



RF TEST REPORT

Applicant Positioning Universal Inc
FCC ID 2AHRH-FT750
Product In-cab advanced telematics tracker
Model FT750-L43Q-GL
Report No. R2010A0681-R2V1
Issue Date April 2, 2021

TA Technology (Shanghai) Co., Ltd. tested the above equipment in accordance with the requirements in **FCC CFR47 Part 2 (2019)/ FCC CFR 47 Part 22H (2019)**. The test results show that the equipment tested is capable of demonstrating compliance with the requirements as documented in this report.

Prepared by: Peng Tao

Approved by: Kai Xu

TA Technology (Shanghai) Co., Ltd.

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

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

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



TABLE OF CONTENT

1. Test Laboratory	5
1.1. Notes of the Test Report	5
1.2. Test facility	5
1.3. Testing Location	5
2. General Description of Equipment under Test	6
2.3. Applicant and Manufacturer Information	6
2.4. General Information	6
3. Applied Standards	7
4. Test Configuration	8
5. Test Case Results	9
5.1. RF Power Output and Effective Radiated Power	9
5.2. Radiates Spurious Emission	20
6. Main Test Instruments	27
ANNEX A: The EUT Appearance	28
ANNEX B: Test Setup Photos	28



Version	Revision description	Issue Date
Rev.0	Initial issue of report.	January 18, 2021
Rev.1	Update description	April 2, 2021
Note: This revised report (Report No. R2010A0681-R2V1) supersedes and replaces the previously issued report (Report No. R2010A0681-R2). Please discard or destroy the previously issued report and dispose of it accordingly.		



Summary of measurement results

No.	Test Case	Clause in FCC rules	Verdict
1	RF Power Output and Effective Radiated Power	2.1046 22.913(a)(5)	PASS
2	Radiates Spurious Emission	2.1053 / 22.917 (a)	PASS
Date of Testing: October 15, 2020 ~ November 2, 2020			
Date of Sample Received: October 13, 2020			
Note: All indications of Pass/Fail in this report are opinions expressed by TA Technology (Shanghai) Co., Ltd. based on interpretations and/or observations of test results. Measurement Uncertainties were not taken into account and are published for informational purposes only.			

This report only tests Radiates Spurious Emission and recalculates Effective Radiated Power. The test value of the conduction part is referred to the module report. (Report No. HR/2019/100161)



1. Test Laboratory

1.1. Notes of the Test Report

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

1.2. Test facility

FCC (Designation number: CN1179, Test Firm Registration Number: 446626)

TA Technology (Shanghai) Co., Ltd. has been listed on the US Federal Communications Commission list of test facilities recognized to perform electromagnetic emissions measurements.

A2LA (Certificate Number: 3857.01)

TA Technology (Shanghai) Co., Ltd. has been listed by American Association for Laboratory Accreditation to perform measurement.

1.3. Testing Location

Company: TA Technology (Shanghai) Co., Ltd.
Address: No.145, Jintang Rd, Tangzhen Industry Park, Pudong
City: Shanghai
Post code: 201201
Country: P. R. China
Contact: Xu Kai
Telephone: +86-021-50791141/2/3
Fax: +86-021-50791141/2/3-8000
Website: <http://www.ta-shanghai.com>
E-mail: xukai@ta-shanghai.com

2. General Description of Equipment under Test

2.3. Applicant and Manufacturer Information

Applicant	Positioning Universal Inc
Applicant address	4660 La Jolla Village Drive Suite 1100, San Diego, California, United States
Manufacturer	Positioning Universal Inc
Manufacturer address	4660 La Jolla Village Drive Suite 1100, San Diego, California, United States

2.4. General Information

EUT Description			
Model	FT750-L43Q-GL		
IMEI	015937000000022		
Hardware Version	P0		
Software Version	2.4.17		
Power Supply	External Power Supply		
Antenna Type	Internal Antenna/ External Antenna		
Antenna Gain	Internal Antenna: 0dBi External Antenna: 2dBi		
Test Mode(s)	GSM 850; WCDMA Band V;LTE Band 5/26;		
Test Modulation	(GSM/GPRS)GMSK, (EGPRS) GMSK/ 8PSK; (WCDMA) BPSK, QPSK,16QAM; (LTE)QPSK 16QAM;		
Maximum E.R.P.	GSM 850:	32.38dBm	
	WCDMA Band V:	23.71dBm	
	LTE Band 5:	23.85dBm	
	LTE Band 26:	23.79dBm	
Rated Power Supply Voltage	12V		
Extreme Voltage	Minimum: 6V Maximum: 48V		
Extreme Temperature	Lowest: -30°C Highest: +50°C		
Operating Voltage	Minimum: 6V Maximum: 48V		
Operating Temperature	Lowest: -40°C Highest: +85°C		
Operating Frequency Range(s)	Band	Tx (MHz)	Rx (MHz)
	GSM850	824 ~ 849	869 ~ 894
	WCDMA Band V	824 ~ 849	869 ~ 894
	LTE Band 5	824 ~ 849	869 ~ 894
	LTE Band 26	824 ~ 849	869 ~ 894
Note: 1. The EUT is sent from the applicant to TA and the information of the EUT is declared by the applicant.			



3. Applied Standards

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

Test standards:

FCC CFR 47 Part 22H (2019)

ANSI C63.26 (2015)

Reference standard:

FCC CFR47 Part 2 (2019)

KDB 971168 D01 Power Meas License Digital Systems v03r01

4. Test Configuration

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

All mode and data rates and positions were investigated. Subsequently, only the worst case emissions are reported.

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

Test modes are chosen to be reported as the worst case configuration below:

Test items	Modes/Modulation	
	GSM 850	WCDMA Band V
RF Power Output and Effective Radiated power	GSM GPRS EGPRS	RMC
Spurious Emissions at Antenna Terminals	GSM	RMC
Radiates Spurious Emission	GSM	RMC

Test modes are chosen as the worst case configuration below for LTE Band 5/26

Test items	Modes	Bandwidth (MHz)					Modulation		RB			Test Channel		
		1.4	3	5	10	15	QPSK	16QAM	1	50%	100%	L	M	H
RF power output and Effective Radiated power	LTE 5	O	O	O	O	-	O	O	O	O	O	O	O	O
	LTE 26	O	O	O	O	O	O	O	O	O	O	O	O	O
Radiates Spurious Emission	LTE 5	O	-	O	O	-	O	-	O	-	-	-	O	-
	LTE 26	O	-	O	-	O	O	-	O	-	-	-	O	-
Note	1. The mark "O" means that this configuration is chosen for testing. 2. The mark "-" means that this configuration is not testing.													

5. Test Case Results

5.1. RF Power Output and Effective Radiated Power

Ambient condition

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

Methods of Measurement

During the process of the testing, The EUT was connected to the Base Station Simulator with a known loss. The EUT is controlled by the Base Station Simulator test set to ensure max power transmission with proper modulation.

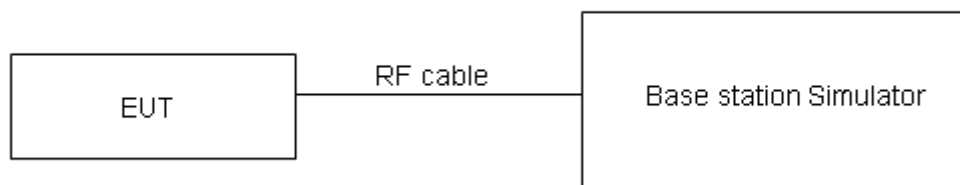
ERP can then be calculated as follows:

EIRP (dBm) = Output Power (dBm) + Antenna Gain (dBi)

where:dBd refers to gain relative to an ideal dipole.

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

Test Setup



Limits

No specific RF power output requirements in part 2.1046.

Rule Part 22.913(a)(5) specifies that "Mobile/portable stations are limited to 7 watts ERP".

Limit	$\leq 7 \text{ W}$ (38.45 dBm)
-------	--------------------------------

Measurement Uncertainty

The assessed measurement uncertainty to ensure 95% confidence level for the normal distribution is with the coverage factor $k = 2$, $U = 0.4 \text{ dB}$ for RF power output, $k = 2$, $U = 1.19 \text{ dB}$ for ERP.



