TEST REPORT

Applicant:	CT Cellutions, Inc
Address of Applicant:	5705 Commerce Blvd. Alpharetta, Georgia 30004, United States
Manufacturer/Factory:	Z-TECH COMMUNICATION(SZ)CO LTD
Address of Manufacturer/Factory:	7/F BLK D BAO'AN ZHI'GU YIN'TIAN RD. NO.4 XI'XIANG ST' BAO'AN SZ CN
Equipment Under Test (EUT)	
Product Name:	MOBILE PHONES
Model No.:	PADUA
Trade mark:	CELLUTION
FCC ID:	2AT3DPADUA
Applicable standards:	FCC CFR Title 47 Part 2
	FCC CFR Title 47 Part 22 Subpart H
	FCC CFR Title 47 Part 24 Subpart E
Date of sample receipt:	September 09, 2020
Date of Test:	September 10-30, 2020
Date of report issued:	September 30, 2020
Test Result :	PASS *

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

Authorized Signature:

Robinson Lo
Laboratory Manager

This results shown in this test report refer only to the sample(s) tested, this test report cannot be reproduced, except in full, without prior written permission of the company. The report would be invalid without specific stamp of test institute and the signatures of compiler and approver.

2 Version

Version No.	Date	Description
00	*September 30, 2020*	*Original*

Prepared By: ***Date:*** *September 30, 2020*

Project Engineer

Check By: ***Date:*** *September 30, 2020*

Reviewer

3 Contents

Page

2 VERSION 2

3 CONTENTS 3

4 TEST SUMMARY 4

5 GENERAL INFORMATION 5

5.1 GENERAL DESCRIPTION OF EUT 5
5.2 RELATED SUBMITTAL(S) / GRANT (S) 7
5.3 TEST METHODOLOGY 7
5.4 DEVIATION FROM STANDARDS 7
5.5 ABNORMALITIES FROM STANDARD CONDITIONS 7
5.6 TEST FACILITY 7
5.7 TEST LOCATION 7

6 TEST INSTRUMENTS LIST 8

7 SYSTEM TEST CONFIGURATION 10

7.1 TEST MODE 10
7.2 CONFIGURATION OF TESTED SYSTEM 10
7.3 CONDUCTED AVERAGE OUTPUT POWER 11
7.4 PEAK-TO-AVERAGE RATIO 12
7.5 OCCUPY BANDWIDTH 13
7.6 MODULATION CHARACTERISTIC 14
7.7 OUT OF BAND EMISSION AT ANTENNA TERMINALS 14
7.8 ERP, EIRP MEASUREMENT 15
7.9 FIELD STRENGTH OF SPURIOUS RADIATION MEASUREMENT 18
7.10 FREQUENCY STABILITY V.S. TEMPERATURE MEASUREMENT 28
7.11 FREQUENCY STABILITY V.S. VOLTAGE MEASUREMENT 29

8 TEST SETUP PHOTO 30

9 EUT CONSTRUCTIONAL DETAILS 30

4 Test Summary

Test Item	Section in CFR 47	Result
RF Exposure (SAR)	Part 1.1307 Part 2.1093	Pass* (Please refer to SAR Report)
RF Output Power	Part 2.1046 Part 22.913(a) Part 24.232(c)	Pass
Peak-to-Average Ratio	Part 2.1046 Part 22.913(d) Part 24.232(d)	Pass
Modulation Characteristics	Part 2.1047	Pass
99% Occupied Bandwidth & 26dB Bandwidth	Part 2.1049 Part 22.917(b) Part 24.238(b)	Pass
Spurious Emissions at Antenna Terminal	Part 2.1051 Part 22.917 Part 24.238	Pass
Field Strength of Spurious Radiation	Part 2.1053 Part 22.917 Part 24.238	Pass
Out of band emission, Band Edge	Part 2.1051 Part 22.917 Part 24.238	Pass
ERP and EIRP	Part 22.913(a) Part 24.232(b)	Pass
Frequency stability vs. temperature	Part 2.1055(a)(1)(b) Part 22.355 Part 24.235	Pass
Frequency stability vs. voltage	Part 2.1055(d)(1)(2) Part 22.355 Part 24.235	Pass

