


FCC RF Test Report

(WCDMA)

Applicant: Livongo 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: 
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 **Date:** 13 Dec., 2021
Test Engineer

Reviewed by: Winn Zhang **Date:** 13 Dec., 2021
Project Engineer

Approved by: Winn Zhang **Date:** 13 Dec., 2021
Manager



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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 (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 (h)(1)	Pass
Conducted Spurious Emission	Part 2.1051 Part 22.917 (a) Part 24.238 (a) 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 (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:	WCDMA Band II: 1852.4 MHz-1907.6 MHz WCDMA Band IV: 1712.4 MHz-1752.6 MHz WCDMA Band V: 826.4MHz-846.6MHz
Modulation type:	<input checked="" type="checkbox"/> RMC(QPSK) <input checked="" type="checkbox"/> HSUPA(QPSK) <input checked="" type="checkbox"/> HSDPA(QPSK,16QAM)
Antenna type:	Internal Antenna
Antenna gain:	WCDMA Band II: 0.87 dBi(declare by Applicant) WCDMA Band IV: -1.35 dBi(declare by Applicant) WCDMA Band V: -1.61 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°C ~ 35°C, Extreme: -30°C ~ +50°C
Humidity:	20 % ~ 75 % RH
Atmospheric Pressure:	1008 mbar
Voltage:	Nominal: 3.85Vdc, Extreme: Low 3.5 Vdc, High 4.4 Vdc
Test mode:	
RMC	Keep the EUT communication with simulated station in RMC mode (worst case)
HSDPA	Keep the EUT communication with simulated station in HSDPA mode
HSUPA	Keep the EUT communication with simulated station in HSUPA 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: <ul style="list-style-type: none"> ● 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

Test Item	Clause	Limit																																
Effective Isotropic Radiated Power	Part 22.913(a)(5)	The ERP of mobile transmitters and auxiliary test transmitters must not exceed 7 watts.																																
	Part 24.232(c)	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.																																
	Part 27.50(d)(4)	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.																																
Peak-to-Average Power Ratio	Part 22.913(d)	The peak-to-average ratio (PAR) of the transmission must not exceed 13 dB.																																
	Part 24.232(d) Part 27.50(d)(5)	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.																																
26dB Bandwidth & Occupied Bandwidth	Part 22.917(b) Part 24.238(b) Part 27.53(h)(3)	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.																																
Band Edge & Conducted Spurious Emission & Field strength of spurious radiation	Part 22.917(a) Part 24.238(a)	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.																																
	Part 27.53(h)(1)	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 $43 + 10 \log_{10}(P)$ dB.																																
Frequency stability	Part 22.355	<p style="text-align: center;">TABLE C-1—FREQUENCY TOLERANCE FOR TRANSMITTERS IN THE PUBLIC MOBILE SERVICES</p> <table border="1" style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th>Frequency range (MHz)</th> <th>Base, fixed (ppm)</th> <th>Mobile >3 watts (ppm)</th> <th>Mobile ≤3 watts (ppm)</th> </tr> </thead> <tbody> <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>621 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> </tbody> </table>	Frequency range (MHz)	Base, fixed (ppm)	Mobile >3 watts (ppm)	Mobile ≤3 watts (ppm)	25 to 50	20.0	20.0	50.0	50 to 450	5.0	5.0	50.0	450 to 512	2.5	5.0	5.0	621 to 896	1.5	2.5	2.5	928 to 929	5.0	n/a	n/a	929 to 960	1.5	n/a	n/a	2110 to 2220	10.0	n/a	n/a
	Frequency range (MHz)	Base, fixed (ppm)	Mobile >3 watts (ppm)	Mobile ≤3 watts (ppm)																														
	25 to 50	20.0	20.0	50.0																														
50 to 450	5.0	5.0	50.0																															
450 to 512	2.5	5.0	5.0																															
621 to 896	1.5	2.5	2.5																															
928 to 929	5.0	n/a	n/a																															
929 to 960	1.5	n/a	n/a																															
2110 to 2220	10.0	n/a	n/a																															
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:

