Spectrum Report (WCDMA)

FCC ID Applicant:	DANLAW Inc
FCC ID Address of Applicant:	41131 Vincenti Court, Novi, Michigan 48375, United States
IC Applicant:	Danlaw, Inc
IC Address of Applicant:	41131 Vincenti Court Novi MI 48375 United States Of America
Manufacturer:	Asiatelco Technologies Co.
Address of Manufacturer:	#289 Bisheng Road,Building-8,3F,Zhangjiang Hi-tech Park,Pudong Shanghai 201204 China
Equipment Under Test (EUT)	
Product Name:	OBDII Datalogger
Model No.:	DL980QT
FCC ID:	2AD9I-DL980QT
IC:	24046-DL980QT
Contains FCC ID:	XMR201605EC25A
Contains IC:	10224A-201611EC25A
Applicable standards:	FCC CFR Title 47 Part 2
	FCC CFR Title 47 Part22 Subpart H
	FCC CFR Title 47 Part24 Subpart E
	FCC CFR Title 47 Part 27
	RSS-132 Issue 3, January 2013
	RSS-133 Issue 6, January 2013
	RSS-139 Issue 3, July 2015
	RSS-Gen Issue 5, April 2018
Date of sample receipt:	March 01, 2019
Date of Test:	March 01-14, 2019
Date of report issued:	March 14, 2019
Test Result :	PASS *

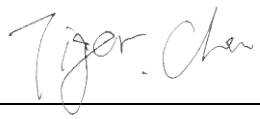
* In the configuration tested, the EUT complied with the standards specified above.

Authorized Signature:

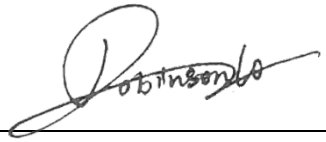
Robinson Lo
Laboratory Manager

2 Version

Version No.	Date	Description
00	*March 14, 2019*	*Original*

Prepared By:  ***Date:*** *March 14, 2019*

Project Engineer

Check By:  ***Date:*** *March 14, 2019*

Reviewer

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4 Test Summary

Test Item	Section in CFR 47	Result
RF Exposure (SAR)	Part 1.1307 Part 2.1093	Pass* (Please refer to MPE Report)
RF Output Power	Part 2.1046 Part 22.913 (a)(2) Part 24.232 (c) Part 27.50(c)(10)/(d)(4)	Pass
Field Strength of Spurious Radiation	Part 2.1053 Part 22.917 (a) Part 24.238 (a) Part 27.53(h)/(g)	Pass
Field strength of spurious radiation measurement	Part 22.917 (a) Part 24.238 (a) Part 27.53(h)/(g)	Pass
Peak-to-Average Ratio	FCC part24.232(d) FCC Part 27.50	Compliance*
Modulation Characteristics	Part 2.1047	Compliance*
99% & -26 dB Occupied Bandwidth	Part 2.1049 Part 22.917 Part 24.238 Part 27.53(h)/(g)	Compliance*
Spurious Emissions at Antenna Terminal	Part 2.1051 Part 22.917 (a) Part 24.238 (a) Part 27.53(h)/(g)	Compliance*
Out of band emission, Band Edge	Part 22.917 (a) Part 24.238 (a) Part 27.53(h)/(g)	Compliance*
Frequency stability vs. temperature	Part 2.1055(a)(1)(b)	Compliance*
Frequency stability vs. voltage	Part 2.1055(d)(1)(2)	Compliance*

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

Compliance: Test data refers to FCC ID: XMR201605EC25A*

Test Item	Section in RSS	Result
RF Exposure (SAR)	RSS-102	Pass* (Please refer to MPE Report)
RF Output Power	RSS-132 Clause 5.4 RSS-133 Clause 6.4 RSS-139 Clause 6.5	Pass
Transmitter Output Power and Equivalent Isotropically Radiated Power	RSS-132 Clause 5.4 RSS-133 Clause 6.4 RSS-139 Clause 6.5	Pass
Field strength of spurious radiation measurement	RSS-Gen Clause 6.13	Pass
Frequency Plan	RSS-132 Clause 5.1 RSS-133 Clause 6.1 RSS-139 Clause 6.1	Compliance*
Types of Modulation	RSS-132 Clause 5.2 RSS-133 Clause 6.2 RSS-139 Clause 6.2	Compliance*
Occupied Bandwidth	RSS-Gen Clause 6.6	Compliance*
Frequency Stability	RSS-132 Clause 5.3 RSS-133 Clause 6.3 RSS-139 Clause 6.4	Compliance*
Peak-to-Average Power Ratio	RSS-132 Clause 5.4 RSS-133 Clause 6.4 RSS-139 Clause 6.5	Compliance*
Transmitter Unwanted Emissions	RSS-132 Clause 5.5 RSS-133 Clause 6.5 RSS-139 Clause 6.6	Compliance*