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

5 General Information

5.1 General Description of EUT

Product Name:	MOBILE PHONES
Model No.:	PADUA
Test sample(s) ID:	GTS202009000106-1
Sample(s) Status:	Engineer sample
Serial No.:	0123456789ABCDEF
Hardware Version:	Y391I_MB_V1
Software Version:	PADUA_Cellution_V3
Support Networks:	GSM, GPRS, WCDMA
Support Bands:	GSM850, PCS1900, WCDMA Band V, WCDMA Band II
TX Frequency:	GSM850: 824.20MHz-848.80MHz PCS1900: 1850.20MHz-1909.80MHz WCDMA Band V: 826.40MHz-846.60MHz WCDMA Band II: 1852.40MHz-1907.60MHz
Modulation type:	GSM/GPRS: GMSK WCDMA Band II/V: QPSK
Antenna type:	PIFA antenna
Antenna gain:	GSM850:-4.02dBi PCS1900:1.27dBi WCDMA Band V: -4.02dBi WCDMA Band II: 1.27dBi
Power supply:	Adaptor Model: Padua Input: AC 100-240V, 50/60Hz, 0.15A Output: DC 5.0V, 1Amp Or DC 3.8V 2800mAh Li-ion Battery

Operation Frequency List:

GSM 850		PCS1900		WCDMA Band V		WCDMA Band II	
Channel	Frequency (MHz)	Channel	Frequency (MHz)	Channel	Frequency (MHz)	Channel	Frequency (MHz)
128	824.20	512	1850.20	4132	826.40	9262	1852.40
129	824.40	513	1850.40	4133	826.60	9263	1852.60
⋮	⋮	⋮	⋮	⋮	⋮	⋮	⋮
189	836.40	660	1879.80	4181	836.20	9399	1879.80
190	836.60	661	1880.00	4182	836.40	9400	1880.00
191	836.80	662	1880.20	4183	836.60	9401	1880.20
⋮	⋮	⋮	⋮	⋮	⋮	⋮	⋮
250	848.60	809	1909.60	4232	846.40	9537	1907.40
251	848.80	810	1909.80	4233	846.60	9538	1907.60

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:

GSM 850		PCS1900		WCDMA Band V		WCDMA Band II	
Channel	Frequency (MHz)	Channel	Frequency (MHz)	Channel	Frequency (MHz)	Channel	Frequency (MHz)
128	824.20	512	1850.20	4132	826.40	9262	1852.40
190	836.60	661	1880.00	4182	836.40	9400	1880.00
251	848.80	810	1909.80	4233	846.60	9538	1907.60

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.

5.3 Test Methodology

Both conducted and radiated testing were performed according to the procedures document on ANSI C63.26:2015 and FCC CFR 47.1046, 2.1047, 2.1049, 2.1051, 2.1053, 2.1055 and 2.1057

5.4 Deviation from Standards

None.

5.5 Abnormalities from Standard Conditions

None.

5.6 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.

● **IC —Registration No.: 9079A**

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.

● **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

5.7 Test Location

All tests were performed at:
Global United Technology Services Co., Ltd. Address: No. 123-128, Tower A, Jinyuan Business Building, No.2, Laodong Industrial Zone, Xixiang Road, Baoan District, Shenzhen, Guangdong, China 518102 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. 02 2020	July. 01 2025
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. 25 2020	June. 24 2021
4	BiConiLog Antenna	SCHWARZBECK MESS-ELEKTRONIK	VULB9163	GTS214	June. 25 2020	June. 24 2021
5	Double -ridged waveguide horn	SCHWARZBECK MESS-ELEKTRONIK	BBHA 9120 D	GTS208	June. 25 2020	June. 24 2021
6	Horn Antenna	ETS-LINDGREN	3160	GTS217	June. 25 2020	June. 24 2021
7	EMI Test Software	AUDIX	E3	N/A	N/A	N/A
8	Coaxial Cable	GTS	N/A	GTS213	June. 25 2020	June. 24 2021
9	Coaxial Cable	GTS	N/A	GTS211	June. 25 2020	June. 24 2021
10	Coaxial cable	GTS	N/A	GTS210	June. 25 2020	June. 24 2021
11	Coaxial Cable	GTS	N/A	GTS212	June. 25 2020	June. 24 2021
12	Amplifier(100kHz-3GHz)	HP	8347A	GTS204	June. 25 2020	June. 24 2021
13	Amplifier(2GHz-20GHz)	HP	84722A	GTS206	June. 25 2020	June. 24 2021
14	Amplifier (18-26GHz)	Rohde & Schwarz	AFS33-18002 650-30-8P-44	GTS218	June. 25 2020	June. 24 2021
15	Band filter	Amindeon	82346	GTS219	June. 25 2020	June. 24 2021
16	Power Meter	Anritsu	ML2495A	GTS540	June. 25 2020	June. 24 2021
17	Power Sensor	Anritsu	MA2411B	GTS541	June. 25 2020	June. 24 2021
18	Wideband Radio Communication Tester	Rohde & Schwarz	CMW500	GTS575	June. 25 2020	June. 24 2021
19	Splitter	Agilent	11636B	GTS237	June. 25 2020	June. 24 2021
20	Loop Antenna	ZHINAN	ZN30900A	GTS534	June. 25 2020	June. 24 2021
21	Breitband hornantenne	SCHWARZBECK	BBHA 9170	GTS579	Oct. 19 2019	Oct. 18 2020
22	Amplifier	TDK	PA-02-02	GTS574	Oct. 19 2019	Oct. 18 2020
23	Amplifier	TDK	PA-02-03	GTS576	Oct. 19 2019	Oct. 18 2020
24	PSA Series Spectrum Analyzer	Rohde & Schwarz	FSP	GTS578	June. 25 2020	June. 24 2021