Test Results

GSM 850		Maximum Output Power (dBm)			ERP (dBm) Internal Antenna			ERP (dBm) External Antenna		
		Channel 128	Channel 190	Channel 251	Channel 128	Channel 190	Channel 251	Channel 128	Channel 190	Channel 251
		824.2 (MHz)	836.6 (MHz)	848.8 (MHz)	824.2 (MHz)	836.6 (MHz)	848.8 (MHz)	824.2 (MHz)	836.6 (MHz)	848.8 (MHz)
GSM(GMSK)	Results	32.32	32.53	32.20	30.17	30.38	30.05	32.17	32.38	32.05
EGPRS(8PSK)	1TXslot	26.51	26.67	26.67	24.36	24.52	24.52	26.36	26.52	26.52

WCDMA Band V		Maximum Output Power (dBm)			ERP (dBm) Internal Antenna			ERP (dBm) External Antenna		
		Channel 4132	Channel 4183	Channel 4233	Channel 4132	Channel 4183	Channel 4233	Channel 4132	Channel 4183	Channel 4233
		826.4 (MHz)	836.6 (MHz)	846.6 (MHz)	826.4 (MHz)	836.6 (MHz)	846.6 (MHz)	826.4 (MHz)	836.6 (MHz)	846.6 (MHz)
RMC	12.2k	23.86	23.81	23.76	21.71	21.66	21.61	23.71	23.66	23.61

Band	Bandwidth	Modulation	Channel	RB Configuration	Maximum Output Power(dBm)	ERP (dBm) Internal Antenna	ERP (dBm) External Antenna	Verdict
LTE Band 5	1.4M	QPSK	20407	1RB#0	23.01	20.86	22.86	PASS
LTE Band 5	1.4M	QPSK	20407	1RB#2	23.23	21.08	23.08	PASS
LTE Band 5	1.4M	QPSK	20407	1RB#5	23.38	21.23	23.23	PASS
LTE Band 5	1.4M	QPSK	20407	3RB#0	23.47	21.32	23.32	PASS
LTE Band 5	1.4M	QPSK	20407	3RB#2	23.50	21.35	23.35	PASS
LTE Band 5	1.4M	QPSK	20407	3RB#3	23.46	21.31	23.31	PASS
LTE Band 5	1.4M	QPSK	20407	6RB#0	22.50	20.35	22.35	PASS
LTE Band 5	1.4M	QPSK	20525	1RB#0	23.25	21.10	23.10	PASS
LTE Band 5	1.4M	QPSK	20525	1RB#2	23.30	21.15	23.15	PASS
LTE Band 5	1.4M	QPSK	20525	1RB#5	23.18	21.03	23.03	PASS
LTE Band 5	1.4M	QPSK	20525	3RB#0	23.33	21.18	23.18	PASS
LTE Band 5	1.4M	QPSK	20525	3RB#2	23.36	21.21	23.21	PASS
LTE Band 5	1.4M	QPSK	20525	3RB#3	23.37	21.22	23.22	PASS
LTE Band 5	1.4M	QPSK	20525	6RB#0	22.28	20.13	22.13	PASS
LTE Band 5	1.4M	QPSK	20643	1RB#0	23.29	21.14	23.14	PASS
LTE Band 5	1.4M	QPSK	20643	1RB#2	23.36	21.21	23.21	PASS
LTE Band 5	1.4M	QPSK	20643	1RB#5	23.31	21.16	23.16	PASS
LTE Band 5	1.4M	QPSK	20643	3RB#0	23.41	21.26	23.26	PASS
LTE Band 5	1.4M	QPSK	20643	3RB#2	23.44	21.29	23.29	PASS



LTE Band 5	1.4M	QPSK	20643	3RB#3	23.33	21.18	23.18	PASS
LTE Band 5	1.4M	QPSK	20643	6RB#0	22.48	20.33	22.33	PASS
LTE Band 5	1.4M	16QAM	20407	1RB#0	21.99	19.84	21.84	PASS
LTE Band 5	1.4M	16QAM	20407	1RB#2	22.21	20.06	22.06	PASS
LTE Band 5	1.4M	16QAM	20407	1RB#5	22.07	19.92	21.92	PASS
LTE Band 5	1.4M	16QAM	20407	3RB#0	22.63	20.48	22.48	PASS
LTE Band 5	1.4M	16QAM	20407	3RB#2	22.52	20.37	22.37	PASS
LTE Band 5	1.4M	16QAM	20407	3RB#3	22.73	20.58	22.58	PASS
LTE Band 5	1.4M	16QAM	20407	6RB#0	21.28	19.13	21.13	PASS
LTE Band 5	1.4M	16QAM	20525	1RB#0	22.11	19.96	21.96	PASS
LTE Band 5	1.4M	16QAM	20525	1RB#2	22.10	19.95	21.95	PASS
LTE Band 5	1.4M	16QAM	20525	1RB#5	21.88	19.73	21.73	PASS
LTE Band 5	1.4M	16QAM	20525	3RB#0	22.49	20.34	22.34	PASS
LTE Band 5	1.4M	16QAM	20525	3RB#2	22.29	20.14	22.14	PASS
LTE Band 5	1.4M	16QAM	20525	3RB#3	22.41	20.26	22.26	PASS
LTE Band 5	1.4M	16QAM	20525	6RB#0	21.31	19.16	21.16	PASS
LTE Band 5	1.4M	16QAM	20643	1RB#0	22.02	19.87	21.87	PASS
LTE Band 5	1.4M	16QAM	20643	1RB#2	21.94	19.79	21.79	PASS
LTE Band 5	1.4M	16QAM	20643	1RB#5	21.79	19.64	21.64	PASS
LTE Band 5	1.4M	16QAM	20643	3RB#0	22.62	20.47	22.47	PASS
LTE Band 5	1.4M	16QAM	20643	3RB#2	22.46	20.31	22.31	PASS
LTE Band 5	1.4M	16QAM	20643	3RB#3	22.60	20.45	22.45	PASS
LTE Band 5	1.4M	16QAM	20643	6RB#0	21.29	19.14	21.14	PASS
LTE Band 5	3M	QPSK	20415	1RB#0	23.47	21.32	23.32	PASS
LTE Band 5	3M	QPSK	20415	1RB#7	23.49	21.34	23.34	PASS
LTE Band 5	3M	QPSK	20415	1RB#14	23.30	21.15	23.15	PASS
LTE Band 5	3M	QPSK	20415	8RB#0	22.60	20.45	22.45	PASS
LTE Band 5	3M	QPSK	20415	8RB#4	22.51	20.36	22.36	PASS
LTE Band 5	3M	QPSK	20415	8RB#7	22.58	20.43	22.43	PASS
LTE Band 5	3M	QPSK	20415	15RB#0	22.55	20.40	22.40	PASS
LTE Band 5	3M	QPSK	20525	1RB#0	23.40	21.25	23.25	PASS
LTE Band 5	3M	QPSK	20525	1RB#7	23.32	21.17	23.17	PASS
LTE Band 5	3M	QPSK	20525	1RB#14	23.04	20.89	22.89	PASS
LTE Band 5	3M	QPSK	20525	8RB#0	22.43	20.28	22.28	PASS
LTE Band 5	3M	QPSK	20525	8RB#4	22.51	20.36	22.36	PASS
LTE Band 5	3M	QPSK	20525	8RB#7	22.31	20.16	22.16	PASS
LTE Band 5	3M	QPSK	20525	15RB#0	22.32	20.17	22.17	PASS
LTE Band 5	3M	QPSK	20635	1RB#0	23.47	21.32	23.32	PASS
LTE Band 5	3M	QPSK	20635	1RB#7	23.57	21.42	23.42	PASS
LTE Band 5	3M	QPSK	20635	1RB#14	23.27	21.12	23.12	PASS
LTE Band 5	3M	QPSK	20635	8RB#0	22.56	20.41	22.41	PASS
LTE Band 5	3M	QPSK	20635	8RB#4	22.48	20.33	22.33	PASS
LTE Band 5	3M	QPSK	20635	8RB#7	22.45	20.30	22.30	PASS



