

TEST REPORT

No. I16Z40291-EMC03

for

TCL Communication Ltd.

Go Flip

Model Name: 4043S

FCC ID: 2ACCJA007

with

Hardware Version: PIO1

Software Version: 4F25

Issued Date: 2016-02-19

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 CTTL.

Test Laboratory:

FCC 2.948 Listed: No.525429

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REPORT HISTORY

Report Number	Revision	Description	Issue Date
I16Z40291-EMC03	Rev.0	1st edition	2016-02-19



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1. Test Laboratory

1.1. Testing Location

Company Name: CTTL, Telecommunication Technology Labs, Academy of

Telecommunication Research, MIIT

Address: No. 52, Huayuan North Road, Haidian District, Beijing, P. R. China

100191

Postal Code: 100191

Telephone: 00861062304633 Fax: 00861062304793

1.2. Testing Environment

Normal Temperature: $15-35^{\circ}$ C Relative Humidity: 20-75%

Air pressure 980 - 1040 hPa

The climatic requirements above are general exclude the special requirements for dedicated test environments listed in section 5 and some specific test cases in other parts of this report.

1.3. Project data

Testing Start Date: 2016-02-17
Testing End Date: 2016-02-18

1.4. Signature

Zhang Hui

(Prepared this test report)

Qu Pengfei

(Reviewed this test report)

到泥块之

Liu Baodian

(Approved this test report)



2. Client Information

2.1. Applicant Information

Company Name: TCL Communication Ltd.

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2.2. Manufacturer Information

Company Name: TCL Communication Ltd.

Address /Post: 5F, C building, No. 232, Liang Jing Road ZhangJiang High-Tech Park,

Pudong Area Shanghai, P.R. China. 201203

Contact Person: Gong Zhizhou

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 Telephone:
 0086-21-51798260

 Fax:
 0086-21-61460602



3. Equipment Under Test (EUT) and Ancillary Equipment (AE)

3.1. About EUT

Description Go Flip
Model Name 4043S
FCC ID 2ACCJA007
Antenna Integrated

Output power 23.71dBm maximum EIRP measured for LTE Band 4

Extreme vol. Limits 3.45VDC to 4.2VDC (nominal: 3.7VDC)

Extreme temp. Tolerance -30°C to +50°C

Note: Components list, please refer to documents of the manufacturer; it is also included in the original test record of CTTL, Telecommunication Technology Labs, Academy of Telecommunication Research, MIIT

3.2. Internal Identification of EUT used during the test

EUT ID*	IMEI	HW Version	SW Version
EUT1	353462070026393	PIO1	4F25

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

3.3. Internal Identification of AE used during the test

AE ID*	Description	SN	Revision
AE1	Battery	/	15TCT-BA-0618
AE2	Battery	/	15TCT-BA-0622
AE3	Battery	/	15TCT-BA-0616
AE4	Battery	/	15TCT-BA-0626
AE5	Battery	/	15TCT-BA-0621

AE1,AE2,AE3,AE4,AE5

Model CAB1780000C2

Manufacturer SCUD
Capacitance 1780 mAh
Nominal voltage 3.8 V

3.4. General Description

The Equipment Under Test (EUT) is a model of Go Flip with integrated antenna and embedded battery.

The EUT supports LTE FDD bands 4/13 and CDMA Band class 0/Band class 1, supports 1X RTT EV-DO rev0 rev.A. It has MP3, camera, USB memory functions.

Manual and specifications of the EUT were provided to fulfil the test.

Samples undergoing test were selected by the client.

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



4. Reference Documents

4.1. Reference Documents for testing

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

	g.	
Reference	Title	Version
FCC Part 27	MISCELLANEOUS WIRELESS COMMUNICATIONS	10-1-14
	SERVICES	Edition
ANSI/TIA-603-D	Land Mobile FM or PM Communications Equipment	2015
	Measurement and Performance Standards	
ANSI C63.4	Methods of Measurement of Radio-Noise Emissions from	2014
	Low-Voltage Electrical and Electronic Equipment in the	
	Range of 9 kHz to 40 GHz	
KDB 971168 D01	Measurement Guidance for Certification of Licensed Digital	v02r02
	Transmitters	



5. LABORATORY ENVIRONMENT

Fully-anechoic chamber FAC-3 (9 meters × 6.5 meters × 4 meters) did not exceed following limits along the EMC testing:

3	
Temperature	Min. = 15 °C, Max. = 35 °C
Relative humidity	Min. = 15 %, Max. = 75 %
Shielding effectiveness	0.014MHz - 1MHz, >60dB;
	1MHz - 1000MHz, >90dB.
Electrical insulation	> 2 MΩ
Ground system resistance	< 4 Ω
Site voltage standing-wave ratio (S _{VSWR})	Between 0 and 6 dB, from 1GHz to 18GHz
Uniformity of field strength	Between 0 and 6 dB, from 80 to 4000 MHz



6. SUMMARY OF TEST RESULTS

6.1. Summary of test results

Abbreviations used in this clause:		
Р		Pass
Verdict Column	F	Fail
	NA	Not applicable
NM		Not measured
Location Column		The test is performed in test location A, B, C or D
Location Column A/B/C/D		which are described in section 1.1 of this report

LTE Band 4

Items	Test Name	Clause in FCC rules	Section in this report	Verdict
1	Output Power	27.50(d)(4)	A.1	Р
2	Emission Limit	27.53(h), 2.1051	A.2	Р

LTE Band 13

Items	Test Name	Clause in FCC rules	Section in this report	Verdict
1	Output Power	27.50(b)(10)	A.1	Р
2	Emission Limit	27.53(c), 2.1051	A.2	Р

6.2. Statements

The test cases listed in section 6.1 of this report for the EUT specified in section 3 were performed by CTTL according to the standards or reference documents in section 4.1

The EUT met all applicable requirements of the standards or reference documents in section 4.1.

This report only deals with the LTE functions among the features described in section 3.



7. Test Equipments Utilized

NO.	NAME	TYPE	PRODUCER	SERIES NUMBER	CAL. DUE DATE	CAL. INTERVAL
1.	EMI Antenna	VULB 9163	Schwarzbeck	9163-235	2017-10-29	3 Years
2.	EMI Antenna	3117	ETS-Lindgren	00119024	2017-01-20	3 Years
3.	EMI Antenna	3117	ETS-Lindgren	00058889	2017-12-15	3 Years
4.	Signal Generator	N5183A	Agilent	MY49060052	2016-03-02	1 Year
5.	Power Amplifier	5S1G4	AR	0341863	/	1 Year
6.	Spectrum Analyzer	E4440A	Agilent	MY48250642	2016-03-02	1 Year
7.	Universal Radio Communication Tester	E5515C	Agilent	MY48363198	2016-07-06	1 Year



ANNEX A: MEASUREMENT RESULTS

A.1 OUTPUT POWER

Reference

FCC: 27.50(d)(4), 27.50(b)(10).

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

A.1.2 Radiated

A.1.2.1 Description

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

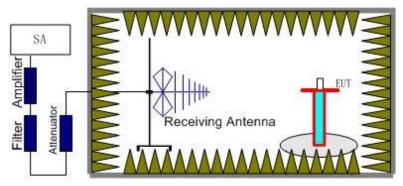
Rule Part 27.50(d) specifies "Fixed, mobile, and portable (handheld) stations operating in the 1710–1755 MHz band are limited to 1 watt EIRP".

Rule Part 27.50(b)(10) specifies "Portable stations (hand-held devices)transmitting in the 746–757 MHz,758–763 MHz, 776–793 MHz, and 805–806 MHz bands are limited to 3 watts ERP.".

A.1.2.2 Method of Measurement

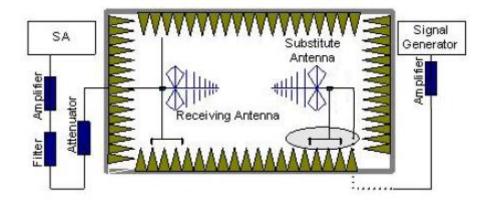
The measurements procedures in TIA-603D-2015 are used.

1. EUT was placed on a 1.5 meter high non-conductive stand at a 3 meter test distance from the receive antenna. A receiving antenna was placed on the antenna mast 3 meters from the EUT for emission measurements. The height of receiving antenna is 1.5m. The test setup refers to figure below. Detected emissions were maximized at each frequency by rotating the EUT through 360° and adjusting the receiving antenna polarization. The radiated emission measurements of all transmit frequencies in three channels (High, Middle, Low) were measured with peak detector.



- 2. The EUT is then put into continuously transmitting mode at its maximum power level during the test. And the maximum value of the receiver should be recorded as (Pr).
- 3. The EUT shall be replaced by a substitution antenna. The test setup refers to figure below.