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. 25 2020	June. 24 2021
2	Barometer	ChangChun	DYM3	GTS255	June. 25 2020	June. 24 2021

RF Conducted Test:

Item	Test Equipment	Manufacturer	Model No.	Serial No.	Cal.Date (mm-dd-yy)	Cal.Due date (mm-dd-yy)
1	MXA Signal Analyzer	Agilent	N9020A	GTS566	June. 25 2020	June. 24 2021
2	EMI Test Receiver	R&S	ESCI 7	GTS552	June. 25 2020	June. 24 2021
3	Spectrum Analyzer	Agilent	E4440A	GTS533	June. 25 2020	June. 24 2021
4	MXG vector Signal Generator	Agilent	N5182A	GTS567	June. 25 2020	June. 24 2021
5	ESG Analog Signal Generator	Agilent	E4428C	GTS568	June. 25 2020	June. 24 2021
6	USB RF Power Sensor	DARE	RPR3006W	GTS569	June. 25 2020	June. 24 2021
7	RF Switch Box	Shongyi	RFSW3003328	GTS571	June. 25 2020	June. 24 2021
8	Programmable Constant Temp & Humi Test Chamber	WEWON	WHTH-150L-40-880	GTS572	June. 25 2020	June. 24 2021

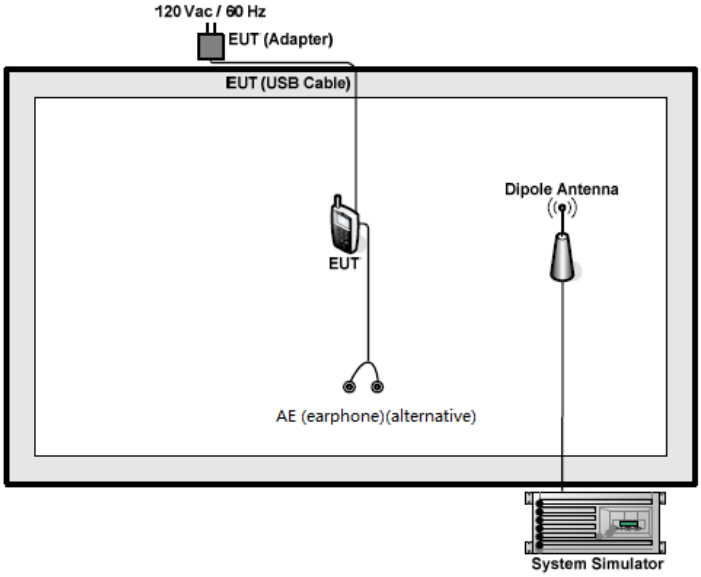
7 System test configuration

7.1 Test mode

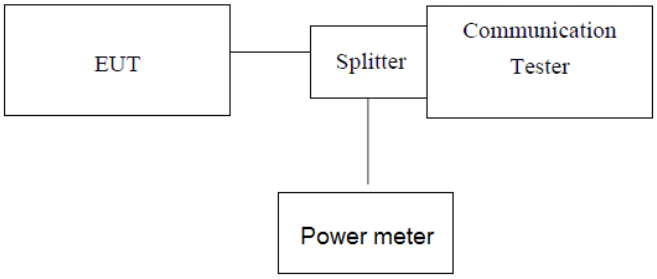
During all testing, EUT is in link mode with base station emulator at maximum power level. The spurious emission measurements were carried out in semi-anechoic chamber with 3-meter test range, and EUT is rotated on three test planes to find out the worst emission.