LTE Band 5	3M	QPSK	20635	15RB#0	22.51	20.36	22.36	PASS
LTE Band 5	3M	16QAM	20415	1RB#0	22.09	19.94	21.94	PASS
LTE Band 5	3M	16QAM	20415	1RB#7	22.01	19.86	21.86	PASS
LTE Band 5	3M	16QAM	20415	1RB#14	21.73	19.58	21.58	PASS
LTE Band 5	3M	16QAM	20415	8RB#0	21.39	19.24	21.24	PASS
LTE Band 5	3M	16QAM	20415	8RB#4	21.47	19.32	21.32	PASS
LTE Band 5	3M	16QAM	20415	8RB#7	21.46	19.31	21.31	PASS
LTE Band 5	3M	16QAM	20415	15RB#0	21.55	19.40	21.40	PASS
LTE Band 5	3M	16QAM	20525	1RB#0	22.17	20.02	22.02	PASS
LTE Band 5	3M	16QAM	20525	1RB#7	22.06	19.91	21.91	PASS
LTE Band 5	3M	16QAM	20525	1RB#14	22.06	19.91	21.91	PASS
LTE Band 5	3M	16QAM	20525	8RB#0	21.32	19.17	21.17	PASS
LTE Band 5	3M	16QAM	20525	8RB#4	21.23	19.08	21.08	PASS
LTE Band 5	3M	16QAM	20525	8RB#7	21.28	19.13	21.13	PASS
LTE Band 5	3M	16QAM	20525	15RB#0	21.56	19.41	21.41	PASS
LTE Band 5	3M	16QAM	20635	1RB#0	22.14	19.99	21.99	PASS
LTE Band 5	3M	16QAM	20635	1RB#7	22.09	19.94	21.94	PASS
LTE Band 5	3M	16QAM	20635	1RB#14	22.07	19.92	21.92	PASS
LTE Band 5	3M	16QAM	20635	8RB#0	21.28	19.13	21.13	PASS
LTE Band 5	3M	16QAM	20635	8RB#4	21.31	19.16	21.16	PASS
LTE Band 5	3M	16QAM	20635	8RB#7	21.44	19.29	21.29	PASS
LTE Band 5	3M	16QAM	20635	15RB#0	21.49	19.34	21.34	PASS
LTE Band 5	5M	QPSK	20425	1RB#0	23.41	21.26	23.26	PASS
LTE Band 5	5M	QPSK	20425	1RB#13	23.43	21.28	23.28	PASS
LTE Band 5	5M	QPSK	20425	1RB#24	23.24	21.09	23.09	PASS
LTE Band 5	5M	QPSK	20425	12RB#0	22.68	20.53	22.53	PASS
LTE Band 5	5M	QPSK	20425	12RB#6	22.56	20.41	22.41	PASS
LTE Band 5	5M	QPSK	20425	12RB#13	22.49	20.34	22.34	PASS
LTE Band 5	5M	QPSK	20425	25RB#0	22.55	20.40	22.40	PASS
LTE Band 5	5M	QPSK	20525	1RB#0	23.11	20.96	22.96	PASS
LTE Band 5	5M	QPSK	20525	1RB#13	23.29	21.14	23.14	PASS
LTE Band 5	5M	QPSK	20525	1RB#24	23.15	21.00	23.00	PASS
LTE Band 5	5M	QPSK	20525	12RB#0	22.48	20.33	22.33	PASS
LTE Band 5	5M	QPSK	20525	12RB#6	22.46	20.31	22.31	PASS
LTE Band 5	5M	QPSK	20525	12RB#13	22.46	20.31	22.31	PASS
LTE Band 5	5M	QPSK	20525	25RB#0	22.41	20.26	22.26	PASS
LTE Band 5	5M	QPSK	20625	1RB#0	23.13	20.98	22.98	PASS
LTE Band 5	5M	QPSK	20625	1RB#13	23.40	21.25	23.25	PASS
LTE Band 5	5M	QPSK	20625	1RB#24	23.33	21.18	23.18	PASS
LTE Band 5	5M	QPSK	20625	12RB#0	22.45	20.30	22.30	PASS
LTE Band 5	5M	QPSK	20625	12RB#6	22.58	20.43	22.43	PASS
LTE Band 5	5M	QPSK	20625	12RB#13	22.37	20.22	22.22	PASS
LTE Band 5	5M	QPSK	20625	25RB#0	22.39	20.24	22.24	PASS



LTE Band 5	5M	16QAM	20425	1RB#0	21.87	19.72	21.72	PASS
LTE Band 5	5M	16QAM	20425	1RB#13	22.31	20.16	22.16	PASS
LTE Band 5	5M	16QAM	20425	1RB#24	21.55	19.40	21.40	PASS
LTE Band 5	5M	16QAM	20425	12RB#0	21.45	19.30	21.30	PASS
LTE Band 5	5M	16QAM	20425	12RB#6	21.44	19.29	21.29	PASS
LTE Band 5	5M	16QAM	20425	12RB#13	21.23	19.08	21.08	PASS
LTE Band 5	5M	16QAM	20425	25RB#0	21.48	19.33	21.33	PASS
LTE Band 5	5M	16QAM	20525	1RB#0	21.85	19.70	21.70	PASS
LTE Band 5	5M	16QAM	20525	1RB#13	22.36	20.21	22.21	PASS
LTE Band 5	5M	16QAM	20525	1RB#24	21.96	19.81	21.81	PASS
LTE Band 5	5M	16QAM	20525	12RB#0	21.36	19.21	21.21	PASS
LTE Band 5	5M	16QAM	20525	12RB#6	21.21	19.06	21.06	PASS
LTE Band 5	5M	16QAM	20525	12RB#13	21.20	19.05	21.05	PASS
LTE Band 5	5M	16QAM	20525	25RB#0	21.43	19.28	21.28	PASS
LTE Band 5	5M	16QAM	20625	1RB#0	21.95	19.80	21.80	PASS
LTE Band 5	5M	16QAM	20625	1RB#13	22.52	20.37	22.37	PASS
LTE Band 5	5M	16QAM	20625	1RB#24	21.96	19.81	21.81	PASS
LTE Band 5	5M	16QAM	20625	12RB#0	21.43	19.28	21.28	PASS
LTE Band 5	5M	16QAM	20625	12RB#6	21.30	19.15	21.15	PASS
LTE Band 5	5M	16QAM	20625	12RB#13	21.26	19.11	21.11	PASS
LTE Band 5	5M	16QAM	20625	25RB#0	21.25	19.10	21.10	PASS
LTE Band 5	10M	QPSK	20450	1RB#0	23.51	21.36	23.36	PASS
LTE Band 5	10M	QPSK	20450	1RB#25	23.53	21.38	23.38	PASS
LTE Band 5	10M	QPSK	20450	1RB#49	23.04	20.89	22.89	PASS
LTE Band 5	10M	QPSK	20450	25RB#0	22.61	20.46	22.46	PASS
LTE Band 5	10M	QPSK	20450	25RB#13	22.66	20.51	22.51	PASS
LTE Band 5	10M	QPSK	20450	25RB#25	22.28	20.13	22.13	PASS
LTE Band 5	10M	QPSK	20450	50RB#0	22.38	20.23	22.23	PASS
LTE Band 5	10M	QPSK	20525	1RB#0	23.22	21.07	23.07	PASS
LTE Band 5	10M	QPSK	20525	1RB#25	24.00	21.85	23.85	PASS
LTE Band 5	10M	QPSK	20525	1RB#49	23.03	20.88	22.88	PASS
LTE Band 5	10M	QPSK	20525	25RB#0	22.57	20.42	22.42	PASS
LTE Band 5	10M	QPSK	20525	25RB#13	22.53	20.38	22.38	PASS
LTE Band 5	10M	QPSK	20525	25RB#25	22.33	20.18	22.18	PASS
LTE Band 5	10M	QPSK	20525	50RB#0	22.43	20.28	22.28	PASS
LTE Band 5	10M	QPSK	20600	1RB#0	23.30	21.15	23.15	PASS
LTE Band 5	10M	QPSK	20600	1RB#25	23.54	21.39	23.39	PASS
LTE Band 5	10M	QPSK	20600	1RB#49	23.00	20.85	22.85	PASS
LTE Band 5	10M	QPSK	20600	25RB#0	22.51	20.36	22.36	PASS
LTE Band 5	10M	QPSK	20600	25RB#13	22.45	20.30	22.30	PASS
LTE Band 5	10M	QPSK	20600	25RB#25	22.35	20.20	22.20	PASS
LTE Band 5	10M	QPSK	20600	50RB#0	22.43	20.28	22.28	PASS
LTE Band 5	10M	16QAM	20450	1RB#0	22.12	19.97	21.97	PASS



LTE Band 5	10M	16QAM	20450	1RB#25	22.04	19.89	21.89	PASS
LTE Band 5	10M	16QAM	20450	1RB#49	22.06	19.91	21.91	PASS
LTE Band 5	10M	16QAM	20450	25RB#0	21.59	19.44	21.44	PASS
LTE Band 5	10M	16QAM	20450	25RB#13	21.53	19.38	21.38	PASS
LTE Band 5	10M	16QAM	20450	25RB#25	21.33	19.18	21.18	PASS
LTE Band 5	10M	16QAM	20450	50RB#0	21.30	19.15	21.15	PASS
LTE Band 5	10M	16QAM	20525	1RB#0	22.06	19.91	21.91	PASS
LTE Band 5	10M	16QAM	20525	1RB#25	21.98	19.83	21.83	PASS
LTE Band 5	10M	16QAM	20525	1RB#49	21.94	19.79	21.79	PASS
LTE Band 5	10M	16QAM	20525	25RB#0	21.52	19.37	21.37	PASS
LTE Band 5	10M	16QAM	20525	25RB#13	21.65	19.50	21.50	PASS
LTE Band 5	10M	16QAM	20525	25RB#25	21.41	19.26	21.26	PASS
LTE Band 5	10M	16QAM	20525	50RB#0	21.48	19.33	21.33	PASS
LTE Band 5	10M	16QAM	20600	1RB#0	22.17	20.02	22.02	PASS
LTE Band 5	10M	16QAM	20600	1RB#25	22.01	19.86	21.86	PASS
LTE Band 5	10M	16QAM	20600	1RB#49	21.99	19.84	21.84	PASS
LTE Band 5	10M	16QAM	20600	25RB#0	21.50	19.35	21.35	PASS
LTE Band 5	10M	16QAM	20600	25RB#13	21.32	19.17	21.17	PASS
LTE Band 5	10M	16QAM	20600	25RB#25	21.31	19.16	21.16	PASS
LTE Band 5	10M	16QAM	20600	50RB#0	21.44	19.29	21.29	PASS