In the chamber, a substitution antenna for the frequency band of interest is placed at the reference point of the chamber. An RF signal source for the frequency band of interest is connected to the substitution antenna with a cable that has been constructed to not interfere with the radiation pattern of the antenna. A power (P_{Mea}) is applied to the input of the substitution antenna. Adjust the level of the signal generator output until the value of the receiver reaches the previously recorded (P_r). The power of signal source (P_{Mea}) is recorded. The test should be performed by rotating the test item and adjusting the receiving antenna polarization.

4. An amplifier should be connected to the Signal Source output port. And the cable should be connected between the amplifier and the substitution antenna.

The cable loss (P_{cl}), the substitution antenna Gain (G_a) and the amplifier Gain (P_{Ag}) should be recorded after test.

The measurement results are obtained as described below:

Power (EIRP) =
$$P_{Mea} - P_{Aq} - P_{cl} - G_a$$

- 5. This value is EIRP since the measurement is calibrated using an antenna of known gain (unit dBi) and known input power.
- 6. ERP can be calculated from EIRP by subtracting the gain of the dipole, ERP = EIRP -2.15.



A.1.2.3 Measurement result

LTE Band 4- EIRP 27.50(d)

Limits: ≤30dBm (1W)

LTE Band 4_1.4MHz_QPSK

Frequency(MHz)	P _{Mea} (dBm)	P _{cl} (dB)	P _{Ag} (dB)	G _a Antenna Gain(dB)	EIRP(dBm)	Limit(dBm)	Margin(dB)	Polarization
1710.70	-22.47	3.17	-44.10	-5.12	23.58	30.00	6.42	Н
1732.50	-22.55	3.33	-44.14	-5.08	23.34	30.00	6.66	Н
1754.30	-22.53	3.76	-44.14	-5.04	22.89	30.00	7.11	V

LTE Band 4_3MHz_QPSK

Frequency(MHz)	P _{Mea} (dBm)	P _{cl} (dB)	P _{Ag} (dB)	G _a Antenna Gain(dB)	EIRP(dBm)	Limit(dBm)	Margin(dB)	Polarization
1711.50	-22.22	3.40	-44.10	-5.12	23.60	30.00	6.40	Н
1732.50	-22.78	3.33	-44.14	-5.08	23.11	30.00	6.89	Н
1753.50	-23.31	3.80	-44.13	-5.04	22.06	30.00	7.94	Н

LTE Band 4_5MHz_QPSK

Frequency(MHz)	P _{Mea} (dBm)	P _{cl} (dB)	P _{Ag} (dB)	G _a Antenna Gain(dB)	EIRP(dBm)	Limit(dBm)	Margin(dB)	Polarization
1712.50	-22.13	3.66	-44.10	-5.12	23.43	30.00	6.57	Н
1732.50	-22.82	3.33	-44.14	-5.08	23.07	30.00	6.93	Н
1752.50	-23.03	3.82	-44.14	-5.05	22.34	30.00	7.66	Н

LTE Band 4_10MHz_QPSK

Frequency(MHz)	P _{Mea} (dBm)	P _{cl} (dB)	P _{Ag} (dB)	G _a Antenna Gain(dB)	EIRP(dBm)	Limit(dBm)	Margin(dB)	Polarization
1715.00	-22.20	3.56	-44.10	-5.11	23.45	30.00	6.55	Н
1732.50	-22.90	3.33	-44.14	-5.08	22.99	30.00	7.01	Н
1750.00	-24.10	3.00	-44.15	-5.05	22.10	30.00	7.90	Н

LTE Band 4_15MHz_QPSK

Frequency(MHz)	P _{Mea} (dBm)	P _{cl} (dB)	P _{Ag} (dB)	G _a Antenna Gain(dB)	EIRP(dBm)	Limit(dBm)	Margin(dB)	Polarization
1717.50	-23.19	3.47	-44.11	-5.11	22.56	30.00	7.44	Н
1732.50	-22.94	3.33	-44.14	-5.08	22.95	30.00	7.05	Н
1747.50	-24.01	3.34	-44.15	-5.05	21.85	30.00	8.15	Н