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

Compliance: Test data refers to IC: 10224A-201611EC25A*

4.1 Measurement Uncertainty

Test Item	Frequency Range	Measurement Uncertainty	Notes
Radiated Emission	9kHz ~ 30MHz	± 4.34dB	(1)
Radiated Emission	30MHz ~ 1000MHz	± 4.24dB	(1)
Radiated Emission	1GHz ~ 26.5GHz	± 4.68dB	(1)
Note (1): The measurement uncertainty is for coverage factor of k=2 and a level of confidence of 95%.			

5 General Information

5.1 General Description of EUT

Product Name:	OBDII Datalogger
Model No.:	DL980QT
Serial No.:	9042601001
Tested Sample(s) ID:	GTS201904000001-1
Hardware Version:	p5
Software Version:	v1.0
Support Networks:	WCDMA
Support Bands:	WCDMA Band II, Band V, Band IV
TX Frequency:	WCDMA Band II: 1852.40MHz -1907.60MHz WCDMA Band IV: 1712.40MHz -1752.60MHz WCDMA Band V: 826.40MHz -846.60MHz
Modulation type:	WCDMA Band II/V/IV: QPSK
Antenna type:	Integral antenna
Antenna gain:	WCDMA Band II: 0.8dBi WCDMA Band IV: 0.7dBi WCDMA Band V: -0.8dBi
Power supply:	DC 12V

Remark: The radio module is installed according to the installation instructions of the module manufacture

Output power, spurious radiated emission and ERP/EIRP retest

Operation Frequency List:

WCDMA Band V		WCDMA Band II		WCDMA Band IV	
Channel	Frequency (MHz)	Channel	Frequency (MHz)	Channel	Frequency (MHz)
4132	826.40	9262	1852.40	1312	1712.40
4133	826.60	9263	1852.60	1313	1712.60
· ⋮	· ⋮	· ⋮	· ⋮	· ⋮	· ⋮
4181	836.20	9399	1879.80	1411	1732.20
4182	836.40	9400	1880.00	1412	1732.40
4183	836.60	9401	1880.20	1413	1732.60
· ⋮	· ⋮	· ⋮	· ⋮	· ⋮	· ⋮
4232	846.40	9537	1907.40	1512	1752.40
4233	846.60	9538	1907.60	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:

Final test channel:

WCDMA Band V		WCDMA Band II		WCDMA Band IV	
Channel	Frequency (MHz)	Channel	Frequency (MHz)	Channel	Frequency (MHz)
4132	826.40	9262	1852.40	1312	1712.40
4183	836.60	9400	1880.00	1412	1732.40
4233	846.60	9538	1907.60	1513	1752.60

5.2 Related Submittal(s) / Grant (s)

This submittal(s) (test report) is filing to comply with Section Part 22 subpart H and Part 24 subpart E of the FCC CFR 47 Rules.
This submittal(s) (test report) is filing to comply with RSS-132, RSS-133, RSS-139, RSS-Gen of the IC Rules.

5.3 Test Methodology

Both conducted and radiated testing were performed according to the procedures document on ANSI / TIA / EIA-603-D-2010 and FCC KDB 971168 D01 Power Meas. License Digital Systems v03r01 and ANSI C63.4, FCC CFR 47.1046, 2.1047, 2.1049, 2.1051, 2.1053, 2.1055 and 2.1057, 27.50, 27.53

5.4 Test Facility

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

● **FCC —Registration No.: 381383**

Global United Technology Services Co., Ltd., Shenzhen EMC Laboratory has been registered and fully described in a report filed with the (FCC) Federal Communications Commission. The acceptance letter from the FCC is maintained in files. Registration 381383.

● **Industry Canada (IC) —Registration No.: 9079A-2**

The 3m Semi-anechoic chamber of Global United Technology Services Co., Ltd. has been registered by Certification and Engineering Bureau of Industry Canada for radio equipment testing with Registration No.: 9079A-2.