Band	Bandwidth	Modulation	Channel	RB Configuration	Maximum Output Power(dBm)	ERP (dBm) Internal Antenna	ERP (dBm) External Antenna	Verdict
LTE Band 26	1.4M	QPSK	26797	1RB#0	23.11	20.96	22.96	PASS
LTE Band 26	1.4M	QPSK	26797	1RB#2	23.25	21.10	23.10	PASS
LTE Band 26	1.4M	QPSK	26797	1RB#5	23.34	21.19	23.19	PASS
LTE Band 26	1.4M	QPSK	26797	3RB#0	23.47	21.32	23.32	PASS
LTE Band 26	1.4M	QPSK	26797	3RB#2	23.49	21.34	23.34	PASS
LTE Band 26	1.4M	QPSK	26797	3RB#3	23.47	21.32	23.32	PASS
LTE Band 26	1.4M	QPSK	26797	6RB#0	22.39	20.24	22.24	PASS
LTE Band 26	1.4M	QPSK	26915	1RB#0	23.43	21.28	23.28	PASS
LTE Band 26	1.4M	QPSK	26915	1RB#2	23.49	21.34	23.34	PASS
LTE Band 26	1.4M	QPSK	26915	1RB#5	23.37	21.22	23.22	PASS
LTE Band 26	1.4M	QPSK	26915	3RB#0	23.64	21.49	23.49	PASS
LTE Band 26	1.4M	QPSK	26915	3RB#2	23.65	21.50	23.50	PASS
LTE Band 26	1.4M	QPSK	26915	3RB#3	23.57	21.42	23.42	PASS
LTE Band 26	1.4M	QPSK	26915	6RB#0	22.48	20.33	22.33	PASS
LTE Band 26	1.4M	QPSK	27033	1RB#0	23.18	21.03	23.03	PASS
LTE Band 26	1.4M	QPSK	27033	1RB#2	23.42	21.27	23.27	PASS
LTE Band 26	1.4M	QPSK	27033	1RB#5	23.00	20.85	22.85	PASS
LTE Band 26	1.4M	QPSK	27033	3RB#0	23.40	21.25	23.25	PASS



LTE Band 26	1.4M	QPSK	27033	3RB#2	23.43	21.28	23.28	PASS
LTE Band 26	1.4M	QPSK	27033	3RB#3	23.42	21.27	23.27	PASS
LTE Band 26	1.4M	QPSK	27033	6RB#0	22.47	20.32	22.32	PASS
LTE Band 26	1.4M	16QAM	26797	1RB#0	22.08	19.93	21.93	PASS
LTE Band 26	1.4M	16QAM	26797	1RB#2	22.14	19.99	21.99	PASS
LTE Band 26	1.4M	16QAM	26797	1RB#5	22.12	19.97	21.97	PASS
LTE Band 26	1.4M	16QAM	26797	3RB#0	22.56	20.41	22.41	PASS
LTE Band 26	1.4M	16QAM	26797	3RB#2	22.63	20.48	22.48	PASS
LTE Band 26	1.4M	16QAM	26797	3RB#3	22.49	20.34	22.34	PASS
LTE Band 26	1.4M	16QAM	26797	6RB#0	21.41	19.26	21.26	PASS
LTE Band 26	1.4M	16QAM	26915	1RB#0	22.22	20.07	22.07	PASS
LTE Band 26	1.4M	16QAM	26915	1RB#2	22.27	20.12	22.12	PASS
LTE Band 26	1.4M	16QAM	26915	1RB#5	22.15	20.00	22.00	PASS
LTE Band 26	1.4M	16QAM	26915	3RB#0	22.63	20.48	22.48	PASS
LTE Band 26	1.4M	16QAM	26915	3RB#2	23.11	20.96	22.96	PASS
LTE Band 26	1.4M	16QAM	26915	3RB#3	23.25	21.10	23.10	PASS
LTE Band 26	1.4M	16QAM	26915	6RB#0	23.34	21.19	23.19	PASS
LTE Band 26	1.4M	16QAM	27033	1RB#0	23.47	21.32	23.32	PASS
LTE Band 26	1.4M	16QAM	27033	1RB#2	23.49	21.34	23.34	PASS
LTE Band 26	1.4M	16QAM	27033	1RB#5	23.47	21.32	23.32	PASS
LTE Band 26	1.4M	16QAM	27033	3RB#0	22.39	20.24	22.24	PASS
LTE Band 26	1.4M	16QAM	27033	3RB#2	23.43	21.28	23.28	PASS
LTE Band 26	1.4M	16QAM	27033	3RB#3	23.49	21.34	23.34	PASS
LTE Band 26	1.4M	16QAM	27033	6RB#0	23.37	21.22	23.22	PASS
LTE Band 26	3M	QPSK	26805	1RB#0	23.64	21.49	23.49	PASS
LTE Band 26	3M	QPSK	26805	1RB#7	23.65	21.50	23.50	PASS
LTE Band 26	3M	QPSK	26805	1RB#14	23.57	21.42	23.42	PASS
LTE Band 26	3M	QPSK	26805	8RB#0	22.48	20.33	22.33	PASS
LTE Band 26	3M	QPSK	26805	8RB#4	23.18	21.03	23.03	PASS
LTE Band 26	3M	QPSK	26805	8RB#7	23.42	21.27	23.27	PASS
LTE Band 26	3M	QPSK	26805	15RB#0	23.00	20.85	22.85	PASS
LTE Band 26	3M	QPSK	26915	1RB#0	23.40	21.25	23.25	PASS
LTE Band 26	3M	QPSK	26915	1RB#7	23.43	21.28	23.28	PASS
LTE Band 26	3M	QPSK	26915	1RB#14	23.42	21.27	23.27	PASS
LTE Band 26	3M	QPSK	26915	8RB#0	22.47	20.32	22.32	PASS
LTE Band 26	3M	QPSK	26915	8RB#4	22.08	19.93	21.93	PASS
LTE Band 26	3M	QPSK	26915	8RB#7	22.14	19.99	21.99	PASS
LTE Band 26	3M	QPSK	26915	15RB#0	22.12	19.97	21.97	PASS
LTE Band 26	3M	QPSK	27025	1RB#0	22.56	20.41	22.41	PASS
LTE Band 26	3M	QPSK	27025	1RB#7	22.63	20.48	22.48	PASS
LTE Band 26	3M	QPSK	27025	1RB#14	22.49	20.34	22.34	PASS
LTE Band 26	3M	QPSK	27025	8RB#0	21.41	19.26	21.26	PASS
LTE Band 26	3M	QPSK	27025	8RB#4	22.22	20.07	22.07	PASS