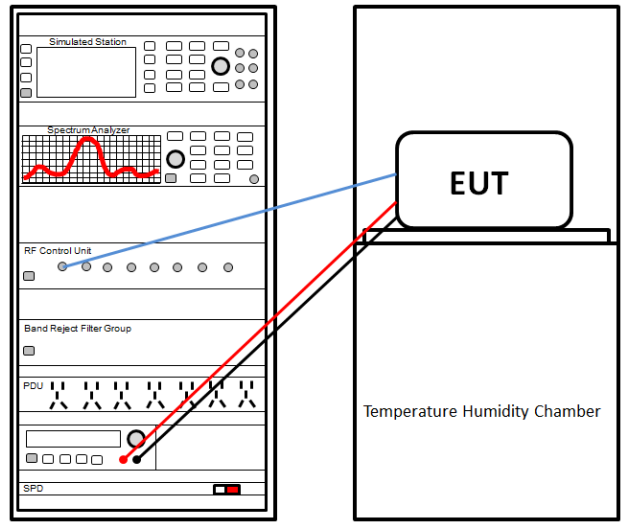
WCDMA Band V		WCDMA Band II	
Channel	Frequency (MHz)	Channel	Frequency (MHz)
4132	826.40	9262	1852.40
4133	826.60	9263	1852.60
....
4182	836.40	9399	1879.80
4183	836.60	9400	1880.00
4184	836.80	9401	1880.20
...
4232	846.40	9537	1907.40
4233	846.60	9538	1907.60
WCDMA Band IV			
Channel	Frequency (MHz)		
1312	1712.40		
1313	1712.60		
....		
1412	1732.40		
1413	1732.60		
1414	1732.80		
...	...		
1512	1752.40		
1513	1752.60		

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:

WCDMA Band V			WCDMA Band II		
Channel	Frequency(MHz)		Channel	Frequency(MHz)	
Lowest	4132	826.40	Lowest	9262	1852.40
Middle	4183	836.60	Middle	9400	1880.00
Highest	4233	846.60	Highest	9538	1907.60
WCDMA Band IV					
Channel	Frequency(MHz)				
Lowest	1312	1712.40			
Middle	1413	1732.60			
Highest	1513	1752.60			

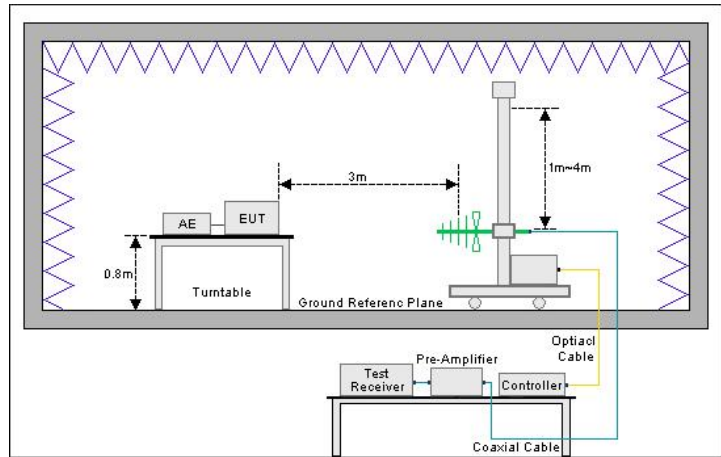
6.4 Test Setup Block

1) Conducted test method:

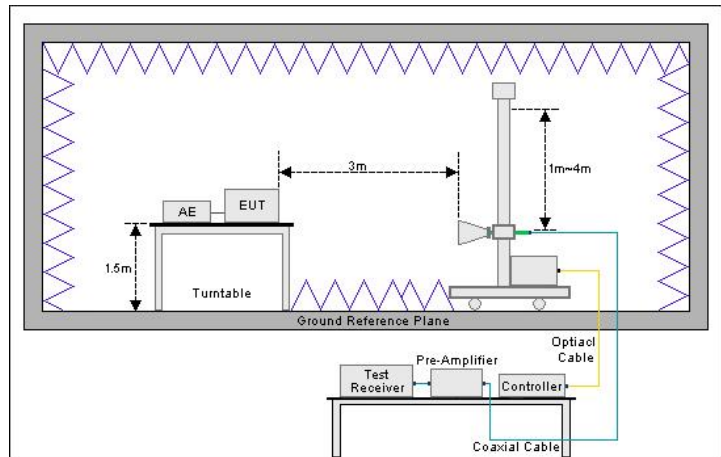


2) Radiated test method:

Below 1GHz

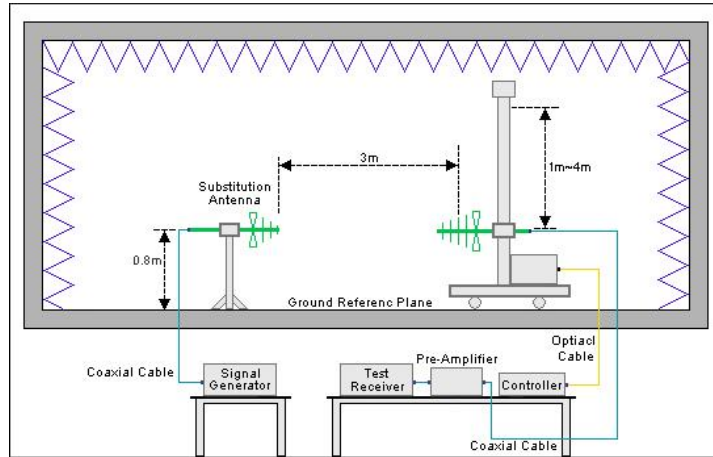


Above 1GHz

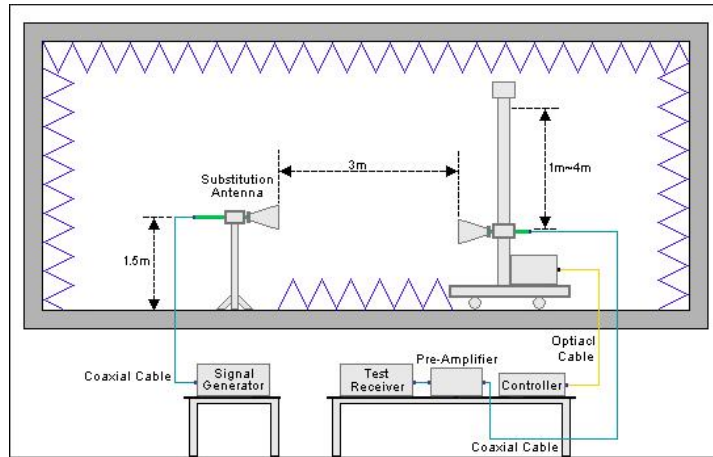


3) Substitution measurement

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	RMC	NVNT	Appendix WCDMA – Appendix A	Pass
Peak-to-Average Power Ratio	Lowest Middle Highest	RMC	NVNT	Appendix WCDMA – Appendix B	Pass
26dB Bandwidth and Occupied Bandwidth	Lowest Middle Highest	RMC	NVNT	Appendix WCDMA – Appendix C	Pass
Band Edge	Lowest Highest	RMC	NVNT	Appendix WCDMA – Appendix D	Pass
Conducted Spurious Emission	Lowest Middle Highest	RMC	NVNT	Appendix WCDMA – Appendix E	Pass
Field strength of spurious radiation	Lowest Middle Highest	RMC	NVNT	See Section 6.5.2	Pass
Frequency stability	Lowest Middle Highest	RMC	LVNT	Appendix WCDMA – Appendix F	Pass
			NVNT		
			HVNT		
			NVLT		
			NVHT		
Modulation Characteristics	Middle	RMC	NVNT	Appendix WCDMA – 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. During the test, pre-scan RMC mode, HSDPA mode and HSUPA of the modulation mode, found RMC modulation mode was worse case mode. Just the worst case modulation mode (RMC mode) 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

WCDMA Band II					
Test Channel = Low Channel					
Freq. [MHz]	Reading [dBm]	Level [dBm]	Limit [dBm]	Margin [dB]	Polarity
1282.2853	20.41	-50.90	-13.00	37.90	Horizontal
2681.7102	21.33	-46.76	-13.00	33.76	Horizontal
3703.5352	54.35	-63.81	-13.00	50.81	Horizontal
7472.4736	49.07	-54.83	-13.00	41.83	Horizontal
11213.6607	47.17	-48.67	-13.00	35.67	Horizontal
15034.3517	45.19	-45.18	-13.00	32.18	Horizontal
1260.5326	20.78	-50.49	-13.00	37.49	Vertical
2701.9627	21.01	-46.91	-13.00	33.91	Vertical
3702.7851	53.32	-64.85	-13.00	51.85	Vertical
7455.9728	48.98	-55.08	-13.00	42.08	Vertical
11249.6625	47.02	-48.91	-13.00	35.91	Vertical
15013.3507	44.66	-45.56	-13.00	32.56	Vertical

Remark: The emission levels of below 1 GHz are lower than the limit 20dB and not show in test report.

