FCC RF Test Report

(LTE)

Applicant:	Teladoc Health, Inc.
Address of Applicant:	150 W. Evelyn, Suite 150, Mountain View, CA 94041
Equipment Under Test (EUT)	
Product Name:	Livongo Blood Glucose Monitoring System
Model No.:	BG1000
Trade mark:	Livongo
FCC ID:	2AA92LV02799
Applicable standards:	FCC CFR Title 47 Part 2, 22H, 24E, & 27
Date of sample receipt:	04 Jul., 2021
Date of Test:	05 Jul., to 23 Nov., 2021
Date of report issued:	13 Dec., 2021
Test Result:	PASS*

* In the configuration tested, the EUT complied with the standards specified above.

Tested by:	Mike.ou ***Test Engineer***	***Date:***	*13 Dec., 2021*
Reviewed by:	Winner Zhang ***Project Engineer***	***Date:***	*13 Dec., 2021*
Approved by:	Eric.Zheng ***Manager***	***Date:***	*13 Dec., 2021*

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2. Version

Version No.	Date	Description
00	*13 Dec., 2021*	*Original*

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4. Test Summary

Test Item	Section in CFR 47	Result
Effective radiated power, Effective Isotropic Radiated Power	Part 2.1046 Part 22.913 (a)(5) Part 24.232 (c) Part 27.50 (c)(10) Part 27.50 (d)(4)	Pass
Peak-to-Average Power Ratio	Part 22.913 (d) Part 24.232 (d) Part 27.50(d)(5)	Pass
-26dB Bandwidth & Occupied Bandwidth	Part 2.1049 Part 22.917(b) Part 24.238(b) Part 27.53(h)(3)	Pass
Band Edge	Part 2.1051 Part 22.917 (a) Part 24.238 (a) Part 27.53(g) Part 27.53 (h)(1)	Pass
Conducted Spurious Emission	Part 2.1051 Part 22.917 (a) Part 24.238 (a) Part 27.53(g) Part 27.53 (h)(1)	Pass
Field strength of spurious radiation	Part 2.1053 Part 22.917 (a) Part 24.238 (a) Part 27.53(g) Part 27.53 (h)(1)	Pass
Frequency stability	Part 22.355 Part 24.235 Part 27.54 Part 2.1055(a)(1)(b) Part 2.1055(d)(2)	Pass
Modulation Characteristics	Part 2.1047(a)	Pass

Remark:

1. Pass: The EUT complies with the essential requirements in the standard.

Test Method:	*ANSI C63.26-2015* *KDB 971168 D01 Power Meas License Digital Systems v03r01* *KDB 412172 D01 Determining ERP and EIRP v01r01*

5. General Information

5.1 Client Information

Applicant:	Livongo Health, Inc.
Address:	150 W. Evelyn, Suite 150, Mountain View, CA 94041
Manufacturer:	Livongo Health, Inc.
Address:	150 W. Evelyn, Suite 150, Mountain View, CA 94041

5.2 General Description of E.U.T.

Product Name:	Livongo Blood Glucose Monitoring System
Model No.:	BG1000
Operation Frequency range:	LTE Band 2: Tx: 1850 MHz-1910 MHz Rx: 1930 MHz-1990 MHz LTE Band 4: Tx: 1710 MHz-1755 MHz Rx: 2110 MHz-2155 MHz LTE Band 5: Tx: 824 MHz-849 MHz Rx: 869 MHz-894 MHz LTE Band 12: Tx: 699 MHz-716 MHz Rx: 729 MHz-746 MHz LTE Band 66: Tx: 1710 MHz-1780 MHz Rx: 2110 MHz-2200 MHz LTE Band 71: Tx: 663 MHz-698 MHz Rx: 617 MHz-652 MHz
Modulation type:	☒ QPSK ☒ 16QAM ☐64QAM ☐265QAM
Antenna type:	Internal Antenna
Antenna gain:	LTE Band 2: 0.87 dBi (declare by Applicant) LTE Band 4: -1.35 dBi (declare by Applicant) LTE Band 5: -1.61 dBi (declare by Applicant) LTE Band 12: -3.49 dBi (declare by Applicant) LTE Band 66: -1.35 dBi (declare by Applicant) LTE Band 71: -5.49 dBi (declare by Applicant)
Power supply:	Rechargeable Li-ion Polymer Battery DC 3.85V, 2400mAh Manufacturer: ShenZhen BYD Lithium Battery Company Limited
AC adapter:	Adapter 1: Model: PSAA05E-050QL6W-R Input: AC100-240V, 50/60Hz, 0.2A Output: DC 5.0V, 1.0A Adapter 2: Model: PSAA05A-050QL6W-R Input: AC100-240V, 50/60Hz, 0.2A Output: DC 5.0V, 1.0A Adapter 3: Model: PSAA05K-050QL6W-R Input: AC100-240V, 50/60Hz, 0.2A Output: DC 5.0V, 1.0A Note: Only the pins are different between different models
Test Sample Condition:	The test samples were provided in good working order with no visible defects.

5.3 Test environment and mode

Operating Environment:	
Temperature:	Normal: 15℃ ~ 35℃, Extreme: -30℃ ~ +50℃
Humidity:	20 % ~ 75 % RH
Atmospheric Pressure:	1008 mbar
Voltage:	Nominal: 3.85Vdc, Extreme: Low 3.5 Vdc, High 4.4 Vdc
Test mode:	
QPSK mode	Keep the EUT communication with simulated station in QPSK mode
16QAM mode	Keep the EUT communication with simulated station in 16QAM mode
Remark: The EUT has been tested under continuous transmitting mode. Channel Low, Mid and High for each type band with rated data rate were chosen for full testing. The field strength of spurious radiation emission was measured as EUT stand-up position (H mode) and lie down position (E1, E2 mode) for these modes. Just the worst case position (H mode) shown in report.	

5.4 Description of Test Auxiliary Equipment

Test Equipment	Manufacturer	Model No.	Serial No.
Simulated Station	Rohde & Schwarz	CMW500	140493

5.5 Additions to, deviations, or exclusions from the method

No

5.6 Measurement Uncertainty

Parameter	Expanded Uncertainty (Confidence of 95%(U = 2Uc(y)))
Radiated Emission (9kHz ~ 30MHz) (3m SAC)	±3.13 dB
Radiated Emission (30MHz ~ 1000MHz) (3m SAC)	±4.45 dB
Radiated Emission (1GHz ~ 18GHz) (3m SAC)	±5.34 dB
Radiated Emission (18GHz ~ 40GHz) (3m SAC)	±5.34 dB

Note: *The measurement uncertainties shown below were calculated in accordance with the requirements of ANSI C63.26-2015. All the measurement uncertainty value were shown with a coverage k=2 to indicate 95% level of confidence. The measurement data show herein meets or exceeds the CISPR measurement uncertainty values specified in CISPR 16-4-2 and can be compared directly to specified limit to determine compliance.*

5.7 Laboratory Facility

The test facility is recognized, certified, or accredited by the following organizations:

- **FCC - Designation No.: CN1211**

JianYan Testing Group Shenzhen Co., Ltd. has been accredited as a testing laboratory by FCC(Federal Communications Commission). The test firm Registration No. is 727551.

- **ISED – CAB identifier.: CN0021**

The 3m Semi-anechoic chamber of JianYan Testing Group Shenzhen Co., Ltd. has been Registered by Certification and Engineering Bureau of Industry Canada for radio equipment testing with Registration No.: 10106A-1.