LTE Band 26	3M	QPSK	27025	8RB#7	22.27	20.12	22.12	PASS
LTE Band 26	3M	QPSK	27025	15RB#0	22.15	20.00	22.00	PASS
LTE Band 26	3M	16QAM	26805	1RB#0	22.63	20.48	22.48	PASS
LTE Band 26	3M	16QAM	26805	1RB#7	23.11	20.96	22.96	PASS
LTE Band 26	3M	16QAM	26805	1RB#14	23.25	21.10	23.10	PASS
LTE Band 26	3M	16QAM	26805	8RB#0	23.34	21.19	23.19	PASS
LTE Band 26	3M	16QAM	26805	8RB#4	23.47	21.32	23.32	PASS
LTE Band 26	3M	16QAM	26805	8RB#7	23.49	21.34	23.34	PASS
LTE Band 26	3M	16QAM	26805	15RB#0	23.47	21.32	23.32	PASS
LTE Band 26	3M	16QAM	26915	1RB#0	22.04	19.89	21.89	PASS
LTE Band 26	3M	16QAM	26915	1RB#7	22.15	20.00	22.00	PASS
LTE Band 26	3M	16QAM	26915	1RB#14	21.98	19.83	21.83	PASS
LTE Band 26	3M	16QAM	26915	8RB#0	21.16	19.01	21.01	PASS
LTE Band 26	3M	16QAM	26915	8RB#4	21.26	19.11	21.11	PASS
LTE Band 26	3M	16QAM	26915	8RB#7	21.21	19.06	21.06	PASS
LTE Band 26	3M	16QAM	26915	15RB#0	21.57	19.42	21.42	PASS
LTE Band 26	3M	16QAM	27025	1RB#0	22.03	19.88	21.88	PASS
LTE Band 26	3M	16QAM	27025	1RB#7	21.95	19.80	21.80	PASS
LTE Band 26	3M	16QAM	27025	1RB#14	22.03	19.88	21.88	PASS
LTE Band 26	3M	16QAM	27025	8RB#0	21.21	19.06	21.06	PASS
LTE Band 26	3M	16QAM	27025	8RB#4	21.20	19.05	21.05	PASS
LTE Band 26	3M	16QAM	27025	8RB#7	21.26	19.11	21.11	PASS
LTE Band 26	3M	16QAM	27025	15RB#0	21.41	19.26	21.26	PASS
LTE Band 26	5M	QPSK	26815	1RB#0	23.14	20.99	22.99	PASS
LTE Band 26	5M	QPSK	26815	1RB#13	23.45	21.30	23.30	PASS
LTE Band 26	5M	QPSK	26815	1RB#24	23.12	20.97	22.97	PASS
LTE Band 26	5M	QPSK	26815	12RB#0	22.56	20.41	22.41	PASS
LTE Band 26	5M	QPSK	26815	12RB#6	22.47	20.32	22.32	PASS
LTE Band 26	5M	QPSK	26815	12RB#13	22.37	20.22	22.22	PASS
LTE Band 26	5M	QPSK	26815	25RB#0	22.44	20.29	22.29	PASS
LTE Band 26	5M	QPSK	26915	1RB#0	23.25	21.10	23.10	PASS
LTE Band 26	5M	QPSK	26915	1RB#13	23.64	21.49	23.49	PASS
LTE Band 26	5M	QPSK	26915	1RB#24	23.31	21.16	23.16	PASS
LTE Band 26	5M	QPSK	26915	12RB#0	22.41	20.26	22.26	PASS
LTE Band 26	5M	QPSK	26915	12RB#6	22.48	20.33	22.33	PASS
LTE Band 26	5M	QPSK	26915	12RB#13	22.34	20.19	22.19	PASS
LTE Band 26	5M	QPSK	26915	25RB#0	22.42	20.27	22.27	PASS
LTE Band 26	5M	QPSK	27015	1RB#0	23.27	21.12	23.12	PASS
LTE Band 26	5M	QPSK	27015	1RB#13	23.42	21.27	23.27	PASS
LTE Band 26	5M	QPSK	27015	1RB#24	22.86	20.71	22.71	PASS
LTE Band 26	5M	QPSK	27015	12RB#0	22.55	20.40	22.40	PASS
LTE Band 26	5M	QPSK	27015	12RB#6	22.33	20.18	22.18	PASS
LTE Band 26	5M	QPSK	27015	12RB#13	22.29	20.14	22.14	PASS



LTE Band 26	5M	QPSK	27015	25RB#0	22.48	20.33	22.33	PASS
LTE Band 26	5M	16QAM	26815	1RB#0	22.03	19.88	21.88	PASS
LTE Band 26	5M	16QAM	26815	1RB#13	22.41	20.26	22.26	PASS
LTE Band 26	5M	16QAM	26815	1RB#24	21.93	19.78	21.78	PASS
LTE Band 26	5M	16QAM	26815	12RB#0	21.42	19.27	21.27	PASS
LTE Band 26	5M	16QAM	26815	12RB#6	21.35	19.20	21.20	PASS
LTE Band 26	5M	16QAM	26815	12RB#13	21.35	19.20	21.20	PASS
LTE Band 26	5M	16QAM	26815	25RB#0	21.34	19.19	21.19	PASS
LTE Band 26	5M	16QAM	26915	1RB#0	21.86	19.71	21.71	PASS
LTE Band 26	5M	16QAM	26915	1RB#13	22.42	20.27	22.27	PASS
LTE Band 26	5M	16QAM	26915	1RB#24	21.76	19.61	21.61	PASS
LTE Band 26	5M	16QAM	26915	12RB#0	21.29	19.14	21.14	PASS
LTE Band 26	5M	16QAM	26915	12RB#6	21.23	19.08	21.08	PASS
LTE Band 26	5M	16QAM	26915	12RB#13	21.36	19.21	21.21	PASS
LTE Band 26	5M	16QAM	26915	25RB#0	21.44	19.29	21.29	PASS
LTE Band 26	5M	16QAM	27015	1RB#0	22.02	19.87	21.87	PASS
LTE Band 26	5M	16QAM	27015	1RB#13	22.51	20.36	22.36	PASS
LTE Band 26	5M	16QAM	27015	1RB#24	22.04	19.89	21.89	PASS
LTE Band 26	5M	16QAM	27015	12RB#0	21.42	19.27	21.27	PASS
LTE Band 26	5M	16QAM	27015	12RB#6	21.40	19.25	21.25	PASS
LTE Band 26	5M	16QAM	27015	12RB#13	21.24	19.09	21.09	PASS
LTE Band 26	5M	16QAM	27015	25RB#0	21.36	19.21	21.21	PASS
LTE Band 26	10M	QPSK	26840	1RB#0	23.26	21.11	23.11	PASS
LTE Band 26	10M	QPSK	26840	1RB#25	23.78	21.63	23.63	PASS
LTE Band 26	10M	QPSK	26840	1RB#49	23.00	20.85	22.85	PASS
LTE Band 26	10M	QPSK	26840	25RB#0	22.69	20.54	22.54	PASS
LTE Band 26	10M	QPSK	26840	25RB#13	22.72	20.57	22.57	PASS
LTE Band 26	10M	QPSK	26840	25RB#25	22.46	20.31	22.31	PASS
LTE Band 26	10M	QPSK	26840	50RB#0	22.44	20.29	22.29	PASS
LTE Band 26	10M	QPSK	26915	1RB#0	23.17	21.02	23.02	PASS
LTE Band 26	10M	QPSK	26915	1RB#25	23.84	21.69	23.69	PASS
LTE Band 26	10M	QPSK	26915	1RB#49	22.84	20.69	22.69	PASS
LTE Band 26	10M	QPSK	26915	25RB#0	22.58	20.43	22.43	PASS
LTE Band 26	10M	QPSK	26915	25RB#13	22.71	20.56	22.56	PASS
LTE Band 26	10M	QPSK	26915	25RB#25	22.26	20.11	22.11	PASS
LTE Band 26	10M	QPSK	26915	50RB#0	22.55	20.40	22.40	PASS
LTE Band 26	10M	QPSK	26990	1RB#0	23.29	21.14	23.14	PASS
LTE Band 26	10M	QPSK	26990	1RB#25	23.94	21.79	23.79	PASS
LTE Band 26	10M	QPSK	26990	1RB#49	22.77	20.62	22.62	PASS
LTE Band 26	10M	QPSK	26990	25RB#0	22.67	20.52	22.52	PASS
LTE Band 26	10M	QPSK	26990	25RB#13	22.57	20.42	22.42	PASS
LTE Band 26	10M	QPSK	26990	25RB#25	22.25	20.10	22.10	PASS
LTE Band 26	10M	QPSK	26990	50RB#0	22.43	20.28	22.28	PASS