LTE Band 4_20MHz_QPSK

Frequency(MHz)	P _{Mea} (dBm)	P _{cl} (dB)	P _{Ag} (dB)	G _a Antenna Gain(dB)	EIRP(dBm)	Limit(dBm)	Margin(dB)	Polarization
1720.00	-22.13	3.37	-44.11	-5.10	23.71	30.00	6.29	Н
1732.50	-22.84	3.33	-44.14	-5.08	23.05	30.00	6.95	Н
1745.00	-22.97	3.68	-44.16	-5.06	22.57	30.00	7.43	Н



LTE Band 4_1.4MHz_16QAM

Frequency(MHz)	P _{Mea} (dBm)	P _{cl} (dB)	P _{Ag} (dB)	G _a Antenna Gain(dB)	EIRP(dBm)	Limit(dBm)	Margin(dB)	Polarization
1710.70	-23.38	3.17	-44.10	-5.12	22.67	30.00	7.33	Н
1732.50	-23.62	3.33	-44.14	-5.08	22.27	30.00	7.73	Н
1754.30	-23.21	3.76	-44.14	-5.04	22.21	30.00	7.79	V

LTE Band 4_3MHz_16QAM

Frequency(MHz)	P _{Mea} (dBm)	P _{cl} (dB)	P _{Ag} (dB)	G _a Antenna Gain(dB)	EIRP(dBm)	Limit(dBm)	Margin(dB)	Polarization
1711.50	-23.32	3.40	-44.10	-5.12	22.50	30.00	7.50	Н
1732.50	-23.66	3.33	-44.14	-5.08	22.23	30.00	7.77	Н
1753.50	-24.57	3.80	-44.13	-5.04	20.80	30.00	9.20	Н

LTE Band 4_5MHz_16QAM

Frequency(MHz)	P _{Mea} (dBm)	P _{cl} (dB)	P _{Ag} (dB)	G _a Antenna Gain(dB)	EIRP(dBm)	Limit(dBm)	Margin(dB)	Polarization
1712.50	-22.98	3.66	-44.10	-5.12	22.58	30.00	7.42	Н
1732.50	-23.82	3.33	-44.14	-5.08	22.07	30.00	7.93	Н
1752.50	-24.16	3.82	-44.14	-5.05	21.21	30.00	8.79	Н

LTE Band 4_10MHz_16QAM

Frequency(MHz)	P _{Mea} (dBm)	P _{cl} (dB)	P _{Ag} (dB)	G _a Antenna Gain(dB)	EIRP(dBm)	Limit(dBm)	Margin(dB)	Polarization
1715.00	-23.17	3.56	-44.10	-5.11	22.48	30.00	7.52	Н
1732.50	-23.87	3.33	-44.14	-5.08	22.02	30.00	7.98	Н
1750.00	-25.05	3.00	-44.15	-5.05	21.15	30.00	8.85	Н

LTE Band 4_15MHz_16QAM

		- '						
Frequency(MHz)	P _{Mea} (dBm)	P _{cl} (dB)	P _{Ag} (dB)	G _a Antenna Gain(dB)	EIRP(dBm)	Limit(dBm)	Margin(dB)	Polarization
1717.50	-23.62	3.47	-44.11	-5.11	22.13	30.00	7.87	Н
1732.50	-23.61	3.33	-44.14	-5.08	22.28	30.00	7.72	Н
1747.50	-25.21	3.34	-44.15	-5.05	20.65	30.00	9.35	Н

LTE Band 4_20MHz_16QAM

Frequency(MHz)	P _{Mea} (dBm)	P _{cl} (dB)	P _{Ag} (dB)	G _a Antenna Gain(dB)	EIRP(dBm)	Limit(dBm)	Margin(dB)	Polarization
1720.00	-23.20	3.37	-44.11	-5.10	22.64	30.00	7.36	Н
1732.50	-23.60	3.33	-44.14	-5.08	22.29	30.00	7.71	Н
1745.00	-23.86	3.68	-44.16	-5.06	21.68	30.00	8.32	Н

 $Peak \; EIRP(dBm) = P_{Mea}(-22.13dBm) - G_a \; (-5.10dBi) - P_{Ag} \; (-44.11dB) - P_{cl} \; (3.37dB) = 23.71dBm$



LTE Band 13- ERP 27.50(b)(10)

Limits: ≤34.77 dBm (3W)

LTE Band 13_5MHz_QPSK

Frequency(MHz)	P _{Mea} (dBm)	P _{cl} (dB)	P _{Ag} (dB)	G _a Antenna Gain(dB)	Correction (dB)	ERP(dBm)	Limit(dBm)	Margin(dB)	Polarization
779.50	-23.18	2.01	-45.64	-0.04	2.15	18.34	34.77	16.43	V
782.00	-22.45	2.01	-45.65	-0.09	2.15	19.13	34.77	15.64	V
784.50	-20.92	2.01	-45.67	-0.16	2.15	20.75	34.77	14.02	V