- **A2LA - Registration No.: 4346.01**

This laboratory is accredited in accordance with the recognized International Standard ISO/IEC 17025:2017 General requirements for the competence of testing and calibration laboratories. The test scope can be found as below link: https://portal.a2la.org/scopepdf/4346-01.pdf

5.8 Laboratory Location

JianYan Testing Group Shenzhen Co., Ltd.
Address: No.101, Building 8, Innovation Wisdom Port, No.155 Hongtian Road, Huangpu Community, Xinqiao Street, Bao'an District, Shenzhen, Guangdong, People's Republic of China.
Tel: +86-755-23118282, Fax: +86-755-23116366
Email: info-JYTee@lets.com, Website: http://www.ccis-cb.com

5.9 Test Instruments list

Radiated Emission:					
Test Equipment	**Manufacturer**	**Model No.**	**Management Number**	**Cal.Date (mm-dd-yy)**	**Cal. Due date (mm-dd-yy)**
3m SAC	ETS	9m*6m*6m	WXJ001-1	01-19-2021	01-18-2024
BiConiLog Antenna	Schwarzbeck	VULB9163	WXJ002	03-03-2021	03-02-2022
Biconical Antenna	Schwarzbeck	VUBA9117	WXJ002-1	06-20-2021	06-19-2022
Horn Antenna	Schwarzbeck	BBHA9120D	WXJ002-2	03-03-2021	03-02-2022
Horn Antenna	Schwarzbeck	BBHA9120D	WXJ002-3	06-18-2021	06-17-2022
Loop Antenna	Schwarzbeck	FMZB 1519 B	WXJ002-4	03-07-2021	03-06-2022
Pre-amplifier (30MHz ~ 1GHz)	HP	8447D	WXG001-2	03-07-2021	03-06-2022
Pre-amplifier (1GHz ~ 18GHz)	SKET	LNPA_0118G-50	WXG001-3	03-07-2021	03-06-2022
Pre-amplifier (18GHz ~ 40GHz)	RF System	TRLA-180400G45B	WXG001-9	03-07-2021	03-06-2022
EMI Test Receiver	Rohde & Schwarz	ESRP7	WXJ003-1	03-03-2021	03-02-2022
Spectrum Analyzer	KEYSIGHT	N9010B	WXJ004-2	11-27-2020	11-26-2021
Signal Generator	Agilent	N5173B	WXJ006-7	03-25-2021	03-24-2022
Simulated Station	Rohde & Schwarz	CMW500	WXJ008-3	06-17-2021	06-16-2022
Coaxial Cable (30MHz ~ 1GHz)	JYT	JYT3M-1G-NN-8M	WXG001-4	03-07-2021	03-06-2022
Coaxial Cable (1GHz ~ 18GHz)	JYT	JYT3M-18G-NN-8M	WXG001-5	03-07-2021	03-06-2022
Coaxial Cable (9kHz ~ 30MHz)	JYT	JYT3M-1G-BB-5M	WXG001-6	03-07-2021	03-06-2022
Coaxial Cable (18GHz ~ 40GHz)	JYT	JYT3M-40G-SS-8M	WXG001-7	03-07-2021	03-06-2022
Band Reject Filter Group	Tonscend	JS0806-F	WXJ089	N/A	
Test Software	Tonscend	RE/RSE/RS Test System	Version: 3.0.0.1		

Conducted method:					
Test Equipment	**Manufacturer**	**Model No.**	**Management Number**	**Cal. Date (mm-dd-yy)**	**Cal. Due date (mm-dd-yy)**
Spectrum Analyzer	Rohde & Schwarz	FSP30	WXJ004	03-03-2021	03-02-2022
Simulated Station	Rohde & Schwarz	CMW500	WXJ081	07-02-2021	07-01-2022
DC Power Supply	Keysight	E3642A	WXJ025-2	11-27-2020	11-26-2021
Temperature Humidity Chamber	HONG ZHI	CZ-A-80D	WXJ032-3	03-19-2021	03-18-2023
RF Control Unit	Tonscend	JS0806-1	WXG006-1	N/A	N/A
Band Reject Filter Group	Tonscend	JS0806-F	WXG006-2	N/A	N/A
Test Software	Tonscend	JS1120 RF Test System	Version: 2.6.9.0526		

6. Radio Technical Requirements Specification

6.1 Test Method

The EUT and test equipment were configured testing of according to ANSI C63.26-2015 and ANSI/TIA-603-E-2016.
The EUT was tested in the normal operating mode to represent worst-case results during the final qualification test.

6.2 Test Limit

<table>
<tr><th>Test Item</th><th>Clause</th><th>Limit</th></tr>
<tr><td rowspan="4">Effective Isotropic Radiated Power</td><td>Part 22.913(a)(5)</td><td>The ERP of mobile transmitters and auxiliary test transmitters must not exceed 7 watts.</td></tr>
<tr><td>Part 24.232(c)</td><td>Mobile and portable stations are limited to 2 watts EIRP and the equipment must employ a means for limiting power to the minimum necessary for successful communications.</td></tr>
<tr><td>Part 27.50(c)(10)</td><td>Portable stations (hand-held devices) in the 600 MHz uplink band and the 698-746 MHz band, and fixed and mobile stations in the 600 MHz uplink band are limited to 3 watts ERP.</td></tr>
<tr><td>Part 27.50(d)(4)</td><td>Fixed, mobile, and portable (hand-held) stations operating in the 1710-1755 MHz band and mobile and portable stations operating in the 1695-1710 MHz and 1755-1780 MHz bands are limited to 1 watt EIRP.</td></tr>
<tr><td>Peak-to-Average Power Ratio</td><td>Part 22.913(d)
Part 24.232(d)
Part 27.50(d)(5)</td><td>In measuring transmissions in this band using an average power technique, the peak-to-average ratio (PAR) of the transmission may not exceed 13 dB.</td></tr>
<tr><td>26dB Bandwidth & Occupied Bandwidth</td><td>Part 22.917(b)
Part 24.238(b)
Part 27.53(h)(3)</td><td>The emission bandwidth is defined as the width of the signal between two points, one below the carrier center frequency and one above the carrier center frequency, outside of which all emissions are attenuated at least 26 dB below the transmitter power.</td></tr>
<tr><td rowspan="3">Band Edge & Conducted Spurious Emission & Field strength of spurious radiation</td><td>Part 22.917(a)
Part 24.238(a)</td><td>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.</td></tr>
<tr><td>Part 27.53(g)</td><td>For operations in the 600 MHz band and the 698-746 MHz band, the power of any emission outside a licensee's frequency band(s) of operation shall be attenuated below the transmitter power (P) within the licensed band(s) of operation, measured in watts, by at least 43 + 10 log (P) dB. Compliance with this provision is based on the use of measurement instrumentation employing a resolution bandwidth of 100 kilohertz or greater. However, in the 100 kilohertz bands immediately outside and adjacent to a licensee's frequency block, a resolution bandwidth of at least 30 kHz may be employed.</td></tr>
<tr><td>Part 27.53(h)(1)</td><td>Operations in the 1695-1710 MHz, 1710-1755 MHz, 1755-1780 MHz, 1915-1920 MHz, 1995-2000 MHz, 2000-2020 MHz, 2110-2155 MHz, 2155-2180 MHz, and 2180-2200 bands, the power of any emission outside a licensee's frequency block shall be attenuated below the transmitter power (P) in watts by at least 43 + 10 log10 (P) dB.</td></tr>
<tr><td>Frequency stability</td><td>Part 22.355</td><td>TABLE C-1—FREQUENCY TOLERANCE FOR TRANSMITTERS IN THE PUBLIC MOBILE SERVICES
<table>
<tr><th>Frequency range (MHz)</th><th>Base, fixed (ppm)</th><th>Mobile >3 watts (ppm)</th><th>Mobile ≤3 watts (ppm)</th></tr>
<tr><td>25 to 50</td><td>20.0</td><td>20.0</td><td>50.0</td></tr>
<tr><td>50 to 450</td><td>5.0</td><td>5.0</td><td>50.0</td></tr>
<tr><td>450 to 512</td><td>2.5</td><td>5.0</td><td>5.0</td></tr>
<tr><td>821 to 896</td><td>1.5</td><td>2.5</td><td>2.5</td></tr>
<tr><td>928 to 929</td><td>5.0</td><td>n/a</td><td>n/a</td></tr>
<tr><td>929 to 960</td><td>1.5</td><td>n/a</td><td>n/a</td></tr>
<tr><td>2110 to 2220</td><td>10.0</td><td>n/a</td><td>n/a</td></tr>
</table></td></tr>
</table>