● **NVLAP (LAB CODE:600179-0)**

Global United Technology Services Co., Ltd., is accredited by the National Voluntary Laboratory Accreditation Program (NVLAP). LAB CODE:600179-0

5.5 Test Location

All tests were performed at:

Global United Technology Services Co., Ltd.

Address: No. 301-309, 3/F., Jinyuan Business Building, No.2, Laodong Industrial Zone, Xixiang Road, Baoan District, Shenzhen, Guangdong, China

Tel: 0755-27798480

Fax: 0755-27798960

6 Test Instruments list

Radiated Emission:						
Item	**Test Equipment**	**Manufacturer**	**Model No.**	**Inventory No.**	**Cal.Date (mm-dd-yy)**	**Cal.Due date (mm-dd-yy)**
1	3m Semi- Anechoic Chamber	ZhongYu Electron	9.2(L)*6.2(W)* 6.4(H)	GTS250	July. 03 2015	July. 02 2020
2	Control Room	ZhongYu Electron	6.2(L)*2.5(W)* 2.4(H)	GTS251	N/A	N/A
3	EMI Test Receiver	Rohde & Schwarz	ESU26	GTS203	June. 27 2018	June. 26 2019
4	BiConiLog Antenna	SCHWARZBECK MESS-ELEKTRONIK	VULB9163	GTS214	June. 27 2018	June. 26 2019
5	Double -ridged waveguide horn	SCHWARZBECK MESS-ELEKTRONIK	BBHA 9120 D	GTS208	June. 27 2018	June. 26 2019
6	Horn Antenna	ETS-LINDGREN	3160	GTS217	June. 27 2018	June. 26 2019
7	EMI Test Software	AUDIX	E3	N/A	N/A	N/A
8	Coaxial Cable	GTS	N/A	GTS213	June. 27 2018	June. 26 2019
9	Coaxial Cable	GTS	N/A	GTS211	June. 27 2018	June. 26 2019
10	Coaxial cable	GTS	N/A	GTS210	June. 27 2018	June. 26 2019
11	Coaxial Cable	GTS	N/A	GTS212	June. 27 2018	June. 26 2019
12	Amplifier(100kHz-3GHz)	HP	8347A	GTS204	June. 27 2018	June. 26 2019
13	Amplifier(2GHz-20GHz)	HP	84722A	GTS206	June. 27 2018	June. 26 2019
14	Amplifier (18-26GHz)	Rohde & Schwarz	AFS33-18002 650-30-8P-44	GTS218	June. 27 2018	June. 26 2019
15	Band filter	Amindeon	82346	GTS219	June. 27 2018	June. 26 2019
16	Power Meter	Anritsu	ML2495A	GTS540	June. 27 2018	June. 26 2019
17	Power Sensor	Anritsu	MA2411B	GTS541	June. 27 2018	June. 26 2019
18	Wideband Radio Communication Tester	Rohde & Schwarz	CMW500	GTS575	June. 27 2018	June. 26 2019
19	Splitter	Agilent	11636B	GTS237	June. 27 2018	June. 26 2019
20	Loop Antenna	ZHINAN	ZN30900A	GTS534	June. 27 2018	June. 26 2019
21	Breitband hornantenne	SCHWARZBECK	BBHA 9170	GTS579	Oct. 20 2018	Oct. 19 2019
22	Amplifier	TDK	PA-02-02	GTS574	Oct. 20 2018	Oct. 19 2019
23	Amplifier	TDK	PA-02-03	GTS576	Oct. 20 2018	Oct. 19 2019
24	PSA Series Spectrum Analyzer	Rohde & Schwarz	FSP	GTS578	June. 27 2018	June. 26 2019

General used equipment:						
Item	**Test Equipment**	**Manufacturer**	**Model No.**	**Inventory No.**	**Cal.Date (mm-dd-yy)**	**Cal.Due date (mm-dd-yy)**
1	Humidity/ Temperature Indicator	KTJ	TA328	GTS243	June. 27 2018	June. 26 2019
2	Barometer	ChangChun	DYM3	GTS255	June. 27 2018	June. 26 2019

