	20.88	17.48
	100% RB	821.5	22.84	21.88	20.87	17.50
		819.0	22.84	21.83	20.84	17.50

Bandwidth	RB size/offset	Frequency (MHz)	Power(dBm)			
			QPSK	16QAM	64QAM	256QAM
10MHz	1 RB high	816.5	22.88	21.9	20.89	17.55
		819.0	23.87	23.1	21.99	17.46
		819.0	23.85	23.12	22.02	17.42
	1 RB low	819.0	23.92	23.12	21.95	17.51
		819.0	23.86	23.15	21.9	17.44
		821.5	23.83	23.01	21.99	17.29
	50% RB mid	819.0	23.91	23.09	21.95	17.30
		816.5	22.87	21.87	20.83	17.50
		821.5	22.9	21.88	20.84	17.54
	100% RB	819.0	22.93	21.91	20.87	17.49
		816.5	22.84	21.88	20.84	17.49
		821.5	22.92	21.88	20.86	17.47
		819.0	22.88	21.9	20.87	17.38

Note: Expanded measurement uncertainty is U = 0.49dB, k = 1.96

LTE band 26(824MHz-849MHz)

Bandwidth	RB size/offset	Frequency (MHz)	Power(dBm)			
			QPSK	16QAM	64QAM	256QAM
1.4MHz	1 RB high	848.3	24.00	23.28	22.25	19.14
		836.5	24.07	23.28	22.24	19.23
		824.7	24.16	23.26	22.16	19.32
	1 RB low	848.3	24.02	23.30	22.20	19.16
		836.5	24.07	23.21	22.19	19.19
		824.7	24.10	23.25	22.12	19.22
	50% RB mid	848.3	24.12	23.13	22.21	19.27
		836.5	24.17	23.20	22.21	19.35
		824.7	24.12	23.15	22.22	19.23
	100% RB	848.3	23.10	22.17	21.01	19.31
		836.5	23.14	22.17	21.06	19.32
		824.7	23.09	22.16	21.02	19.24
3MHz	1 RB high	847.5	24.03	23.34	22.25	19.18
		836.5	24.03	23.36	22.24	19.17
		825.5	24.08	23.28	22.24	19.23
	1 RB low	847.5	24.05	23.27	22.23	19.17
		836.5	24.05	23.39	22.20	19.21
		825.5	24.02	23.23	22.16	19.18
	50% RB mid	847.5	23.07	22.11	21.10	19.25
		836.5	23.10	22.19	21.15	19.27
		825.5	23.09	22.17	21.06	19.26
	100% RB	847.5	23.09	22.12	21.15	19.30
		836.5	23.10	22.13	21.14	19.29
		825.5	23.12	22.12	21.12	19.28
5MHz	1 RB high	846.5	24.07	23.36	22.08	19.22
		836.5	24.15	23.36	22.25	19.33
		826.5	24.11	23.40	22.29	19.30
	1 RB low	846.5	24.02	23.31	22.09	19.20
		836.5	24.13	23.30	22.29	19.29
		826.5	24.04	23.32	22.20	19.22
	50% RB mid	846.5	23.04	22.02	21.08	19.22
		836.5	23.11	22.10	21.17	19.26
		826.5	23.06	22.07	21.12	19.27
	100% RB	846.5	23.07	22.09	21.06	19.21
		836.5	23.13	22.13	21.11	19.32
		826.5	23.09	22.13	21.10	19.29