WCDMA Band II					
Test Channel = Middle Channel					
Freq. [MHz]	Reading [dBm]	Level [dBm]	Limit [dBm]	Margin [dB]	Polarity
1330.7913	20.57	-50.62	-13.00	37.62	Horizontal
2752.9691	21.12	-46.86	-13.00	33.86	Horizontal
3758.2879	55.15	-62.34	-13.00	49.34	Horizontal
7535.4768	49.08	-55.10	-13.00	42.10	Horizontal
13364.0182	45.88	-46.29	-13.00	33.29	Horizontal
16391.9196	47.01	-43.52	-13.00	30.52	Horizontal
1470.3088	20.27	-50.39	-13.00	37.39	Vertical
2697.2122	21.01	-46.90	-13.00	33.90	Vertical
3759.0380	53.15	-64.34	-13.00	51.34	Vertical
7488.2244	48.67	-55.08	-13.00	42.08	Vertical
11932.1966	45.86	-47.99	-13.00	34.99	Vertical
15017.8509	44.58	-45.67	-13.00	32.67	Vertical

Remark: The emission levels of below 1 GHz are lower than the limit 20dB and not show in test report.

WCDMA Band II					
Test Channel = High Channel					
Freq. [MHz]	Reading [dBm]	Level [dBm]	Limit [dBm]	Margin [dB]	Polarity
1258.0323	20.55	-50.79	-13.00	37.79	Horizontal
2650.4563	21.20	-46.94	-13.00	33.94	Horizontal
3813.7907	53.52	-64.11	-13.00	51.11	Horizontal
7485.9743	49.38	-54.39	-13.00	41.39	Horizontal
11916.4458	45.66	-47.97	-13.00	34.97	Horizontal
16401.6701	46.73	-43.66	-13.00	30.66	Horizontal
1399.2999	20.66	-50.40	-13.00	37.40	Vertical
2657.4572	21.12	-47.07	-13.00	34.07	Vertical
5725.6363	51.87	-57.71	-13.00	44.71	Vertical
10625.6313	47.06	-50.27	-13.00	37.27	Vertical
15919.3960	45.26	-45.19	-13.00	32.19	Vertical
16943.9472	45.11	-44.96	-13.00	31.96	Vertical

Remark: The emission levels of below 1 GHz are lower than the limit 20dB and not show in test report.

WCDMA Band IV					
Test Channel = Low Channel					
Freq. [MHz]	Reading [dBm]	Level [dBm]	Limit [dBm]	Margin [dB]	Polarity
1367.2959	20.48	-50.55	-13.00	37.55	Horizontal
2111.6390	26.70	-42.79	-13.00	29.79	Horizontal
3423.0212	63.82	-54.84	-13.00	41.84	Horizontal
7480.7240	48.70	-55.12	-13.00	42.12	Horizontal
13364.0182	45.56	-46.61	-13.00	33.61	Horizontal
16431.6716	47.34	-43.61	-13.00	30.61	Horizontal
1258.0323	20.58	-50.76	-13.00	37.76	Vertical
2113.1391	24.47	-44.96	-13.00	31.96	Vertical
3423.0212	58.73	-59.93	-13.00	46.93	Vertical
7459.7230	49.01	-55.01	-13.00	42.01	Vertical
12395.7198	46.04	-47.40	-13.00	34.40	Vertical
16394.1697	46.91	-43.57	-13.00	30.57	Vertical

Remark: The emission levels of below 1 GHz are lower than the limit 20dB and not show in test report.

WCDMA Band IV					
Test Channel = Middle Channel					
Freq. [MHz]	Reading [dBm]	Level [dBm]	Limit [dBm]	Margin [dB]	Polarity
1311.0389	20.65	-50.73	-13.00	37.73	Horizontal
2133.3917	25.28	-43.89	-13.00	30.89	Horizontal
3463.5232	64.40	-53.90	-13.00	40.90	Horizontal
7469.4735	49.08	-54.85	-13.00	41.85	Horizontal
12290.7145	45.75	-47.51	-13.00	34.51	Horizontal
16399.4200	46.62	-43.75	-13.00	30.75	Horizontal
1276.7846	20.72	-50.65	-13.00	37.65	Vertical
2133.3917	25.36	-43.81	-13.00	30.81	Vertical
3467.2734	61.03	-57.19	-13.00	44.19	Vertical
7482.9741	48.65	-55.15	-13.00	42.15	Vertical
12991.9996	45.16	-46.79	-13.00	33.79	Vertical
16400.9200	46.80	-43.58	-13.00	30.58	Vertical

Remark: The emission levels of below 1 GHz are lower than the limit 20dB and not show in test report.