LTE Band 26	10M	16QAM	26840	1RB#0	22.04	19.89	21.89	PASS
LTE Band 26	10M	16QAM	26840	1RB#25	22.15	20.00	22.00	PASS
LTE Band 26	10M	16QAM	26840	1RB#49	22.12	19.97	21.97	PASS
LTE Band 26	10M	16QAM	26840	25RB#0	21.46	19.31	21.31	PASS
LTE Band 26	10M	16QAM	26840	25RB#13	21.60	19.45	21.45	PASS
LTE Band 26	10M	16QAM	26840	25RB#25	21.50	19.35	21.35	PASS
LTE Band 26	10M	16QAM	26840	50RB#0	21.56	19.41	21.41	PASS
LTE Band 26	10M	16QAM	26915	1RB#0	22.32	20.17	22.17	PASS
LTE Band 26	10M	16QAM	26915	1RB#25	22.24	20.09	22.09	PASS
LTE Band 26	10M	16QAM	26915	1RB#49	22.14	19.99	21.99	PASS
LTE Band 26	10M	16QAM	26915	25RB#0	21.33	19.18	21.18	PASS
LTE Band 26	10M	16QAM	26915	25RB#13	21.55	19.40	21.40	PASS
LTE Band 26	10M	16QAM	26915	25RB#25	21.43	19.28	21.28	PASS
LTE Band 26	10M	16QAM	26915	50RB#0	21.47	19.32	21.32	PASS
LTE Band 26	10M	16QAM	26990	1RB#0	22.15	20.00	22.00	PASS
LTE Band 26	10M	16QAM	26990	1RB#25	21.84	19.69	21.69	PASS
LTE Band 26	10M	16QAM	26990	1RB#49	21.96	19.81	21.81	PASS
LTE Band 26	10M	16QAM	26990	25RB#0	21.35	19.20	21.20	PASS
LTE Band 26	10M	16QAM	26990	25RB#13	21.51	19.36	21.36	PASS
LTE Band 26	10M	16QAM	26990	25RB#25	21.49	19.34	21.34	PASS
LTE Band 26	10M	16QAM	26990	50RB#0	21.55	19.40	21.40	PASS
LTE Band 26	15M	QPSK	26865	1RB#0	23.39	21.24	23.24	PASS
LTE Band 26	15M	QPSK	26865	1RB#38	23.74	21.59	23.59	PASS
LTE Band 26	15M	QPSK	26865	1RB#74	22.77	20.62	22.62	PASS
LTE Band 26	15M	QPSK	26865	36RB#0	22.62	20.47	22.47	PASS
LTE Band 26	15M	QPSK	26865	36RB#18	22.67	20.52	22.52	PASS
LTE Band 26	15M	QPSK	26865	36RB#39	22.44	20.29	22.29	PASS
LTE Band 26	15M	QPSK	26865	75RB#0	22.47	20.32	22.32	PASS
LTE Band 26	15M	QPSK	26915	1RB#0	23.20	21.05	23.05	PASS
LTE Band 26	15M	QPSK	26915	1RB#38	23.68	21.53	23.53	PASS
LTE Band 26	15M	QPSK	26915	1RB#74	22.89	20.74	22.74	PASS
LTE Band 26	15M	QPSK	26915	36RB#0	22.60	20.45	22.45	PASS
LTE Band 26	15M	QPSK	26915	36RB#18	22.63	20.48	22.48	PASS
LTE Band 26	15M	QPSK	26915	36RB#39	22.31	20.16	22.16	PASS
LTE Band 26	15M	QPSK	26915	75RB#0	22.46	20.31	22.31	PASS
LTE Band 26	15M	QPSK	26965	1RB#0	23.26	21.11	23.11	PASS
LTE Band 26	15M	QPSK	26965	1RB#38	23.70	21.55	23.55	PASS
LTE Band 26	15M	QPSK	26965	1RB#74	22.71	20.56	22.56	PASS
LTE Band 26	15M	QPSK	26965	36RB#0	22.70	20.55	22.55	PASS
LTE Band 26	15M	QPSK	26965	36RB#18	22.54	20.39	22.39	PASS
LTE Band 26	15M	QPSK	26965	36RB#39	22.42	20.27	22.27	PASS
LTE Band 26	15M	QPSK	26965	75RB#0	22.59	20.44	22.44	PASS
LTE Band 26	15M	16QAM	26865	1RB#0	21.95	19.80	21.80	PASS



LTE Band 26	15M	16QAM	26865	1RB#38	22.06	19.91	21.91	PASS
LTE Band 26	15M	16QAM	26865	1RB#74	22.06	19.91	21.91	PASS
LTE Band 26	15M	16QAM	26865	36RB#0	21.45	19.30	21.30	PASS
LTE Band 26	15M	16QAM	26865	36RB#18	21.47	19.32	21.32	PASS
LTE Band 26	15M	16QAM	26865	36RB#39	21.47	19.32	21.32	PASS
LTE Band 26	15M	16QAM	26865	75RB#0	21.48	19.33	21.33	PASS
LTE Band 26	15M	16QAM	26915	1RB#0	22.17	20.02	22.02	PASS
LTE Band 26	15M	16QAM	26915	1RB#38	22.24	20.09	22.09	PASS
LTE Band 26	15M	16QAM	26915	1RB#74	22.14	19.99	21.99	PASS
LTE Band 26	15M	16QAM	26915	36RB#0	21.56	19.41	21.41	PASS
LTE Band 26	15M	16QAM	26915	36RB#18	21.42	19.27	21.27	PASS
LTE Band 26	15M	16QAM	26915	36RB#39	21.46	19.31	21.31	PASS
LTE Band 26	15M	16QAM	26915	75RB#0	21.39	19.24	21.24	PASS
LTE Band 26	15M	16QAM	26965	1RB#0	22.07	19.92	21.92	PASS
LTE Band 26	15M	16QAM	26965	1RB#38	22.12	19.97	21.97	PASS
LTE Band 26	15M	16QAM	26965	1RB#74	22.10	19.95	21.95	PASS
LTE Band 26	15M	16QAM	26965	36RB#0	21.53	19.38	21.38	PASS
LTE Band 26	15M	16QAM	26965	36RB#18	21.49	19.34	21.34	PASS
LTE Band 26	15M	16QAM	26965	36RB#39	21.44	19.29	21.29	PASS
LTE Band 26	15M	16QAM	26965	75RB#0	21.42	19.27	21.27	PASS

Note: All conducted power has been calculated for line loss.

5.2. Radiates Spurious Emission

Ambient condition

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

Method of Measurement

1. The testing follows FCC KDB 971168 v03r01 Section 5.8 and ANSI C63.26 (2015).
2. Below 1GHz: The EUT is placed on a turntable 0.8 meters above the ground in the chamber, 3 meter away from the antenna. The maximal emission value is acquired by adjusting the antenna height, polarisation and turntable azimuth. Normally, the height range of antenna is 1 m to 4 m, the azimuth range of turntable is 0° to 360°, and the receive antenna has two polarizations Vertical (V) and Horizontal (H). Above 1GHz: (Note: the FCC's permission to use 1.5m as an alternative per TCBC Conf call of Dec. 2, 2014.) The EUT is placed on a turntable 1.5 meters above the ground in the chamber, 3 meter away from the antenna. The maximal emission value is acquired by adjusting the antenna height, polarisation and turntable azimuth. Normally, the height range of antenna is 1 m to 4 m, the azimuth range of turntable is 0° to 360°, and the receive antenna has two polarizations Vertical (V) and Horizontal (H).
3. A loop antenna, A log-periodic antenna or horn antenna shall be substituted in place of the EUT. The log-periodic antenna will be driven by a signal generator and the level will be adjusted till the same power value on the spectrum analyzer or receiver. The level of the spurious emissions can be calculated through the level of the signal generator, cable loss, the gain of the substitution antenna and the reading of the spectrum analyzer or receiver.
4. The EUT is then put into continuously transmitting mode at its maximum power level during the test. Set Test Receiver or Spectrum RBW=200Hz,VBW=600Hz for 9kHz-150kHz , RBW=10kHz, VBW=30kHz 150kHz-30MHz , RBW=100kHz,VBW=300kHz for 30MHz to 1GHz and RBW=1MHz, VBW=3MHz for above 1GHz, And the maximum value of the receiver should be recorded as (Pr).
5. The EUT shall be replaced by a substitution antenna. 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 (PMea) is applied to the input of the substitution antenna, and adjust the level of the signal generator output until the value of the receiver reach the previously recorded (Pr). The power of signal source (PMea) is recorded. The test should be performed by rotating the test item and adjusting the receiving antenna polarization.
6. A amplifier should be connected to the Signal Source output port. And the cable should be connect between the Amplifier and the Substitution Antenna. The cable loss (Pcl) ,the Substitution Antenna Gain (Ga) and the Amplifier Gain (PAg) should be recorded after test.
7. The measurement results are obtained as described below:
$$\text{Power(EIRP)} = \text{PMea} - \text{PAg} - \text{Pcl} + \text{Ga}$$

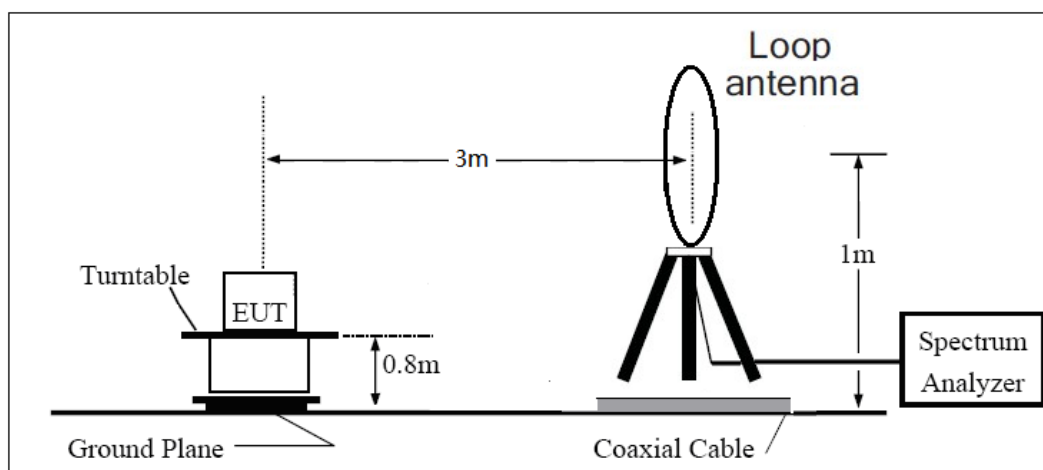
The measurement results are amend as described below:
$$\text{Power(EIRP)} = \text{PMea} - \text{Pcl} + \text{Ga}$$
8. This value is EIRP since the measurement is calibrated using an antenna of known gain (2.15 dBi) and known input power. ERP can be calculated from EIRP by subtracting the gain of the dipole, ERP

= EIRP-2.15dBi.