7 System test configuration

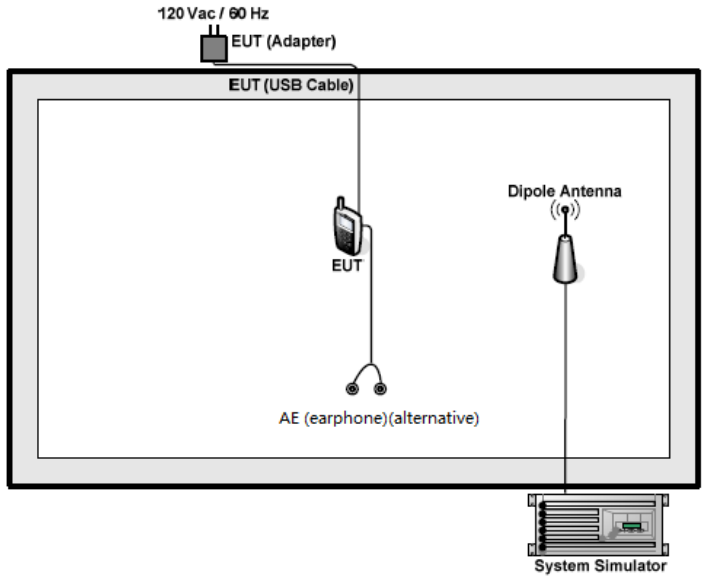
7.1 Test mode

During all testing, EUT is in link mode with base station emulator at maximum power level. The spurious emission measurements were carried out in semi-anechoic chamber with 3-meter test range, and EUT is rotated on three test planes to find out the worst emission.

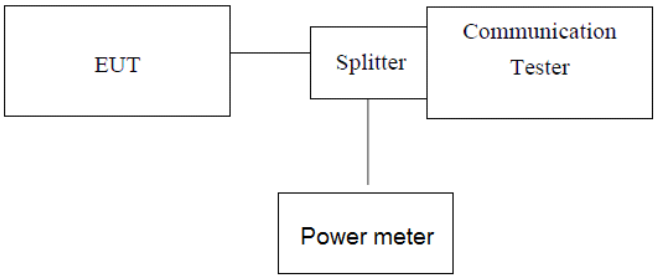
Test modes		
Band	Radiated	Conducted
WCDMA II	■ RMC 12.2Kbps link	■ RMC 12.2Kbps link
WCDMA Band V	■ RMC 12.2Kbps link	■ RMC 12.2Kbps link
WCDMA Band IV	■ RMC 12.2Kbps link	■ RMC 12.2Kbps link

Note: The maximum power levels is RMC12.2Kbps mode for WCDMA Band V, Band IV and Band II. only these modes were used for all tests.

7.2 Configuration of Tested System



7.3 Conducted Average Output Power

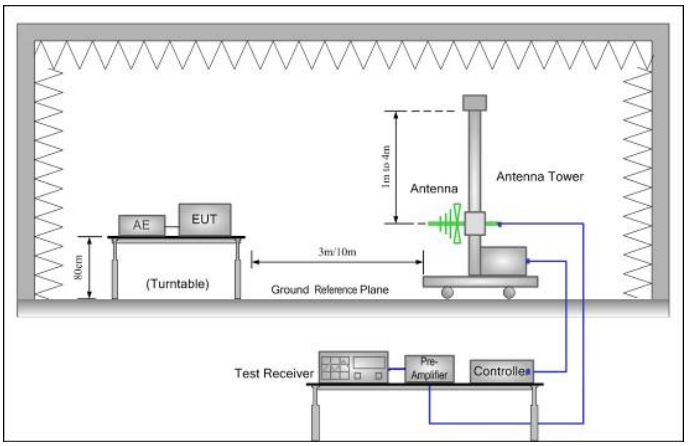
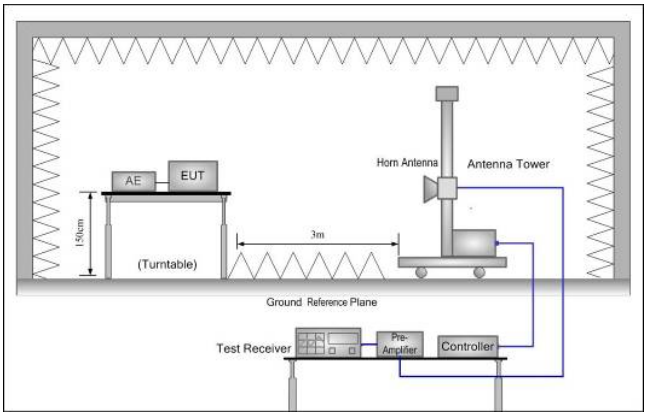
Test Requirement for FCC:	FCC part22.913(a) and FCC part24.232(b) and FCC part 27.50
Test Requirement for IC	RSS-132 Clause 5.4, RSS-133 Clause 6.4, ,RSS-139 Clause 6.5
Limit for FCC:	WCDMA Band V: 7W WCDMA Band II: 2W WCDMA Band IV: 1W
Limit for IC:	WCDMA Band V: 11.5W WCDMA Band II: 2W WCDMA Band IV: 1W
Test setup:	 *Note: Measurement setup for testing on Antenna connector*
Test Procedure:	1. The transmitter output port was connected to base station. 2. The RF output of EUT was connected to the power meter by RF cable and attenuator, the path loss was compensated to the results for each measurement. 3. Set EUT at maximum power through base station. 4. Select lowest, middle, and highest channels for each band and different modulation. 5. Measure the maximum burst average power.
Test Instruments:	Refer to section 6.0 for details
Test mode:	Refer to section 7.1 for details
Test results:	Pass