LTE Band 13_10MHz_QPSK

Frequency(MHz)	P _{Mea} (dBm)	P _{cl} (dB)	P _{Ag} (dB)	G _a Antenna Gain(dB)	Correction (dB)	ERP(dBm)	Limit(dBm)	Margin(dB)	Polarization
782.00	-22.51	2.01	-45.65	-0.09	2.15	19.07	34.77	15.70	V

LTE Band 13_5MHz_16QAM

Frequency(MHz)	P _{Mea} (dBm)	P _{cl} (dB)	P _{Ag} (dB)	G _a Antenna Gain(dB)	Correction (dB)	ERP(dBm)	Limit(dBm)	Margin(dB)	Polarization
779.50	-23.97	2.01	-45.64	-0.04	2.15	17.55	34.77	17.22	V
782.00	-23.10	2.01	-45.65	-0.09	2.15	18.48	34.77	16.29	V
784.50	-21.71	2.01	-45.67	-0.16	2.15	19.96	34.77	14.81	V

LTE Band 13 10MHz 16QAM

	Frequency(MHz) P _{Mea}	D (dPm)	P _{cl} (dB)	D (dD)	G _a Antenna	Correction	ERP(dBm)	Limit(dBm)	Margin(dB)	Polarization
		P _{Mea} (dBm)		P _{Ag} (dB)	Gain(dB)	(dB)	ERP(UDIII)	Limit(apm)	Margin(db)	Folanzation
	782.00	-23.68	2.01	-45.65	-0.09	2.15	17.90	34.77	16.87	V

 $Peak \; ERP(dBm) = P_{Mea}(-20.92dBm) - G_a(-0.16dBi) - P_{Ag}(-45.67dB) - P_{cl} \; (2.01dB) - 2.15dB = 20.75dBm$

ANALYZER SETTINGS:

RBW = VBW = 8MHz for occupied bandwdiths equal to or less than 5MHz.

RBW = VBW = 20MHz for occupied bandwidths equal to or greater than 10MHz.

Note: Expanded measurement uncertainty is U = 0.96 dB, k = 2.



A.2 EMISSION LIMIT

Reference

FCC: CFR 2.1051, 27.53(h), 27.53(c).

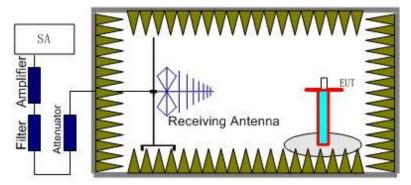
A.2.1 Measurement Method

The measurements procedures in TIA-603D-2015 are used. This measurement is carried out in fully-anechoic chamber FAC-3.

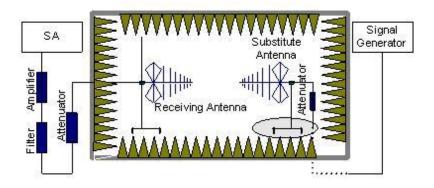
The spectrum was scanned from 30 MHz to the 10th harmonic of the highest frequency generated within the equipment, which is the transmitted carrier. The resolution bandwidth is set 1MHz as outlined in Part 27.53(h), Part 27.53(c). The spectrum was scanned with the mobile station transmitting at carrier frequencies that pertain to low, mid and high channels of the LTE Bands 4.13.

The procedure of radiated spurious emissions is as follows:

1. EUT was placed on a 1.5 meter high non-conductive stand at a 3 meter test distance from the receive antenna. A receiving antenna was placed on the antenna mast 3 meters from the EUT for emission measurements. The height of receiving antenna is 1.5m. The test setup refers to figure below. Detected emissions were maximized at each frequency by rotating the EUT through 360° and adjusting the receiving antenna polarization. The radiated emission measurements of all non-harmonic and harmonics of the transmit frequency through the 10th harmonic were measured with peak detector.



- 2. The EUT is then put into continuously transmitting mode at its maximum power level during the test. And the maximum value of the receiver should be recorded as (Pr).
- 3. The EUT shall be replaced by a substitution antenna. The test setup refers to figure below.