Test Item	Clause	Limit
Frequency stability	Part 24.235	The frequency stability shall be sufficient to ensure that the fundamental emission stays within the authorized frequency block.
	Part 27.54	The frequency stability shall be sufficient to ensure that the fundamental emissions stay within the authorized bands of operation.
Modulation Characteristics	Part 2.1047(a)	Voice modulated communication equipment. A curve or equivalent data showing the frequency response of the audio modulating circuit over a range of 100 to 5000 Hz shall be submitted. For equipment required to have an audio low-pass filter, a curve showing the frequency response of the filter, or of all circuitry installed between the modulation limiter and the modulated stage shall be submitted.

6.3 Test Configuration of EUT

6.3.1 Operation Frequency List:

LTE Band 2 (1.4 MHz)		LTE Band 2 (3 MHz)	
Channel	Frequency (MHz)	Channel	Frequency (MHz)
18607	1850.70	18615	1851.50
18608	1850.80	18616	1851.60
….	….	….	….
18899	1879.90	18899	1879.90
18900	1880.00	18900	1880.00
18901	1880.10	18901	1880.10
…	…	…	…
19193	1909.20	19185	1908.40
19194	1909.30	19186	1908.50
LTE Band 2 (5 MHz)		LTE Band 2 (10 MHz)	
Channel	Frequency (MHz)	Channel	Frequency (MHz)
18625	1852.50	18650	1855.00
18626	1852.60	18651	1855.10
….	….	….	….
18899	1879.90	18899	1879.90
18900	1880.00	18900	1880.00
18901	1880.10	18901	1880.10
….	….	….	….
19175	1907.40	19150	1904.90
19176	1907.50	19151	1905.00
LTE Band 2 (15 MHz)		LTE Band 2 (20 MHz)	
Channel	Frequency (MHz)	Channel	Frequency (MHz)
18675	1857.50	18700	1860.00
18676	1857.60	18701	1860.10
….	….	….	….
18899	1879.90	18899	1879.90
18900	1880.00	18900	1880.00
18901	1880.10	18901	1880.10
….	….	….	….
19125	1902.40	19100	1899.90
19126	1902.50	19101	1900.00

LTE Band 4 (1.4 MHz)		LTE Band 4 (3 MHz)	
Channel	Frequency (MHz)	Channel	Frequency (MHz)
19957	1710.70	19965	1711.50
19958	1710.80	19966	1711.60
….	….	….	….
20174	1732.40	20174	1732.40
20175	1732.50	20175	1732.50
20176	1732.60	20176	1732.60
….	….	….	….
20392	1754.20	20384	1753.40
20393	1754.30	20385	1753.50
LTE Band 4 (5 MHz)		LTE Band 4 (10 MHz)	
Channel	Frequency (MHz)	Channel	Frequency (MHz)
19975	1712.50	20000	1715.00
19976	1712.60	20001	1715.10
….	….	….	….
20174	1732.40	20174	1732.40
20175	1732.50	20175	1732.50
20176	1732.60	20176	1732.60
…	…	…	…
20374	1752.40	20349	1749.90
20375	1752.50	20350	1750.00
LTE Band 4 (15 MHz)		LTE Band 4 (20 MHz)	
Channel	Frequency (MHz)	Channel	Frequency (MHz)
20025	1717.50	20050	1720.00
20026	1717.60	20051	1720.10
….	….	….	….
20174	1732.40	20174	1732.40
20175	1732.50	20175	1732.50
20176	1732.60	20176	1732.60
….	….	….	….
20324	1747.40	20299	1744.90
20325	1747.50	20300	1745.00

LTE Band 5 (1.4 MHz)		LTE Band 5 (3 MHz)	
Channel	Frequency (MHz)	Channel	Frequency (MHz)
20407	824.70	20415	825.50
20408	824.80	20416	825.60
….	….	….	….
20524	836.40	20524	836.40
20525	836.50	20525	836.50
20526	836.60	20526	836.60
….	….	….	….
20642	848.20	20634	847.40
20643	848.30	20635	847.50
LTE Band 5 (5 MHz)		LTE Band 5 (10 MHz)	
Channel	Frequency (MHz)	Channel	Frequency (MHz)
20425	826.50	20450	829.00
20426	826.60	20451	829.10
….	….	….	….
20524	836.40	20524	836.40
20525	836.50	20525	836.50
20526	836.60	20526	836.60
….	….	….	….
20624	846.40	20599	839.90
20625	846.50	20600	844.00

LTE Band 12 (1.4 MHz)		LTE Band 12 (3 MHz)	
Channel	Frequency (MHz)	Channel	Frequency (MHz)
23017	699.70	23025	700.50
23756	699.80	23026	700.60
….	….	….	….
23094	707.40	23094	707.40
23095	707.50	23095	707.50
23096	707.60	23096	707.60
….	….	….	….
23172	715.20	23164	714.40
23173	715.30	23165	714.50
LTE Band 12 (5 MHz)		LTE Band 12 (10 MHz)	
Channel	Frequency (MHz)	Channel	Frequency (MHz)
23035	701.50	23060	704.00
23036	701.60	23061	704.10
….	….	….	….
23094	707.40	23094	707.40
23095	707.50	23095	707.50
23096	707.60	23096	707.60
….	….	….	….
23154	713.40	23129	710.90
23155	713.50	23130	711.00

LTE Band 66 (1.4 MHz)		LTE Band 66 (3 MHz)	
Channel	Frequency (MHz)	Channel	Frequency (MHz)
131979	1710.70	131987	1711.50
131980	1710.80	131988	1711.60
….	….	….	….
132321	1744.90	132321	1744.90
132322	1745.00	132322	1745.00
132323	1745.10	132323	1745.10
…	…	…	…
132664	1779.20	132656	1778.40
132665	1779.30	132657	1778.50
LTE Band 66 (5 MHz)		LTE Band 66 (10 MHz)	
Channel	Frequency (MHz)	Channel	Frequency (MHz)
131997	1712.50	132022	1715.00
131998	1712.60	132023	1715.10
….	….	….	….
132321	1744.90	132321	1744.90
132322	1745.00	132322	1745.00
132323	1745.10	132323	1745.10
…	…	…	…
136246	1777.40	132621	1774.90
136247	1777.50	132622	1775.00
LTE Band 66 (15 MHz)		LTE Band 66 (20 MHz)	
Channel	Frequency (MHz)	Channel	Frequency (MHz)
132047	1717.50	132072	1720.00
132048	1717.60	132073	1720.10
….	….	….	….
132321	1744.90	132321	1744.90
132322	1745.00	132322	1745.00
132323	1745.10	132323	1745.10
…	…	…	…
132596	1772.40	132571	1769.90
132597	1772.50	132572	1770.00