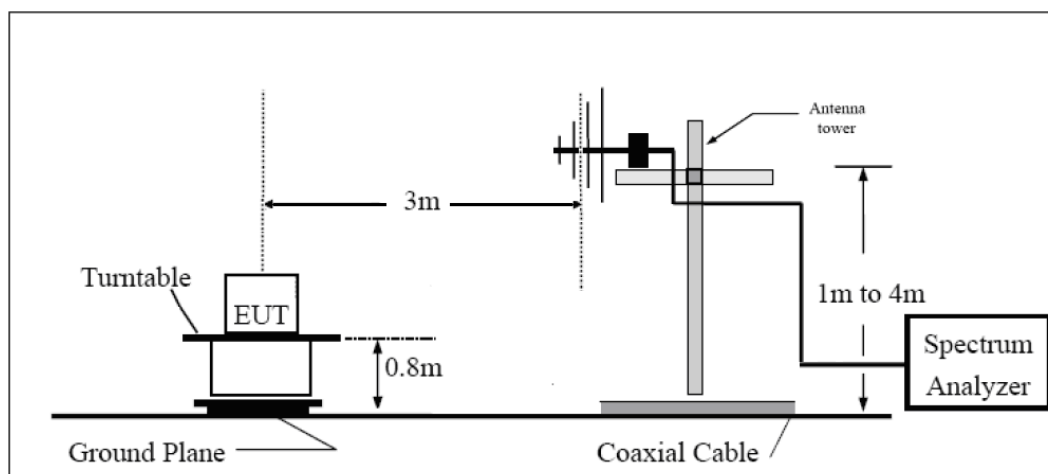
The modulation mode and RB allocation refer to section 5.1, using the maximum output power configuration.

Test setup

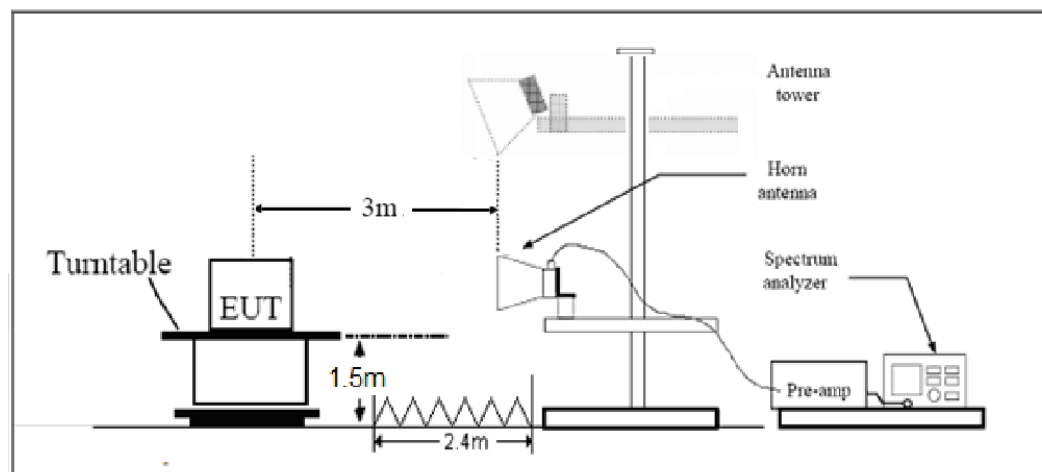
9KHz ~ 30MHz



30MHz ~ 1GHz



Above 1GHz



Note: Area side:2.4mX3.6m



Limits

Rule Part 22.917(a) specifies 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.”

Limit	-13 dBm
-------	---------

Measurement Uncertainty

The assessed measurement uncertainty to ensure 95% confidence level for the normal distribution is with the coverage factor $k = 1.96$, $U = 3.55$ dB.

**Test Result**

Sweep the whole frequency band through the range from 9kHz to the 10th harmonic of the carrier, the emissions below the noise floor will not be recorded in the report.

GSM 850 CH-Middle

Harmonic	Frequency (MHz)	SG (dBm)	Cable Loss (dB)	Gain (dBi)	Antenna Polarization	ERP Level (dBm)	Limit (dBm)	Margin (dB)	Azimuth (deg)
2	1673.20	-49.78	2.00	10.75	Horizontal	-43.18	-13.00	30.18	225
3	2509.69	-39.21	2.51	11.05	Horizontal	-32.82	-13.00	19.82	180
4	3346.40	-61.42	4.20	11.15	Horizontal	-56.62	-13.00	43.62	0
5	4183.00	-59.52	5.20	11.15	Horizontal	-55.72	-13.00	42.72	45
6	5019.60	-58.63	5.50	11.95	Horizontal	-54.33	-13.00	41.33	270
7	5856.20	-59.81	5.70	13.55	Horizontal	-54.11	-13.00	41.11	180
8	6692.80	-57.31	6.30	13.75	Horizontal	-52.01	-13.00	39.01	0
9	7529.40	-54.95	6.80	13.85	Horizontal	-50.05	-13.00	37.05	45
10	8366.00	-54.67	6.90	14.25	Horizontal	-49.47	-13.00	36.47	315

Note: 1.The other Spurious RF Radiated emissions level is no more than noise floor.
2.The worst emission was found in the antenna is Horizontal position.

WCDMA Band V CH-Middle

Harmonic	Frequency (MHz)	SG (dBm)	Cable Loss (dB)	Gain (dBi)	Antenna Polarization	ERP Level (dBm)	Limit (dBm)	Margin (dB)	Azimuth (deg)
2	1673.20	-63.70	2.00	10.75	Horizontal	-57.10	-13.00	44.10	90
3	2509.80	-61.38	2.51	11.05	Horizontal	-54.99	-13.00	41.99	270
4	3346.40	-62.93	4.20	11.15	Horizontal	-58.13	-13.00	45.13	0
5	4183.00	-59.95	5.20	11.15	Horizontal	-56.15	-13.00	43.15	45
6	5019.60	-58.08	5.50	11.95	Horizontal	-53.78	-13.00	40.78	180
7	5856.20	-59.84	5.70	13.55	Horizontal	-54.14	-13.00	41.14	180
8	6692.80	-56.77	6.30	13.75	Horizontal	-51.47	-13.00	38.47	0
9	7529.40	-55.47	6.80	13.85	Horizontal	-50.57	-13.00	37.57	45
10	8366.00	-52.51	6.90	14.25	Horizontal	-47.31	-13.00	34.31	90

Note: 1.The other Spurious RF Radiated emissions level is no more than noise floor.
2.The worst emission was found in the antenna is Horizontal position.



LTE Band 5 1.4MHz CH-Middle

Harmonic	Frequency (MHz)	SG (dBm)	Cable Loss (dB)	Gain (dBi)	Antenna Polarization	ERP Level (dBm)	Limit (dBm)	Margin (dB)	Azimuth (deg)
2	1673.00	-59.16	2.00	10.75	Horizontal	-52.56	-13.00	39.56	0
3	2509.50	-60.44	2.51	11.05	Horizontal	-54.05	-13.00	41.05	180
4	3346.00	-57.49	4.20	11.15	Horizontal	-52.69	-13.00	39.69	0
5	4182.50	-56.64	5.20	11.15	Horizontal	-52.84	-13.00	39.84	0
6	5019.00	-55.82	5.50	11.95	Horizontal	-51.52	-13.00	38.52	45
7	5855.50	-60.61	5.70	13.55	Horizontal	-54.91	-13.00	41.91	315
8	6692.00	-57.13	6.30	13.75	Horizontal	-51.83	-13.00	38.83	90
9	7528.50	-55.17	6.80	13.85	Horizontal	-50.27	-13.00	37.27	180
10	8365.00	-53.99	6.90	14.25	Horizontal	-48.79	-13.00	35.79	45
Note: 1.The other Spurious RF Radiated emissions level is no more than noise floor. 2.The worst emission was found in the antenna is Horizontal position.									