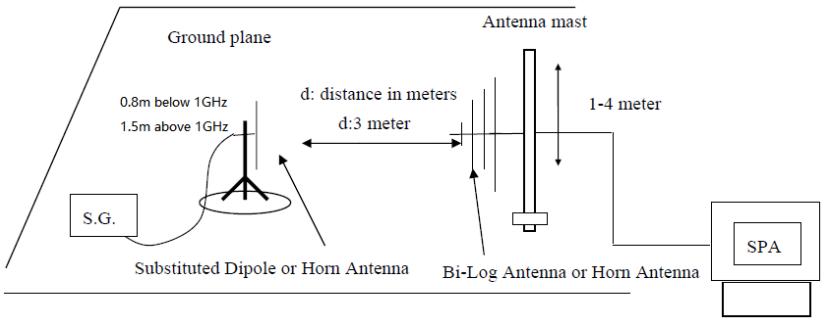
Measurement Data

Conducted Power (dBm)						
Band	WCDMA Band II			WCDMA Band V		
Channel	9262	9400	9538	4132	4183	4233
Frequency	1852.4	1880.0	1907.6	826.4	836.6	846.6
RMC 12.2Kbps	23.47	23.78	22.34	22.27	22.70	23.79
HSDPA Subtest-1	22.31	22.59	22.11	22.89	22.73	22.47
HSDPA Subtest-2	23.62	23.00	22.61	22.92	23.79	23.91
HSDPA Subtest-3	22.09	23.26	22.42	22.87	22.70	23.64
HSDPA Subtest-4	22.90	22.64	22.52	**23.91**	22.67	22.85
HSUPA Subtest-1	22.04	23.89	23.68	23.13	23.79	23.60
HSUPA Subtest-2	22.28	22.90	22.56	22.20	22.34	23.73
HSUPA Subtest-3	22.93	23.88	23.43	22.94	22.66	22.51
HSUPA Subtest-4	22.05	**23.97**	22.56	23.90	22.20	22.72
HSUPA Subtest-5	22.12	22.41	23.32	23.46	23.62	22.56
AMR	23.58	22.03	22.15	22.47	22.64	23.83

Conducted Power (dBm)			
Band	WCDMA Band IV		
Channel	1312	1412	1513
Frequency	1712.4	1732.4	1752.6
RMC 12.2Kbps	21.15	22.17	21.42
HSDPA Subtest-1	21.96	21.50	21.99
HSDPA Subtest-2	21.29	22.64	21.22
HSDPA Subtest-3	21.44	22.06	22.63
HSDPA Subtest-4	21.06	21.79	21.34
HSUPA Subtest-1	22.29	21.09	22.54
HSUPA Subtest-2	21.83	22.58	**22.78**
HSUPA Subtest-3	21.20	21.88	22.10
HSUPA Subtest-4	21.63	22.74	21.48
HSUPA Subtest-5	22.10	21.00	22.66
AMR	21.71	21.56	22.49

7.4 ERP, EIRP Measurement

Test Requirement for FCC:	FCC part22.913(a) and FCC part24.232(b) and FCC part 27.50
Test Requirement for IC:	RSS-132 Clause 5.4, RSS-133 Clause 6.4, RSS-139 Clause 6.5
Limit for FCC:	WCDMA Band V: 7W WCDMA Band II: 2W WCDMA Band IV: 1W
Limit for IC	WCDMA Band V: 11.5W WCDMA Band II: 2W WCDMA Band IV: 1W
Test setup:	Below 1GHz  Above 1GHz  Substituted method:

<table>
<tr><td></td><td colspan="6"> 
</td></tr>
<tr><td>Test Procedure:</td><td colspan="6">1. The EUT was placed on an non-conductive turntable using a non-conductive support. The radiated emission at the fundamental frequency was measured at 3 m with a test antenna and EMI spectrum analyzer.
2. During the measurement, the EUT was communication with the station. The highest emission was recorded with the rotation of the turntable and the lowering of the test antenna from 4m to 1m. The reading was recorded and the field strength (E in dBuV/m) was calculated.
3. ERP in frequency band 824.2 –848.80.8MHz were measured using a substitution method. The EUT was replaced by dipole antenna connected, the S.G. output was recorded and ERP was calculated asfollows:
ERP = S.G. output (dBm) + Antenna Gain (dBd) – Cable Loss (dB)
4. EIRP in frequency band 1850.2 –1909.8MHz were measured using a substitution method. The EUT was replaced by or horn antenna connected, the S.G. output was recorded and EIRP was calculated as follows:
EIRP = S.G. output (dBm) + Antenna Gain (dBi) – Cable Loss (dB)</td></tr>
<tr><td>Test environment:</td><td>Temp.:</td><td>25 °C</td><td>Humid.:</td><td>52%</td><td>Press.:</td><td>1 012mbar</td></tr>
<tr><td>Test Instruments:</td><td colspan="6">Refer to section 6.0 for details</td></tr>
<tr><td>Test mode:</td><td colspan="6">Refer to section 7.1 for details</td></tr>
<tr><td>Test results:</td><td colspan="6">Pass</td></tr>
</table>

Measurement Data

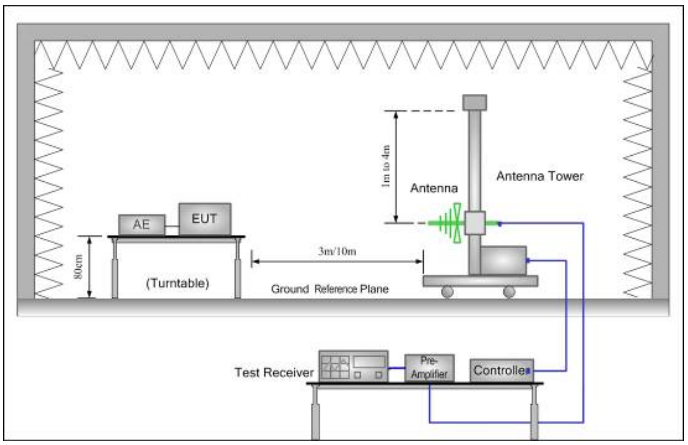
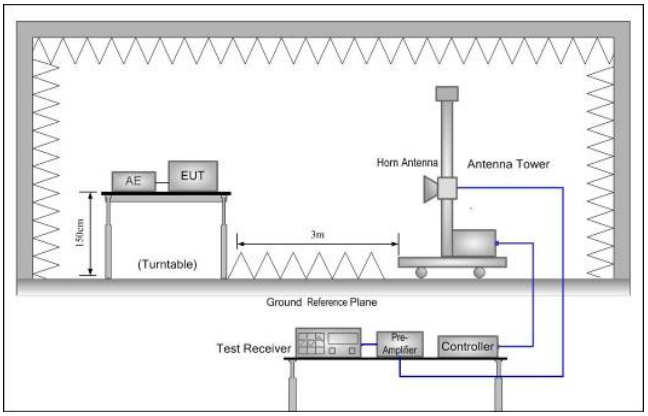
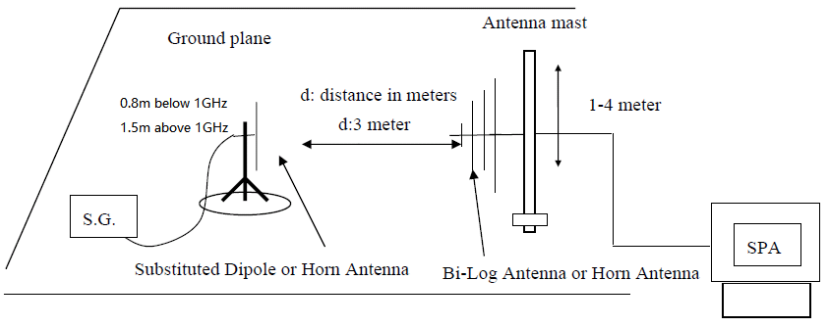
The maximum value has been record and the tighter limits apply:

EUT mode	Channel	Modulation	Polarization	SGP [dBm]	Substitution Gain[dBi]	Cable loss[dB]	EIRP (dBm)	Limit (dBm)	Result
WCDMA Band 2	Lowest	QPSK	H	21.61	-1.93	1.13	20.81	33.00	Pass
	Middle	QPSK	H	21.29	-1.93	1.22	20.58	33.00	Pass
	Highest	QPSK	H	21.12	-1.93	1.34	20.53	33.00	Pass

EUT mode	Channel	Modulation	Polarization	SGP [dBm]	Substitution Gain[dBi]	Cable loss[dB]	EIRP (dBm)	Limit (dBm)	Result
WCDMA Band 4	Lowest	QPSK	H	22.08	-2.74	1.71	21.05	30.00	Pass
	Middle	QPSK	H	21.1	-2.74	1.73	20.09	30.00	Pass
	Highest	QPSK	H	21.07	-2.74	1.81	20.14	30.00	Pass

EUT mode	Channel	Modulation	Polarization	SGP [dBm]	Substitution Gain[dBi]	Cable loss[dB]	ERP (dBm)	Limit (dBm)	Result
WCDMA Band 5	Lowest	QPSK	H	21.25	-2.08	1.55	20.72	38.45	Pass
	Middle	QPSK	H	21.76	-2.08	1.6	21.28	38.45	Pass
	Highest	QPSK	H	22.33	-2.08	1.65	21.9	38.45	Pass

7.5 Field strength of spurious radiation measurement

Test Requirement for FCC:	FCC part22.917(a) and FCC part24.238(a) and FCC part 27.53
Test Requirement for IC:	RSS-GEN Clause 6.13
Limit:	-13dBm
Test setup:	Below 1GHz  Above 1GHz  Substituted method: 

Test Procedure:	1. The EUT was placed on an non-conductive turntable using a non-conductive support. The radiated emission at the fundamental frequency was measured at 3 m with a test antenna and EMI spectrum analyzer. 2. During the tests, the antenna height and the EUT azimuth were varied in order to identify the maximum level of emissions from the EUT. This maximization process was repeated with the EUT positioned in each of its three orthogonal orientations. 3. The frequency range up to tenth harmonic was investigated for each of three fundamental frequency (low, middle and high channels). Once spurious emission was identified, the power of the emission was determined using the substitution method. 4. The spurious emissions attenuation was calculated as the difference between radiated power at the fundamental frequency and the spurious emissions frequency. ERP / EIRP = S.G. output (dBm) + Antenna Gain(dB/dBi) – Cable Loss (dB)					
Test environment:	Temp.:	25 °C	Humid.:	52%	Press.:	1 012mbar
Test Instruments:	Refer to section 5.0 for details					
Test mode:	Refer to section 6.1 for details					
Test results:	Pass					

Measurement Data

Test mode:	WCDMA Band V		Test channel:	Lowest
Frequency (MHz)	Spurious Emission		Limit (dBm)	Result
	Polarization	Level (dBm)		
1652.80	Vertical	-52.49	-13.00	Pass
2479.20	V	-50.27		
3305.60	V	-53.05		
4132.00	V	-50.59		
4958.40	V	-52.36		
1652.80	Horizontal	-52.36	-13.00	Pass
2479.20	H	-52.10		
3305.60	H	-57.56		
4132.00	H	-55.24		
4958.40	H	-53.09		
Test mode:	**WCDMA Band V**		**Test channel:**	**Middle**
Frequency (MHz)	Spurious Emission		Limit (dBm)	Result
	Polarization	Level (dBm)		
1672.80	Vertical	-52.69	-13.00	Pass
2509.20	V	-51.03		
3345.60	V	-53.68		
4182.00	V	-56.16		
5018.40	V	-58.60		
1672.80	Horizontal	-51.20	-13.00	Pass
2509.20	H	-53.15		
3345.60	H	-57.87		
4182.00	H	-54.30		
5018.40	H	-51.93		
Test mode:	**WCDMA Band V**		**Test channel:**	**Highest**
Frequency (MHz)	Spurious Emission		Limit (dBm)	Result
	Polarization	Level (dBm)		
1693.20	Vertical	-51.32	-13.00	Pass
2539.80	V	-53.78		
3386.40	V	-52.44		
4233.00	V	-55.34		
5079.60	V	-52.31		
1693.20	Horizontal	-50.71	-13.00	Pass
2539.80	H	-53.17		
3386.40	H	-54.57		
4233.00	H	-52.79		
5079.60	H	-53.57		

Remark：

1. The emission behaviour belongs to narrowband spurious emission.
2. The emission levels of below 1 GHz are very lower than the limit and not show in test report.