LTE Band 71 (5 MHz)		LTE Band 71 (10 MHz)	
Channel	Frequency (MHz)	Channel	Frequency (MHz)
133147	665.50	133172	668.00
133148	665.60	133173	668.10
….	….	….	….
133296	680.40	133296	680.40
133297	680.50	133297	680.50
133298	680.60	133298	680.60
…	…	…	…
133448	695.40	133421	692.90
133447	695.50	133422	693.00
LTE Band 71 (15 MHz)		LTE Band 66 (20 MHz)	
Channel	Frequency (MHz)	Channel	Frequency (MHz)
133197	670.50	133222	673.00
133198	670.60	133223	673.10
….	….	….	….
133296	680.40	133321	682.90
133297	680.50	133322	683.00
133298	680.60	133323	683.10
…	…	…	…
133396	690.40	133371	687.90
133397	690.50	133372	688.00

Regards to the operating frequency range over 10 MHz, the Lowest frequency, the middle frequency, and the highest frequency of channel were selected to perform the test, and the selected channel see below:

LTE Band 2 (1.4 MHz)			LTE Band 2 (3 MHz)		
Channel		Frequency (MHz)	Channel		Frequency (MHz)
Lowest	18607	1850.70	Lowest	18615	1851.50
Middle	18900	1880.00	Middle	18900	1880.00
Highest	19193	1909.30	Highest	19185	1908.50
LTE Band 2 (5MHz)			LTE Band 2 (10MHz)		
Channel		Frequency (MHz)	Channel		Frequency (MHz)
Lowest	18625	1852.50	Lowest	18650	1855.00
Middle	18900	1880.00	Middle	18900	1880.00
Highest	19175	1907.50	Highest	19150	1905.00
LTE Band 2 (15MHz)			LTE Band 2 (20MHz)		
Channel		Frequency (MHz)	Channel		Frequency (MHz)
Lowest	18675	1857.50	Lowest	18700	1860.00
Middle	18900	1880.00	Middle	18900	1880.00
Highest	19125	1902.50	Highest	19100	1900.00

LTE Band 4 (1.4MHz)			LTE Band 4 (3MHz)		
Channel		Frequency (MHz)	Channel		Frequency (MHz)
Lowest	19957	1710.70	Lowest	19965	1711.50
Middle	20175	1732.50	Middle	20175	1732.50
Highest	20393	1754.30	Highest	20385	1753.50
LTE Band 4 (5MHz)			LTE Band 4 (10MHz)		
Channel		Frequency (MHz)	Channel		Frequency (MHz)
Lowest	19975	1712.50	Lowest	20000	1715.00
Middle	20175	1732.50	Middle	20175	1732.50
Highest	20375	1752.50	Highest	20350	1750.00
LTE Band 4 (15MHz)			LTE Band 4 (20MHz)		
Channel		Frequency (MHz)	Channel		Frequency (MHz)
Lowest	20025	1717.50	Lowest	20050	1720.00
Middle	20175	1732.50	Middle	20175	1732.50
Highest	20325	1747.50	Highest	20300	1745.00

LTE Band 5 (1.4MHz)			LTE Band 5 (3MHz)		
Channel		Frequency (MHz)	Channel		Frequency (MHz)
Lowest	20407	824.70	Lowest	20415	825.5
Middle	20525	836.50	Middle	20525	836.50
Highest	20643	848.30	Highest	20635	847.50
LTE Band 5 (5MHz)			LTE Band 5 (10MHz)		
Channel		Frequency (MHz)	Channel		Frequency (MHz)
Lowest	20425	826.50	Lowest	20450	829.00
Middle	20525	836.50	Middle	20525	836.50
Highest	20625	846.50	Highest	20600	844.00

LTE Band 12(1.4MHz)			LTE Band 12(3MHz)		
Channel		Frequency (MHz)	Channel		Frequency (MHz)
Lowest	23017	699.70	Lowest	23025	700.50
Middle	23095	707.50	Middle	23095	707.50
Highest	23173	715.30	Highest	23165	714.50
LTE Band 12(5MHz)			LTE Band 12(10MHz)		
Channel		Frequency (MHz)	Channel		Frequency (MHz)
Lowest	23035	701.50	Lowest	23060	704.00
Middle	23095	707.50	Middle	23095	707.50
Highest	23155	713.50	Highest	23130	711.00

LTE Band 17(5MHz)			LTE Band 17(10MHz)		
Channel		Frequency (MHz)	Channel		Frequency (MHz)
Lowest	23755	706.50	Lowest	23780	709.00
Middle	23790	710.00	Middle	23790	710.00
Highest	23825	713.50	Highest	23800	711.00

LTE Band 66 (1.4MHz)			LTE Band 66 (3MHz)		
Channel		Frequency (MHz)	Channel		Frequency (MHz)
Lowest	131979	1710.7	Lowest	131987	1711.5
Middle	132322	1745.0	Middle	132322	1745.0
Highest	132665	1779.3	Highest	132657	1778.5
LTE Band 66 (5MHz)			LTE Band 66 (10MHz)		
Channel		Frequency (MHz)	Channel		Frequency (MHz)
Lowest	131997	1712.5	Lowest	132022	1715.0
Middle	132322	1745.5	Middle	132322	1745.0
Highest	132647	1777.5	Highest	132622	1775.0
LTE Band 66 (15MHz)			LTE Band 66 (20MHz)		
Channel		Frequency (MHz)	Channel		Frequency (MHz)
Lowest	132047	1717.5	Lowest	132072	1720.0
Middle	132322	1745.0	Middle	132322	1745.0
Highest	132597	1772.5	Highest	132572	1770.0

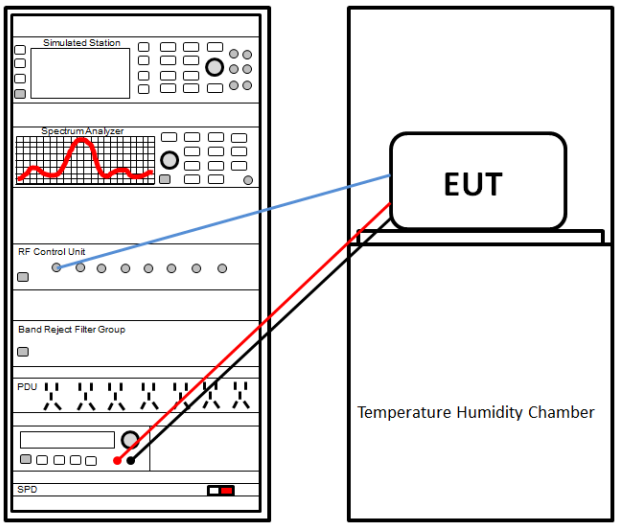
LTE Band 71 (5MHz)			LTE Band 71 (10MHz)		
Channel		Frequency (MHz)	Channel		Frequency (MHz)
Lowest	133147	665.50	Lowest	133172	668.00
Middle	133297	680.50	Middle	133297	680.50
Highest	133447	695.50	Highest	133422	693.00
LTE Band 71 (15MHz)			LTE Band 71 (20MHz)		
Channel		Frequency (MHz)	Channel		Frequency (MHz)
Lowest	133197	670.50	Lowest	133222	673.00
Middle	133297	680.50	Middle	133322	683.00
Highest	133397	690.50	Highest	133372	688.00