WCDMA Band IV					
Test Channel = High Channel					
Freq. [MHz]	Reading [dBm]	Level [dBm]	Limit [dBm]	Margin [dB]	Polarity
1212.5266	20.88	-50.87	-13.00	37.87	Horizontal
2151.6440	25.13	-44.09	-13.00	31.09	Horizontal
3507.0254	62.74	-54.84	-13.00	41.84	Horizontal
7932.2466	48.31	-54.86	-13.00	41.86	Horizontal
12272.7136	45.19	-48.12	-13.00	35.12	Horizontal
16409.1705	47.26	-43.27	-13.00	30.27	Horizontal
1275.5344	20.64	-50.77	-13.00	37.77	Vertical
2153.3942	26.07	-43.14	-13.00	30.14	Vertical
3504.0252	58.67	-58.88	-13.00	45.88	Vertical
7468.7234	48.95	-54.99	-13.00	41.99	Vertical
13338.5169	45.84	-46.41	-13.00	33.41	Vertical
16399.4200	46.79	-43.58	-13.00	30.58	Vertical

Remark: The emission levels of below 1 GHz are lower than the limit 20dB and not show in test report.

WCDMA Band V					
Test Channel = Low Channel					
Freq. [MHz]	Reading [dBm]	Level [dBm]	Limit [dBm]	Margin [dB]	Polarity
1325.0406	20.69	-50.62	-13.00	37.62	Horizontal
2476.1845	21.35	-47.08	-13.00	34.08	Horizontal
4481.3241	51.53	-63.00	-13.00	50.00	Horizontal
7970.4985	48.41	-54.59	-13.00	41.59	Horizontal
14048.8024	44.59	-46.92	-13.00	33.92	Horizontal
16394.1697	47.43	-43.05	-13.00	30.05	Horizontal
1167.2709	20.65	-50.70	-13.00	37.70	Vertical
2406.6758	21.05	-47.41	-13.00	34.41	Vertical
3640.5320	52.40	-65.10	-13.00	52.10	Vertical
7867.7434	48.10	-54.93	-13.00	41.93	Vertical
12427.9714	45.62	-47.57	-13.00	34.57	Vertical
16403.9202	47.06	-43.37	-13.00	30.37	Vertical

Remark: The emission levels of below 1 GHz are lower than the limit 20dB and not show in test report.

WCDMA Band V					
Test Channel = Middle Channel					
Freq. [MHz]	Reading [dBm]	Level [dBm]	Limit [dBm]	Margin [dB]	Polarity
1261.2827	20.52	-50.77	-13.00	37.77	Horizontal
2302.1628	21.16	-47.77	-13.00	34.77	Horizontal
5868.1434	51.00	-58.58	-13.00	45.58	Horizontal
7471.7236	49.09	-54.82	-13.00	41.82	Horizontal
11925.4463	46.74	-47.02	-13.00	34.02	Horizontal
16940.1970	45.57	-44.54	-13.00	31.54	Horizontal
1258.7823	20.76	-50.54	-13.00	37.54	Vertical
2567.4459	21.31	-47.28	-13.00	34.28	Vertical
5672.3836	49.61	-59.77	-13.00	46.77	Vertical
7494.2247	48.67	-55.02	-13.00	42.02	Vertical
12427.2214	45.65	-47.55	-13.00	34.55	Vertical
16407.6704	46.95	-43.55	-13.00	30.55	Vertical

Remark: The emission levels of below 1 GHz are lower than the limit 20dB and not show in test report.

WCDMA Band V					
Test Channel = High Channel					
Freq. [MHz]	Reading [dBm]	Level [dBm]	Limit [dBm]	Margin [dB]	Polarity
1258.5323	20.61	-50.71	-13.00	37.71	Horizontal
2393.6742	21.25	-47.25	-13.00	34.25	Horizontal
5665.6333	49.24	-60.23	-13.00	47.23	Horizontal
9589.8295	46.40	-52.96	-13.00	39.96	Horizontal
13356.5178	45.82	-46.42	-13.00	33.42	Horizontal
16695.6848	47.00	-44.26	-13.00	31.26	Horizontal
1165.7707	20.71	-50.68	-13.00	37.68	Vertical
2390.9239	21.09	-47.47	-13.00	34.47	Vertical
4413.8207	51.48	-63.50	-13.00	50.50	Vertical
7372.7186	49.09	-55.70	-13.00	42.70	Vertical
12391.2196	45.80	-47.66	-13.00	34.66	Vertical
16406.9203	46.89	-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.

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-----