In the chamber, an substitution antenna for the frequency band of interest is placed at the reference point of the chamber. An RF Signal source for the frequency band of interest is connected to the substitution antenna with a cable that has been constructed to not interfere with the radiation pattern of the antenna. A power (P_{Mea}) is applied to the input of the substitution antenna. Adjust the level of the signal generator output until the value of the receiver reaches the previously recorded (P_r). The power of signal source (P_{Mea}) is recorded. The test should be performed by rotating the test item and adjusting the receiving antenna polarization.

- 4. The Path loss (P_{pl}) between the Signal Source with the Substitution Antenna and the Substitution Antenna Gain (G_a) should be recorded after test.
 - An amplifier should be connected in for the test.
 - The Path loss (P_p) is the summation of the cable loss and the gain of the amplifier.
 - The measurement results are obtained as described below:
 - Power (EIRP)= $P_{Mea} + P_{pl} + G_a$
- 5. This value is EIRP since the measurement is calibrated using an antenna of known gain (unit: dBi) and known input power.
- 6. ERP can be calculated from EIRP by subtracting the gain of the dipole, ERP = EIRP -2.15dB.

A.2.2 Measurement Limit

Part 27.53(h), Part 27.53(c) all specify that the power of any emission outside of the authorized operating frequency ranges must be attenuated below the transmitting power (P) by a factor of at least 43 + 10 log(P) dB. The specification that emissions shall be attenuated below the transmitter power (P) by at least 43 + 10 log (P) dB, translates in the relevant power range (1 to 0.001 W) to -13 dBm. At 1 W the specified minimum attenuation becomes 43 dB and relative to a 30 dBm (1 W) carrier becomes a limit of -13 dBm. At 0.001 W (0 dBm) the minimum attenuation is 13 dB, which again yields a limit of -13 dBm. In this way a translation of the specification from relative to absolute terms is carried out.

A.2.3 Measurement Results

Radiated emissions measurements were made only at the upper, middle, and lower carrier frequencies of the LTE Bands 4,13. It was decided that measurements at these three carrier frequencies would be sufficient to demonstrate compliance with emissions limits because it was seen that all the significant spurs occur well outside the band and no radiation was seen from a carrier in one block of the LTE Bands 4,13 into any of the other blocks. The equipment must still, however, meet emissions requirements with the carrier at all frequencies over which it is capable of operating and it is the manufacturer's responsibility to verify this.



LTE Band 4, 1.4MHz QPSK, Channel 19957

Fraguesov/MHz)	D (dDm)	Path	Antenna	Peak	Limit	Margin(dD)	Polarization	
Frequency(MHz)	P _{Mea} (dBm)	Loss	Gain	EIRP(dBm)	(dBm)	Margin(dB)	Fulanzaliun	
3421.71	-56.43	5.47	-8.01	-53.89	-13.00	40.89	V	
5132.65	-40.33	6.42	-10.09	-36.66	-13.00	23.66	V	
6826.80	-56.11	7.10	-11.39	-51.82	-13.00	38.82	V	
8551.92	-57.59	7.60	-13.01	-52.18	-13.00	39.18	Н	
10257.91	-54.34	8.88	-13.00	-50.22	-13.00	37.22	V	
11960.14	-50.80	8.95	-13.01	-46.74	-13.00	33.74	V	

LTE Band 4, 1.4MHz, QPSK, Channel 20175

Fragues av (MIII-)	D (dDm)	Path	Antenna	Peak	Limit	Margin (dD)	Polarization	
Frequency(MHz)	P _{Mea} (dBm)	Loss	Gain	EIRP(dBm)	(dBm)	Margin(dB)	Polanzation	
3470.73	-57.12	5.41	-8.13	-54.40	-13.00	41.40	Н	
5197.92	-37.93	6.56	-10.18	-34.31	-13.00	21.31	V	
6928.71	-58.28	7.17	-11.51	-53.94	-13.00	40.94	Н	
8664.21	-58.42	7.69	-13.03	-53.08	-13.00	40.08	V	
10395.68	-51.85	8.95	-13.06	-47.74	-13.00	34.74	Н	
12128.36	-50.18	9.21	-13.05	-46.34	-13.00	33.34	Н	