6.3.2 RB Configuration

Test Item	Operating Band	Channel	Bandwidth (MHz)	RB Configuration
Effective Isotropic Radiated Power	Band 2, Band 4, Band 5, Band 12, Band 66, Band 71	Lowest, Middle, Highest	1.4	1RB#0, 1RB#2, 1RB#5 3RB#0, 3RB#1, 3RB#3 6RB#0
			3	1RB#0, 1RB#8, 1RB#14 8RB#0, 8RB#4, 8RB#7 15RB#0
			5	1RB#0, 1RB#12, 1RB#24 12RB#0, 12RB#6, 12RB#13 25RB#0
			10	1RB#0, 1RB#24, 1RB#49 25RB#0, 25RB#12, 25RB#25 50RB#0
			15	1RB#0, 1RB#38, 1RB#74 38RB#0, 38RB#18, 38RB#37 75RB#0
			20	1RB#0, 1RB#49, 1RB#99 50RB#0, 50RB#25, 50RB#50 100RB#0
Peak-to-Average Power Ratio	Band 2, Band 4, Band 5, Band 12, Band 66, Band 71	Lowest, Middle, Highest	10, 20	50RB#0 100RB#0
26dB Bandwidth and Occupied Bandwidth	Band 2, Band 4, Band 5, Band 12, Band 66, Band 71	Lowest, Middle, Highest	1.4, 3, 5, 10, 15, 20	6RB#0, 15RB#0, 50RB#0, 75RB#0, 100RB#0
Band Edge	Band 2, Band 4, Band 5, Band 12, Band 66, Band 71	Lowest, Highest	1.4, 3, 5, 10, 15, 20	1RB#0,1RB#5, 6RB#0 1RB#0,1RB#14, 15RB#0 1RB#0,1RB#24, 25RB#0 1RB#0,1RB#49, 50RB#0 1RB#0,1RB#74, 75RB#0 1RB#0,1RB#99, 100RB#0
Conducted Spurious Emission	Band 2, Band 4, Band 5, Band 12, Band 66, Band 71	Lowest, Middle, Highest	10, 20	1RB#0
Field strength of spurious radiation	Band 2, Band 4, Band 5, Band 12, Band 66, Band 71	Lowest, Middle, Highest	10, 20	1RB#0
Frequency stability	Band 2, Band 4, Band 5, Band 12, Band 66, Band 71	Lowest, Middle, Highest	10, 20	50RB#0 100RB#0
Modulation Characteristics	Band 2, Band 4, Band 5, Band 12, Band 66, Band 71	Middle	10, 20	50RB#0 100RB#0
Note: *For the bandwidth supported by each operating band, see clause 6.3.1.*				

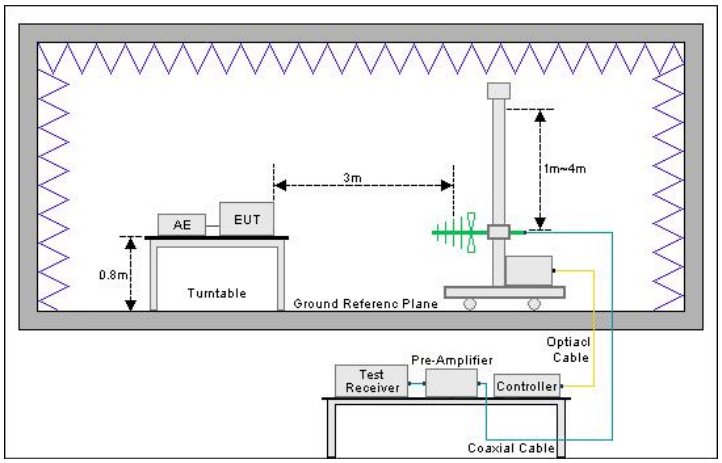
6.4 Test Setup Block

1) Conducted test method:

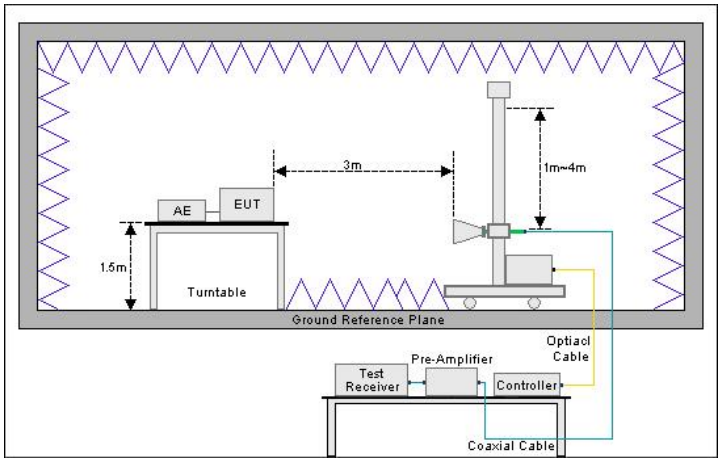


2) Radiated test method:

Below 1GHz

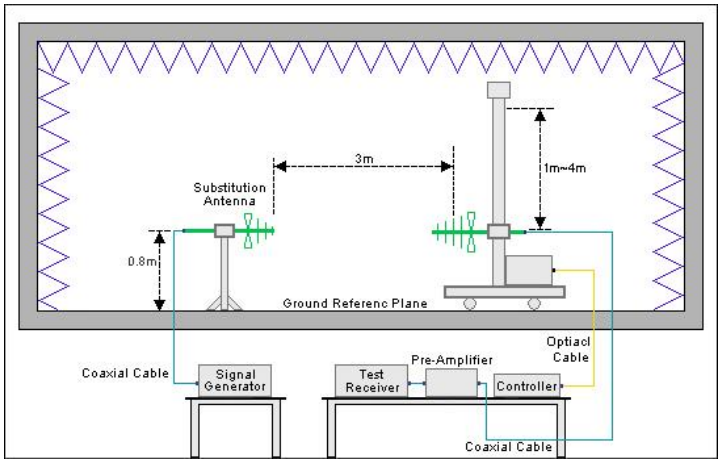


Above 1GHz

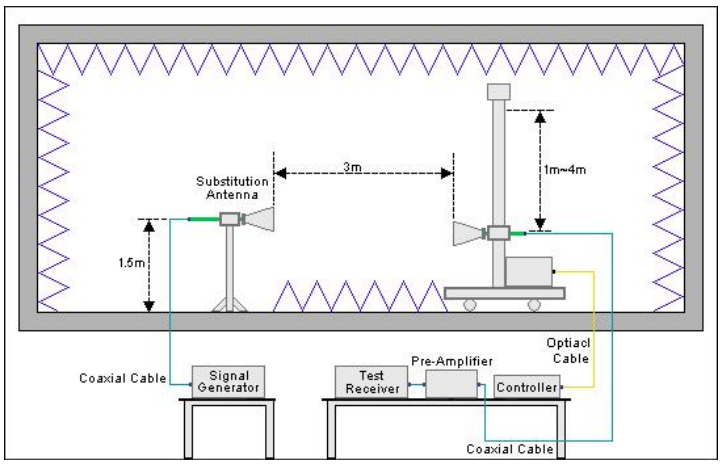


3) Substitution measurement

Below 1GHz



Above 1GHz



6.5 Test Results

6.5.1 Test Result Summary

Test Item	Channel	Modulation	Condition	Test Data	Verdict
Effective radiated power, Effective Isotropic Radiated Power	Lowest Middle Highest	QPSK, 16QAM	NVNT	Appendix LTE Band 2 – Appendix A Appendix LTE Band 4 – Appendix A Appendix LTE Band 5 – Appendix A Appendix LTE Band 12 – Appendix A Appendix LTE Band 66 – Appendix A Appendix LTE Band 71 – Appendix A	Pass
Peak-to-Average Power Ratio	Lowest Middle Highest	QPSK, 16QAM	NVNT	Appendix LTE Band 2 – Appendix B Appendix LTE Band 4 – Appendix B Appendix LTE Band 5 – Appendix B Appendix LTE Band 12 – Appendix B Appendix LTE Band 66 – Appendix B Appendix LTE Band 71 – Appendix B	Pass
26dB Bandwidth and Occupied Bandwidth	Lowest Middle Highest	QPSK, 16QAM	NVNT	Appendix LTE Band 2 – Appendix C Appendix LTE Band 4 – Appendix C Appendix LTE Band 5 – Appendix C Appendix LTE Band 12 – Appendix C Appendix LTE Band 66 – Appendix C Appendix LTE Band 71 – Appendix C	Pass
Band Edge	Lowest Middle Highest	QPSK, 16QAM	NVNT	Appendix LTE Band 2 – Appendix D Appendix LTE Band 4 – Appendix D Appendix LTE Band 5 – Appendix D Appendix LTE Band 12 – Appendix D Appendix LTE Band 66 – Appendix D Appendix LTE Band 71 – Appendix D	Pass
Conducted Spurious Emission	Lowest Middle Highest	QPSK, 16QAM	NVNT	Appendix LTE Band 2 – Appendix E Appendix LTE Band 4 – Appendix E Appendix LTE Band 5 – Appendix E Appendix LTE Band 12 – Appendix E Appendix LTE Band 66 – Appendix E Appendix LTE Band 71 – Appendix E	Pass
Field strength of spurious radiation	Lowest Middle Highest	QPSK	NVNT	See Section 6.5.2	Pass
Frequency stability	Lowest Middle Highest	QPSK, 16QAM	LVNT NVNT HVNT NVLT NVHT	Appendix LTE Band 2 – Appendix F Appendix LTE Band 4 – Appendix F Appendix LTE Band 5 – Appendix F Appendix LTE Band 12 – Appendix F Appendix LTE Band 66 – Appendix F Appendix LTE Band 71 – Appendix F	Pass
Modulation Characteristics	Lowest Middle Highest	QPSK, 16QAM	NVNT	Appendix LTE Band 2 – Appendix G Appendix LTE Band 4 – Appendix G Appendix LTE Band 5 – Appendix G Appendix LTE Band 12 – Appendix G Appendix LTE Band 66 – Appendix G Appendix LTE Band 71 – Appendix G	Pass

Note:

1. *"NVNT" means Normal Voltage Normal Temperature, "LVNT" means Low Voltage Normal Temperature, "HVNT" means High Voltage Normal Temperature, "NVLT" means Normal Voltage Low Temperature, "NVHT" means Normal Voltage High Temperature.*
2. *Only the worst case RB Configuration tested data shown in report.*
3. *The cable insertion loss used by "RF Output Power" and other conduction measurement items is 0.5dB (Fundamental Frequency below 1GHz)/1.0dB (Fundamental Frequency above 1GHz) (provided by the customer).*

6.5.2 Field strength of spurious radiation

LTE Band 2					
Test Channel = Lowest Channel					
Freq. [MHz]	Reading [dBm]	Level [dBm]	Limit [dBm]	Margin [dB]	Polarity
1072.2590	20.31	-51.63	-13.00	38.63	Horizontal
1507.3134	20.36	-50.03	-13.00	37.03	Horizontal
2999.7500	20.22	-46.92	-13.00	33.92	Horizontal
4456.5728	50.96	-63.68	-13.00	50.68	Horizontal
11236.9118	46.09	-49.81	-13.00	36.81	Horizontal
16395.6698	45.69	-44.76	-13.00	31.76	Horizontal
1029.0036	20.81	-51.42	-13.00	38.42	Vertical
1696.5871	20.41	-49.52	-13.00	36.52	Vertical
2952.4941	20.80	-46.50	-13.00	33.50	Vertical
4401.8201	51.19	-63.89	-13.00	50.89	Vertical
7926.9964	48.02	-55.17	-13.00	42.17	Vertical
16405.4203	45.76	-44.70	-13.00	31.70	Vertical
Remark: *The emission levels of below 1 GHz are lower than the limit 20dB and not show in test report.*					

LTE Band 2					
Test Channel = Middle Channel					
Freq. [MHz]	Reading [dBm]	Level [dBm]	Limit [dBm]	Margin [dB]	Polarity
1082.0103	20.42	-51.00	-13.00	38.00	Horizontal
1697.3372	20.35	-49.57	-13.00	36.57	Horizontal
2981.4977	20.69	-46.68	-13.00	33.68	Horizontal
3978.7989	51.55	-65.32	-13.00	52.32	Horizontal
7485.9743	48.35	-55.42	-13.00	42.42	Horizontal
16423.4212	45.93	-44.87	-13.00	31.87	Horizontal
1012.0015	20.73	-51.78	-13.00	38.78	Vertical
1524.3155	20.59	-49.88	-13.00	36.88	Vertical
2949.2437	20.73	-46.55	-13.00	33.55	Vertical
4879.5940	50.25	-63.01	-13.00	50.01	Vertical
11260.9130	46.27	-49.68	-13.00	36.68	Vertical
16407.6704	45.44	-45.06	-13.00	32.06	Vertical
Remark: *The emission levels of below 1 GHz are lower than the limit 20dB and not show in test report.*					

LTE Band 2					
Test Channel = Highest Channel					
Freq. [MHz]	Reading [dBm]	Level [dBm]	Limit [dBm]	Margin [dB]	Polarity
1089.2612	20.64	-50.97	-13.00	37.97	Horizontal
1617.0771	20.59	-49.75	-13.00	36.75	Horizontal
2996.2495	20.75	-46.49	-13.00	33.49	Horizontal
4670.3335	50.88	-63.26	-13.00	50.26	Horizontal
9294.3147	46.67	-53.72	-13.00	40.72	Horizontal
14524.3262	44.26	-47.21	-13.00	34.21	Horizontal
1029.7537	20.49	-51.73	-13.00	38.73	Vertical
1528.5661	20.29	-50.01	-13.00	37.01	Vertical
2996.9996	20.66	-46.56	-13.00	33.56	Vertical
5673.1337	51.27	-58.10	-13.00	45.10	Vertical
10642.8821	45.91	-51.42	-13.00	38.42	Vertical
16415.9208	46.08	-44.58	-13.00	31.58	Vertical
Remark: *The emission levels of below 1 GHz are lower than the limit 20dB and not show in test report.*					

LTE Band 4					
Test Channel = Lowest Channel					
Freq. [MHz]	Reading [dBm]	Level [dBm]	Limit [dBm]	Margin [dB]	Polarity
1027.5034	20.68	-51.57	-13.00	38.57	Horizontal
1568.8211	20.52	-49.99	-13.00	36.99	Horizontal
2978.2473	20.85	-46.54	-13.00	33.54	Horizontal
5133.1067	49.77	-62.62	-13.00	49.62	Horizontal
10488.3744	45.47	-52.14	-13.00	39.14	Horizontal
16408.4204	45.55	-44.97	-13.00	31.97	Horizontal
1078.5098	20.06	-51.41	-13.00	38.41	Vertical
1507.5634	20.73	-49.66	-13.00	36.66	Vertical
2956.9946	20.67	-46.66	-13.00	33.66	Vertical
5393.3697	48.38	-62.57	-13.00	49.57	Vertical
11209.1605	45.51	-50.31	-13.00	37.31	Vertical
16407.6704	45.39	-45.11	-13.00	32.11	Vertical
Remark: *The emission levels of below 1 GHz are lower than the limit 20dB and not show in test report.*					

LTE Band 4					
Test Channel = Middle Channel					
Freq. [MHz]	Reading [dBm]	Level [dBm]	Limit [dBm]	Margin [dB]	Polarity
1028.7536	20.42	-51.81	-13.00	38.81	Horizontal
1529.5662	20.54	-49.73	-13.00	36.73	Horizontal
2982.7478	20.86	-46.52	-13.00	33.52	Horizontal
6063.9032	48.18	-60.46	-13.00	47.46	Horizontal
12998.7499	43.98	-47.89	-13.00	34.89	Horizontal
16401.6701	45.33	-45.06	-13.00	32.06	Horizontal
1014.5018	20.58	-51.88	-13.00	38.88	Vertical
1613.3267	20.40	-50.05	-13.00	37.05	Vertical
2929.2412	20.81	-46.46	-13.00	33.46	Vertical
4478.3239	50.94	-63.60	-13.00	50.60	Vertical
11803.1902	45.46	-49.08	-13.00	36.08	Vertical
16398.6699	45.24	-45.15	-13.00	32.15	Vertical
Remark: *The emission levels of below 1 GHz are lower than the limit 20dB and not show in test report.*					