LTE Band 5 5MHz CH-Middle

Harmonic	Frequency (MHz)	SG (dBm)	Cable Loss (dB)	Gain (dBi)	Antenna Polarization	ERP Level (dBm)	Limit (dBm)	Margin (dB)	Azimuth (deg)
2	1668.60	-56.13	2.00	10.75	Horizontal	-49.53	-13.00	36.53	45
3	2503.30	-60.14	2.51	11.05	Horizontal	-53.75	-13.00	40.75	315
4	3466.20	-58.19	4.20	11.15	Horizontal	-53.39	-13.00	40.39	225
5	4215.90	-56.84	5.20	11.15	Horizontal	-53.04	-13.00	40.04	0
6	5165.60	-53.83	5.50	11.95	Horizontal	-49.53	-13.00	36.53	45
7	5815.30	-58.33	5.70	13.55	Horizontal	-52.63	-13.00	39.63	315
8	6765.00	-56.75	6.30	13.75	Horizontal	-51.45	-13.00	38.45	90
9	7614.70	-55.37	6.80	13.85	Horizontal	-50.47	-13.00	37.47	135
10	8464.40	-57.31	6.90	14.25	Horizontal	-52.11	-13.00	39.11	45
Note: 1.The other Spurious RF Radiated emissions level is no more than noise floor. 2.The worst emission was found in the antenna is Horizontal position.									



LTE Band 5 10MHz CH-Middle

Harmonic	Frequency (MHz)	SG (dBm)	Cable Loss (dB)	Gain (dBi)	Antenna Polarization	ERP Level (dBm)	Limit (dBm)	Margin (dB)	Azimuth (deg)
2	1664.40	-55.34	2.00	10.75	Horizontal	-48.74	-13.00	35.74	90
3	2496.60	-60.02	2.51	11.05	Horizontal	-53.63	-13.00	40.63	180
4	3346.00	-58.15	4.20	11.15	Horizontal	-53.35	-13.00	40.35	180
5	4182.50	-55.80	5.20	11.15	Horizontal	-52.00	-13.00	39.00	0
6	5019.00	-53.38	5.50	11.95	Horizontal	-49.08	-13.00	36.08	45
7	5855.50	-57.02	5.70	13.55	Horizontal	-51.32	-13.00	38.32	315
8	6692.00	-54.23	6.30	13.75	Horizontal	-48.93	-13.00	35.93	90
9	7528.50	-55.28	6.80	13.85	Horizontal	-50.38	-13.00	37.38	45
10	8365.00	-55.56	6.90	14.25	Horizontal	-50.36	-13.00	37.36	180

Note: 1.The other Spurious RF Radiated emissions level is no more than noise floor.

2.The worst emission was found in the antenna is Horizontal position.

LTE Band 26 1.4MHz CH-Middle

Harmonic	Frequency (MHz)	SG (dBm)	Cable Loss (dB)	Gain (dBi)	Antenna Polarization	ERP Level (dBm)	Limit (dBm)	Margin (dB)	Azimuth (deg)
2	1673.00	-64.56	2.00	10.75	Horizontal	-57.96	-13.00	44.96	180
3	2509.50	-52.64	2.51	11.05	Horizontal	-46.25	-13.00	33.25	225
4	3346.00	-60.00	4.20	11.15	Horizontal	-55.20	-13.00	42.20	180
5	4182.50	-57.22	5.20	11.15	Horizontal	-53.42	-13.00	40.42	45
6	5019.00	-53.81	5.50	11.95	Horizontal	-49.51	-13.00	36.51	270
7	5855.50	-56.39	5.70	13.55	Horizontal	-50.69	-13.00	37.69	315
8	6692.00	-56.93	6.30	13.75	Horizontal	-51.63	-13.00	38.63	90
9	7528.50	-54.47	6.80	13.85	Horizontal	-49.57	-13.00	36.57	315
10	8365.00	-54.79	6.90	14.25	Horizontal	-49.59	-13.00	36.59	45

Note: 1.The other Spurious RF Radiated emissions level is no more than noise floor.

2.The worst emission was found in the antenna is Horizontal position.



LTE Band 26 5MHz CH-Middle

Harmonic	Frequency (MHz)	SG (dBm)	Cable Loss (dB)	Gain (dBi)	Antenna Polarization	ERP Level (dBm)	Limit (dBm)	Margin (dB)	Azimuth (deg)
2	1668.56	-62.90	2.00	10.75	Horizontal	-56.30	-13.00	43.30	315
3	2502.75	-52.45	2.51	11.05	Horizontal	-46.06	-13.00	33.06	90
4	3346.00	-59.24	4.20	11.15	Horizontal	-54.44	-13.00	41.44	315
5	4182.50	-58.53	5.20	11.15	Horizontal	-54.73	-13.00	41.73	45
6	5019.00	-53.26	5.50	11.95	Horizontal	-48.96	-13.00	35.96	135
7	5855.50	-57.22	5.70	13.55	Horizontal	-51.52	-13.00	38.52	45
8	6692.00	-55.97	6.30	13.75	Horizontal	-50.67	-13.00	37.67	270
9	7528.50	-54.81	6.80	13.85	Horizontal	-49.91	-13.00	36.91	315
10	8365.00	-55.12	6.90	14.25	Horizontal	-49.92	-13.00	36.92	180

Note: 1.The other Spurious RF Radiated emissions level is no more than noise floor.

2.The worst emission was found in the antenna is Horizontal position.

LTE Band 26 15MHz CH-Middle

Harmonic	Frequency (MHz)	SG (dBm)	Cable Loss (dB)	Gain (dBi)	Antenna Polarization	ERP Level (dBm)	Limit (dBm)	Margin (dB)	Azimuth (deg)
2	1673.00	-63.02	2.00	10.75	Horizontal	-56.42	-13.00	43.42	0
3	2509.50	-49.98	2.51	11.05	Horizontal	-43.59	-13.00	30.59	315
4	3346.00	-58.36	4.20	11.15	Horizontal	-53.56	-13.00	40.56	90
5	4182.50	-56.35	5.20	11.15	Horizontal	-52.55	-13.00	39.55	180
6	5019.00	-54.80	5.50	11.95	Horizontal	-50.50	-13.00	37.50	45
7	5855.50	-57.01	5.70	13.55	Horizontal	-51.31	-13.00	38.31	315
8	6692.00	-56.97	6.30	13.75	Horizontal	-51.67	-13.00	38.67	45
9	7528.50	-54.75	6.80	13.85	Horizontal	-49.85	-13.00	36.85	315
10	8365.00	-56.72	6.90	14.25	Horizontal	-51.52	-13.00	38.52	90

Note: 1.The other Spurious RF Radiated emissions level is no more than noise floor.

2.The worst emission was found in the antenna is Horizontal position.



6. Main Test Instruments

Name	Manufacturer	Type	Serial Number	Calibration Date	Expiration Date
Base Station Simulator	R&S	CMW500	113824	2020-05-18	2021-05-17
Power Splitter	Hua Xiang	SHX-GF2-2-13	10120101	/	/
Spectrum Analyzer	Key sight	N9010A	MY50210259	2020-05-18	2021-05-17
Universal Radio Communication Tester	Key sight	E5515C	MY48367192	2020-05-27	2021-05-26
Signal Analyzer	R&S	FSV30	100815	2019-12-15	2020-12-14
Loop Antenna	SCHWARZBECK	FMZB1519	1519-047	2020-04-02	2023-04-01
Trilog Antenna	SCHWARZBECK	VUBL 9163	9163-201	2017-11-18	2020-11-17
Horn Antenna	R&S	HF907	102723	2018-08-11	2021-08-10
Horn Antenna	ETS-Lindgren	3160-09	00102643	2018-06-20	2021-06-19
Signal generator	R&S	SMB 100A	102594	2020-05-18	2021-05-17
Climatic Chamber	ESPEC	SU-242	93000506	2017-12-17	2020-12-16
Preamplifier	R&S	SCU18	102327	2020-05-18	2021-05-17
MOB COMMS DC SUPPLY	Keysight	66319D	MY43004105	2020-05-18	2021-05-17
RF Cable	Agilent	SMA 15cm	0001	2020-06-12	2020-12-11
Software	R&S	EMC32	9.26.0	/	/

*****END OF REPORT *****



ANNEX A: The EUT Appearance

The EUT Appearance are submitted separately.

ANNEX B: Test Setup Photos

The Test Setup Photos are submitted separately.