LTE Band 4, 1.4MHz, QPSK, Channel 20393

Fragues av/MHz)	D (dDm)	Path	Antenna	Peak	Limit	Margin (dD)	Polarization V V V V V H	
Frequency(MHz)	P _{Mea} (dBm)	Loss	Gain	EIRP(dBm)	(dBm)	Margin(dB)	Polarization	
3508.75	-56.56	5.39	-8.21	-53.74	-13.00	40.74	V	
5263.31	-36.39	6.45	-10.27	-32.57	-13.00	19.57	V	
7017.53	-57.79	7.41	-11.62	-53.58	-13.00	40.58	V	
8782.47	-57.58	8.05	-13.06	-52.57	-13.00	39.57	V	
10526.07	-48.71	8.73	-13.11	-44.33	-13.00	31.33	Н	
12280.78	-45.54	9.31	-13.11	-41.74	-13.00	28.74	Н	



LTE Band 4, 1.4MHz, 16QAM, Channel 19957

Fragues ov (MHz)	D (dDm)	Path	Antenna	Peak	Limit	Margin(dD)	Polarization	
Frequency(MHz)	P _{Mea} (dBm)	Loss Gain		EIRP(dBm)	(dBm)	Margin(dB)	Polarization	
3421.18	-54.85	5.47	-8.01	-52.31	-13.00	39.31	V	
5132.31	-40.60	6.42	-10.09	-36.93	-13.00	23.93	V	
6796.31	-59.15	7.06	-11.36	-54.85	-13.00	41.85	Н	
8613.79	-58.34	7.71	-13.02	-53.03	-13.00	40.03	Н	
10255.11	-54.01	8.83	-13.00	-49.84	-13.00	36.84	V	
11952.79	-53.90	8.97	-13.01	-49.86	-13.00	36.86	V	

LTE Band 4, 1.4MHz, 16QAM, Channel 20175

Fragues ov (MHz)	D (dDm)	Path	Antenna	Peak	Limit	Margin(dD)	Dolorization	
Frequency(MHz)	P _{Mea} (dBm)	Loss	Gain	EIRP(dBm)	(dBm)	Margin(dB)	Polarization	
3469.37	-57.56	5.41	-8.13	-54.84	-13.00	41.84	Н	
5197.56	-37.55	6.55	-10.18	-33.92	-13.00	20.92	V	
6927.83	-56.31	7.17	-11.51	-51.97	-13.00	38.97	V	
8664.17	-57.53	7.69	-13.03	-52.19	-13.00	39.19	Н	
10395.68	-50.22	8.95	-13.06	-46.11	-13.00	33.11	Н	
12128.33	-47.77	9.21	-13.05	-43.93	-13.00	30.93	Н	

LTE Band 4, 1.4MHz, 16QAM, Channel 20393

Frequency(MHz)	P _{Mea} (dBm)	Path	Antenna	Peak	Limit	Margin(dB)	Polarization	
Frequency(winz)	r _{Mea} (ubiii)	Loss	Gain	EIRP(dBm)	(dBm)	Margin(ub)		
3711.68	-59.02	5.36	-8.50	-55.88	-13.00	42.88	Н	
5262.96	-36.13	6.45	-10.27	-32.31	-13.00	19.31	V	
7037.30	-58.35	7.47	-11.64	-54.18	-13.00	41.18	V	
8774.08	-56.69	8.05	-13.05	-51.69	-13.00	38.69	V	
10528.55	-54.03	8.72	-13.11	-49.64	-13.00	36.64	V	
12295.47	-51.63	9.01	-13.12	-47.52	-13.00	34.52	Н	



LTE Band 13, 5MHz, QPSK, Channel 23205

Fragues 24/MHz)	D (dDm)	Path	Antenna	Correction	Peak	Limit	Morgin(dD)	Polarization
Frequency(MHz)	P _{Mea} (dBm)	Loss	Gain	(dB)	ERP(dBm)	(dBm)	Margin(dB)	Polarization
1559.27	-49.01	3.24	-5.39	2.15	-49.01	-13.00	36.01	Н
2334.41	-52.70	4.33	-5.60	2.15	-53.58	-13.00	40.58	V
3697.16	-57.75	5.35	-8.48	2.15	-56.77	-13.00	43.77	V
5174.37	-55.36	6.35	-10.14	2.15	-53.72	-13.00	40.72	V
6268.82	-58.51	6.77	-10.77	2.15	-56.66	-13.00	43.66	V
7138.29	-58.35	6.97	-11.77	2.15	-55.70	-13.00	42.70	Н