LTE Band 4					
Test Channel = Highest Channel					
Freq. [MHz]	Reading [dBm]	Level [dBm]	Limit [dBm]	Margin [dB]	Polarity
1014.0018	20.64	-51.83	-13.00	38.83	Horizontal
1357.0446	20.75	-50.33	-13.00	37.33	Horizontal
2953.7442	21.22	-46.09	-13.00	33.09	Horizontal
4534.5767	50.59	-63.94	-13.00	50.94	Horizontal
8967.2984	47.45	-53.36	-13.00	40.36	Horizontal
16922.1961	44.16	-46.12	-13.00	33.12	Horizontal
1081.2602	20.75	-50.64	-13.00	37.64	Vertical
1621.3277	20.55	-49.73	-13.00	36.73	Vertical
2919.7400	20.88	-46.53	-13.00	33.53	Vertical
5502.1251	48.93	-61.38	-13.00	48.38	Vertical
11238.4119	46.03	-49.87	-13.00	36.87	Vertical
16403.9202	45.24	-45.19	-13.00	32.19	Vertical
Remark: *The emission levels of below 1 GHz are lower than the limit 20dB and not show in test report.*					

LTE Band 5					
Test Channel = Lowest Channel					
Freq. [MHz]	Reading [dBm]	Level [dBm]	Limit [dBm]	Margin [dB]	Polarity
1649.2325	39.04	-50.22	-13.00	37.22	Horizontal
2473.5737	36.77	-50.49	-13.00	37.49	Horizontal
3503.3252	52.89	-64.65	-13.00	51.65	Horizontal
5534.1267	50.16	-60.06	-13.00	47.06	Horizontal
7466.2233	48.93	-55.03	-13.00	42.03	Horizontal
9537.6269	46.82	-52.98	-13.00	39.98	Horizontal
1649.1325	34.99	-54.27	-13.00	41.27	Vertical
2473.6737	29.48	-57.78	-13.00	44.78	Vertical
3629.3315	52.59	-65.04	-13.00	52.04	Vertical
6374.5187	48.99	-58.82	-13.00	45.82	Vertical
8784.0392	47.21	-53.96	-13.00	40.96	Vertical
9951.3476	46.39	-52.49	-13.00	39.49	Vertical
Remark: *The emission levels of below 1 GHz are lower than the limit 20dB and not show in test report.*					

LTE Band 5					
Test Channel = Middle Channel					
Freq. [MHz]	Reading [dBm]	Level [dBm]	Limit [dBm]	Margin [dB]	Polarity
1664.3332	38.68	-50.45	-13.00	37.45	Horizontal
2496.1748	35.56	-51.85	-13.00	38.85	Horizontal
3328.3164	55.61	-63.01	-13.00	50.01	Horizontal
4451.5226	51.02	-63.64	-13.00	50.64	Horizontal
7499.8250	47.75	-55.88	-13.00	42.88	Horizontal
9961.1481	46.49	-52.39	-13.00	39.39	Horizontal
1664.2332	34.87	-54.26	-13.00	41.26	Vertical
2496.3748	31.03	-56.39	-13.00	43.39	Vertical
3541.1271	52.54	-65.45	-13.00	52.45	Vertical
5178.1589	50.44	-61.49	-13.00	48.49	Vertical
6871.1936	49.38	-57.49	-13.00	44.49	Vertical
9386.4193	46.38	-53.42	-13.00	40.42	Vertical
Remark: *The emission levels of below 1 GHz are lower than the limit 20dB and not show in test report.*					

LTE Band 5					
Test Channel = Highest Channel					
Freq. [MHz]	Reading [dBm]	Level [dBm]	Limit [dBm]	Margin [dB]	Polarity
1679.2340	38.23	-50.77	-13.00	37.77	Horizontal
2518.8759	33.33	-53.92	-13.00	40.92	Horizontal
3358.4179	53.70	-64.74	-13.00	51.74	Horizontal
5019.9510	50.18	-62.41	-13.00	49.41	Horizontal
7468.3234	49.07	-54.87	-13.00	41.87	Horizontal
9866.2933	46.63	-52.40	-13.00	39.40	Horizontal
1679.1340	34.63	-54.37	-13.00	41.37	Vertical
2518.8759	31.09	-56.16	-13.00	43.16	Vertical
4155.7578	50.91	-64.91	-13.00	51.91	Vertical
6980.0490	48.68	-57.35	-13.00	44.35	Vertical
8774.5887	47.50	-53.69	-13.00	40.69	Vertical
9922.2961	46.39	-52.56	-13.00	39.56	Vertical
Remark: *The emission levels of below 1 GHz are lower than the limit 20dB and not show in test report.*					

LTE Band 12					
Test Channel = Lowest Channel					
Freq. [MHz]	Reading [dBm]	Level [dBm]	Limit [dBm]	Margin [dB]	Polarity
1399.1200	40.37	-49.51	-13.00	36.51	Horizontal
2098.7549	42.07	-45.90	-13.00	32.90	Horizontal
2798.2899	29.83	-56.07	-13.00	43.07	Horizontal
3498.0749	64.79	-52.75	-13.00	39.75	Horizontal
7339.8670	48.08	-57.02	-13.00	44.02	Horizontal
9840.0420	46.55	-52.60	-13.00	39.60	Horizontal
1399.2200	32.54	-57.34	-13.00	44.34	Vertical
2098.6549	35.21	-52.76	-13.00	39.76	Vertical
2798.1899	25.10	-60.80	-13.00	47.80	Vertical
3497.7249	60.50	-57.05	-13.00	44.05	Vertical
5179.2090	50.03	-61.88	-13.00	48.88	Vertical
8943.9972	47.78	-53.28	-13.00	40.28	Vertical
Remark: *The emission levels of below 1 GHz are lower than the limit 20dB and not show in test report.*					

LTE Band 12					
Test Channel = Middle Channel					
Freq. [MHz]	Reading [dBm]	Level [dBm]	Limit [dBm]	Margin [dB]	Polarity
1406.2203	40.02	-49.83	-13.00	36.83	Horizontal
2109.1555	39.36	-48.67	-13.00	35.67	Horizontal
2812.4906	29.53	-56.46	-13.00	43.46	Horizontal
3515.5758	65.91	-51.77	-13.00	38.77	Horizontal
5497.3749	49.59	-60.74	-13.00	47.74	Horizontal
8787.1894	47.07	-54.09	-13.00	41.09	Horizontal
1406.2203	29.90	-59.95	-13.00	46.95	Vertical
1938.3469	30.86	-57.45	-13.00	44.45	Vertical
2109.1555	34.30	-53.73	-13.00	40.73	Vertical
2812.3906	24.71	-61.28	-13.00	48.28	Vertical
3515.5758	62.48	-55.20	-13.00	42.20	Vertical
7486.1743	48.96	-54.81	-13.00	41.81	Vertical
Remark: *The emission levels of below 1 GHz are lower than the limit 20dB and not show in test report.*					