Test mode:	WCDMA Band II		Test channel:	Lowest
Frequency (MHz)	Spurious Emission		Limit (dBm)	Result
	Polarization	Level (dBm)		
3704.46	Vertical	-58.95	-13.00	Pass
5556.86	V	-52.02		
7409.26	V	-54.56		
9261.66	V	-57.01		
11114.40	V	-52.53		
3704.46	Horizontal	-54.85	-13.00	Pass
5556.86	H	-59.19		
7409.26	H	-50.95		
9261.66	H	-54.01		
11114.40	H	-53.61		
Test mode:	**WCDMA Band II**		**Test channel:**	**Middle**
Frequency (MHz)	Spurious Emission		Limit (dBm)	Result
	Polarization	Level (dBm)		
3759.83	Vertical	-49.67	-13.00	Pass
5639.83	V	-52.59		
7519.83	V	-54.99		
9399.83	V	-57.32		
11280.00	V	-54.80		
3759.83	Horizontal	-55.27	-13.00	Pass
5639.83	H	-59.40		
7519.83	H	-51.06		
9399.83	H	-53.96		
11280.00	H	-51.73		
Test mode:	**WCDMA Band II**		**Test channel:**	**Highest**
Frequency (MHz)	Spurious Emission		Limit (dBm)	Result
	Polarization	Level (dBm)		
3815.03	Vertical	-58.90	-13.00	Pass
5722.63	V	-51.62		
7630.23	V	-53.86		
9537.83	V	-56.03		
11445.60	V	-53.06		
3815.03	Horizontal	-54.12	-13.00	Pass
5722.63	H	-57.97		
7630.23	H	-59.51		
9537.83	H	-52.22		
11445.60	H	-53.31		

Remark：

1. The emission behaviour belongs to narrowband spurious emission.
2. The emission levels of below 1 GHz are very lower than the limit and not show in test report.

Test mode:	WCDMA Band IV		Test channel:	Lowest
Frequency (MHz)	Spurious Emission		Limit (dBm)	Result
	Polarization	Level (dBm)		
3424.80	Vertical	-52.38	-13.00	Pass
5137.20	V	-53.15		
6849.60	V	-51.66		
8562.00	V	-52.92		
10274.40	V	-53.92		
3424.80	Horizontal	-51.70	-13.00	Pass
5137.20	H	-53.46		
6849.60	H	-54.46		
8562.00	H	-57.48		
10274.40	H	-55.13		
Test mode:	**WCDMA Band IV**		**Test channel:**	**Middle**
Frequency (MHz)	Spurious Emission		Limit (dBm)	Result
	Polarization	Level (dBm)		
3464.80	Vertical	-53.40	-13.00	Pass
5197.20	V	-51.58		
6929.60	V	-53.22		
8662.00	V	-57.33		
10394.40	V	-53.57		
3464.80	Horizontal	-52.69	-13.00	Pass
5197.20	H	-53.63		
6929.60	H	-55.93		
8662.00	H	-49.08		
10394.40	H	-52.66		
Test mode:	**WCDMA Band IV**		**Test channel:**	**Highest**
Frequency (MHz)	Spurious Emission		Limit (dBm)	Result
	Polarization	Level (dBm)		
3505.20	Vertical	-52.43	-13.00	Pass
5257.80	V	-51.90		
7010.40	V	-51.02		
8763.00	V	-52.11		
10515.60	V	-52.96		
3505.20	Horizontal	-53.32	-13.00	Pass
5257.80	H	-57.22		
7010.40	H	-51.36		
8763.00	H	-52.42		
10515.60	H	-51.26		

Remark：

1. The emission behaviour belongs to narrowband spurious emission.
2. The emission levels of below 1 GHz are very lower than the limit and not show in test report.

8 Test Setup Photo

Reference to the **appendix I** for details.

9 EUT Constructional Details

Reference to the **appendix II** for details.

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