LTE Band 13, 5MHz, QPSK, Channel 23230

Frequency(MHz)	P _{Mea} (dBm)	Path Loss	Antenna Gain	Correction (dB)	Peak ERP(dBm)	Limit (dBm)	Margin(dB)	Polarization
3122.68	-57.94	5.23	-7.29	2.15	-58.03	-13.00	45.03	Н
3918.13	-56.98	5.81	-8.79	2.15	-56.15	-13.00	43.15	V
4690.88	-56.26	6.11	-9.59	2.15	-54.93	-13.00	41.93	V
5461.92	-56.31	6.69	-10.55	2.15	-54.60	-13.00	41.60	V
6253.87	-58.41	6.79	-10.75	2.15	-56.60	-13.00	43.60	Н
7020.33	-56.70	7.45	-11.62	2.15	-54.68	-13.00	41.68	V

LTE Band 13, 5MHz, QPSK, Channel 23255

Fragues (MHz)	D (dDm)	Path	Antenna	Correction	Peak	Limit	Margin(dD)	Polarization
Frequency(MHz)	P _{Mea} (dBm)	Loss	Gain	(dB)	ERP(dBm)	(dBm)	Margin(dB)	Polatization
3101.08	-58.75	5.16	-7.24	2.15	-58.82	-13.00	45.82	V
4071.29	-58.05	5.60	-8.97	2.15	-56.83	-13.00	43.83	V
4930.76	-57.98	6.33	-9.83	2.15	-56.63	-13.00	43.63	Н
5825.52	-36.21	6.59	-10.53	2.15	-34.42	-13.00	21.42	Н
6731.13	-55.53	7.16	-11.28	2.15	-53.56	-13.00	40.56	V
7552.74	-57.60	7.32	-12.24	2.15	-54.83	-13.00	41.83	V



LTE Band 13, 5MHz, 16QAM, Channel 23205

Fraguanov/MHz)	D (dDm)	Path	Antenna	Correction	Peak	Limit	Margin(dP)	Polarization
Frequency(MHz)	P _{Mea} (dBm)	Loss	Gain	(dB)	ERP(dBm)	(dBm)	Margin(dB)	Polarization
2334.41	-51.92	4.33	-5.60	2.15	-52.80	-13.00	39.80	V
3240.22	-55.63	5.14	-7.58	2.15	-55.34	-13.00	42.34	V
4017.82	-58.47	5.67	-8.92	2.15	-57.37	-13.00	44.37	Н
5169.58	-55.76	6.34	-10.14	2.15	-54.11	-13.00	41.11	Н
6111.83	-57.38	6.87	-10.61	2.15	-55.79	-13.00	42.79	V
7313.34	-57.55	7.25	-11.98	2.15	-54.97	-13.00	41.97	Н

LTE Band 13, 5 MHz, 16QAM, Channel 23230

Frequency(MHz)	P _{Mea} (dBm)	Path Loss	Antenna Gain	Correction (dB)	Peak ERP(dBm)	Limit (dBm)	Margin(dB)	Polarization
2334.41	-52.15	4.33	-5.60	2.15	-53.03	-13.00	40.03	V
3029.40	-57.48	4.90	-7.07	2.15	-57.46	-13.00	44.46	Н
4693.24	-54.80	6.12	-9.59	2.15	-53.48	-13.00	40.48	V
5332.61	-56.18	6.58	-10.37	2.15	-54.54	-13.00	41.54	V
7143.87	-56.29	6.94	-11.77	2.15	-53.61	-13.00	40.61	V
7671.94	-57.74	7.49	-12.34	2.15	-55.04	-13.00	42.04	Н

LTE Band13, 5MHz, 16QAM, Channel 23255

Frequency(MHz)	P _{Mea} (dBm)	Path	Antenna Gain	Correction	Peak	Limit (dBm)	Margin(dB)	Polarization
		Loss	Gain	(dB)	ERP(dBm)	(ubiii)		
1569.27	-49.41	3.33	-5.38	2.15	-49.51	-13.00	36.51	V
3769.68	-57.92	5.07	-8.58	2.15	-56.56	-13.00	43.56	Н
4646.54	-56.01	6.08	-9.55	2.15	-54.69	-13.00	41.69	V
5919.78	-58.88	6.83	-10.52	2.15	-57.34	-13.00	44.34	Н
6965.22	-56.58	7.06	-11.56	2.15	-54.23	-13.00	41.23	Н
8532.71	-56.73	7.78	-13.01	2.15	-53.65	-13.00	40.65	V

Note: The maximum value of expanded measurement uncertainty for this test item is U = 4.2 dB, k = 2.

END OF REPORT