LTE Band 12					
Test Channel = Highest Channel					
Freq. [MHz]	Reading [dBm]	Level [dBm]	Limit [dBm]	Margin [dB]	Polarity
1413.2207	40.60	-49.22	-13.00	36.22	Horizontal
2119.8560	39.32	-48.78	-13.00	35.78	Horizontal
2826.3913	28.38	-57.73	-13.00	44.73	Horizontal
3532.7266	63.89	-54.00	-13.00	41.00	Horizontal
5697.5849	49.44	-59.61	-13.00	46.61	Horizontal
9028.0014	47.70	-52.90	-13.00	39.90	Horizontal
1413.1207	29.51	-60.31	-13.00	47.31	Vertical
1780.0390	24.75	-64.32	-13.00	51.32	Vertical
2119.7560	33.89	-54.21	-13.00	41.21	Vertical
2826.2913	24.48	-61.63	-13.00	48.63	Vertical
3532.7266	60.63	-57.26	-13.00	44.26	Vertical
7487.2244	48.76	-55.00	-13.00	42.00	Vertical
Remark: *The emission levels of below 1 GHz are lower than the limit 20dB and not show in test report.*					

LTE Band 66					
Test Channel = Lowest Channel					
Freq. [MHz]	Reading [dBm]	Level [dBm]	Limit [dBm]	Margin [dB]	Polarity
1149.7687	20.56	-50.74	-13.00	37.74	Horizontal
2127.6410	24.07	-45.13	-13.00	32.13	Horizontal
3422.2711	70.53	-48.13	-13.00	35.13	Horizontal
5133.1067	52.96	-59.43	-13.00	46.43	Horizontal
11192.6596	46.67	-49.12	-13.00	36.12	Horizontal
16403.1702	46.77	-43.65	-13.00	30.65	Horizontal
1151.5189	20.79	-50.53	-13.00	37.53	Vertical
2127.6410	23.49	-45.71	-13.00	32.71	Vertical
3422.2711	64.76	-53.90	-13.00	40.90	Vertical
7509.9755	48.63	-55.16	-13.00	42.16	Vertical
13352.7676	45.50	-46.78	-13.00	33.78	Vertical
16395.6698	46.85	-43.60	-13.00	30.60	Vertical
Remark: *The emission levels of below 1 GHz are lower than the limit 20dB and not show in test report.*					

LTE Band 66					
Test Channel = Middle Channel					
Freq. [MHz]	Reading [dBm]	Level [dBm]	Limit [dBm]	Margin [dB]	Polarity
1261.0326	20.63	-50.65	-13.00	37.65	Horizontal
2648.2060	21.39	-46.78	-13.00	33.78	Horizontal
3471.7736	70.85	-47.27	-13.00	34.27	Horizontal
7485.9743	48.66	-55.11	-13.00	42.11	Horizontal
13376.0188	45.53	-46.54	-13.00	33.54	Horizontal
16397.9199	47.05	-43.35	-13.00	30.35	Horizontal
1151.2689	20.96	-50.36	-13.00	37.36	Vertical
2638.9549	21.42	-46.88	-13.00	33.88	Vertical
3472.5236	64.23	-53.87	-13.00	40.87	Vertical
7377.2189	49.98	-54.82	-13.00	41.82	Vertical
13010.0005	45.44	-46.47	-13.00	33.47	Vertical
16405.4203	47.34	-43.12	-13.00	30.12	Vertical
Remark: *The emission levels of below 1 GHz are lower than the limit 20dB and not show in test report.*					

LTE Band 66					
Test Channel = Highest Channel					
Freq. [MHz]	Reading [dBm]	Level [dBm]	Limit [dBm]	Margin [dB]	Polarity
1181.5227	21.26	-50.35	-13.00	37.35	Horizontal
2625.2032	21.04	-47.18	-13.00	34.18	Horizontal
3522.0261	69.06	-48.70	-13.00	35.70	Horizontal
7464.2232	48.67	-55.31	-13.00	42.31	Horizontal
12182.7091	45.24	-48.23	-13.00	35.23	Horizontal
16397.9199	46.61	-43.79	-13.00	30.79	Horizontal
1210.5263	21.09	-50.66	-13.00	37.66	Vertical
2687.4609	21.02	-46.98	-13.00	33.98	Vertical
3522.0261	64.70	-53.06	-13.00	40.06	Vertical
9558.3279	46.74	-52.98	-13.00	39.98	Vertical
13394.7697	45.23	-46.67	-13.00	33.67	Vertical
16411.4206	46.97	-43.60	-13.00	30.60	Vertical
Remark: *The emission levels of below 1 GHz are lower than the limit 20dB and not show in test report.*					

LTE Band 71					
Test Channel = Lowest Channel					
Freq. [MHz]	Reading [dBm]	Level [dBm]	Limit [dBm]	Margin [dB]	Polarity
1348.0174	41.48	-48.50	-13.00	35.50	Horizontal
2022.2511	36.94	-51.38	-13.00	38.38	Horizontal
2696.2848	30.38	-56.39	-13.00	43.39	Horizontal
3370.6685	56.50	-62.02	-13.00	49.02	Horizontal
7487.5744	48.78	-54.97	-13.00	41.97	Horizontal
9353.1677	47.34	-52.69	-13.00	39.69	Horizontal
1348.1174	32.95	-57.03	-13.00	44.03	Vertical
2022.3511	34.02	-54.30	-13.00	41.30	Vertical
2696.3848	25.05	-61.72	-13.00	48.72	Vertical
5688.8344	49.35	-59.82	-13.00	46.82	Vertical
7467.9734	48.62	-55.32	-13.00	42.32	Vertical
9028.7014	47.33	-53.27	-13.00	40.27	Vertical
Remark: *The emission levels of below 1 GHz are lower than the limit 20dB and not show in test report.*					

LTE Band 71					
Test Channel = Middle Channel					
Freq. [MHz]	Reading [dBm]	Level [dBm]	Limit [dBm]	Margin [dB]	Polarity
1343.2172	43.42	-46.58	-13.00	33.58	Horizontal
2014.8507	39.11	-49.22	-13.00	36.22	Horizontal
2686.1843	27.34	-59.42	-13.00	46.42	Horizontal
3358.4179	56.84	-61.60	-13.00	48.60	Horizontal
7492.1246	48.45	-55.26	-13.00	42.26	Horizontal
9036.7518	47.45	-53.18	-13.00	40.18	Horizontal
1343.1172	31.11	-58.89	-13.00	45.89	Vertical
2014.8507	34.03	-54.30	-13.00	41.30	Vertical
3358.0679	55.08	-63.35	-13.00	50.35	Vertical
5686.0343	49.75	-59.45	-13.00	46.45	Vertical
7468.6734	48.73	-55.21	-13.00	42.21	Vertical
9005.2503	47.64	-52.89	-13.00	39.89	Vertical
Remark: *The emission levels of below 1 GHz are lower than the limit 20dB and not show in test report.*					

LTE Band 71					
Test Channel = Highest Channel					
Freq. [MHz]	Reading [dBm]	Level [dBm]	Limit [dBm]	Margin [dB]	Polarity
1358.2179	41.09	-48.87	-13.00	35.87	Horizontal
2037.1519	37.15	-51.15	-13.00	38.15	Horizontal
2716.2858	31.32	-55.30	-13.00	42.30	Horizontal
3395.1698	59.14	-59.54	-13.00	46.54	Horizontal
7378.0189	49.21	-55.59	-13.00	42.59	Horizontal
9845.2923	46.65	-52.45	-13.00	39.45	Horizontal
1357.8179	28.12	-61.84	-13.00	48.84	Vertical
2037.1519	35.45	-52.85	-13.00	39.85	Vertical
2716.1858	26.61	-60.01	-13.00	47.01	Vertical
4324.8162	52.27	-63.35	-13.00	50.35	Vertical
7467.9734	48.96	-54.98	-13.00	41.98	Vertical
9030.8015	47.47	-53.14	-13.00	40.14	Vertical
Remark: *The emission levels of below 1 GHz are lower than the limit 20dB and not show in test report.*					

7. Test Setup Photo

Reference to the test setup photos: PCE-Test Setup Photo

8. EUT Constructional Details

Reference to the External photo and Internal photo.

------End of report------