Test modes		
Band	Radiated	Conducted
GSM 850	■ GSM link ■ GPRS 1 link	■ GSM link ■ GPRS 1 link
PCS 1900	■ GSM link ■ GPRS 1 link	■ GSM link ■ GPRS 1 link
WCDMA II	■ RMC 12.2Kbps link	■ RMC 12.2Kbps link
WCDMA Band V	■ RMC 12.2Kbps link	■ RMC 12.2Kbps link

7.2 Configuration of Tested System

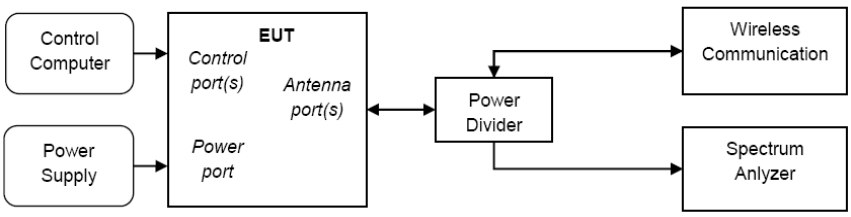


7.3 Conducted Average Output Power

Test Requirement:	FCC part 22.913(a) and FCC part 24.232(c)
Test Method:	FCC part2.1046
Limit:	GSM850, WCDMA Band V: 7W(38.45dBm) PCS1900, WCDMA Band II: 2W(33dBm)
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 power.
Test Instruments:	Refer to section 5.0 for details
Test mode:	Refer to section 6.1 for details
Test results:	Pass

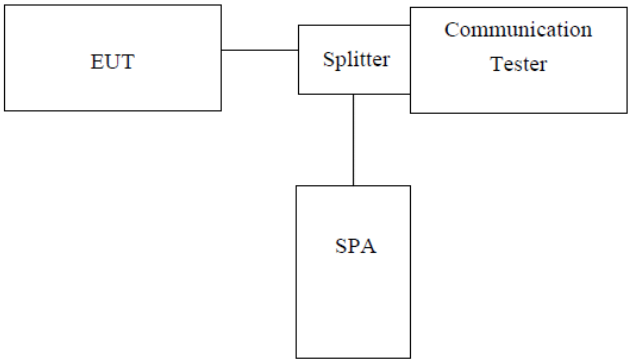
Measurement Data: The detailed test data see Appendix

7.4 Peak-to-Average Ratio

Test Requirement:	FCC Part 22.913(d) and FCC Part 24.232(d)
Test Method:	FCC part2.1046
Limit:	13db
Test setup:	
Test Procedure:	A peak to average ratio measurement is performed at the conducted port of the EUT. For WCDMA signals, the spectrum analyzers Complementary Cumulative Distribution Function (CCDF) measurement profile is used to determine the largest deviation between the average and the peak power of the EUT in a given bandwidth. The CCDF curve shows how much time the peak waveform spends at or above a given average power level. The percent of time the signal spends at or above the level defines the probability for that particular power level. For GSM signals, an average and a peak trace are used on a spectrum analyzer to determine the largest deviation between the average and the peak power of the EUT in a bandwidth greater than the emission bandwidth. The traces are generated with the spectrum analyzer set to zero span mode. **Test Settings** 1. The signal analyzer's CCDF measurement profile enabled 2. Frequency= carrier center frequency 3. Measurement BW > EBW of signal 4. for continuous transmissions, set to 1ms 5. Record the maximum PAPR level associated with a probability of 0.1%.
Test Instruments:	Refer to section 5.0 for details
Test mode:	Refer to section 6.1 for details
Test results:	Pass

Measurement Data: The detailed test data see Appendix

7.5 Occupy Bandwidth

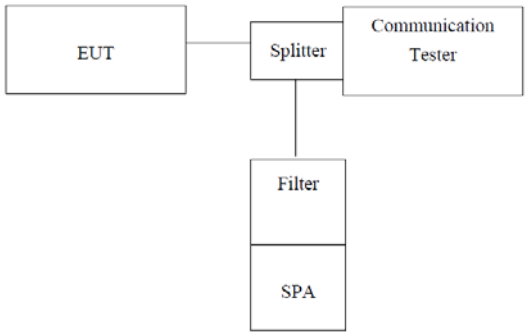
Test Requirement:	FCC part 22.917(b) and FCC part 24.238(b)
Test Method:	FCC part2.1049
Test setup:	 *Note: Measurement setup for testing on Antenna connector*
Test Procedure:	1. The EUT's output RF connector was connected with a short cable to the spectrum analyzer 2. RBW was set to about 1% of emission BW, VBW= 3 times RBW. 3. -26dBc display line was placed on the screen (or 99% bandwidth), the occupied bandwidth is the delta frequency between the two points where the display line intersects the signal trace.
Test Instruments:	Refer to section 5.0 for details
Test mode:	Refer to section 6.1 for details
Test results:	Pass

Measurement Data: The detailed test data see Appendix

7.6 MODULATION CHARACTERISTIC

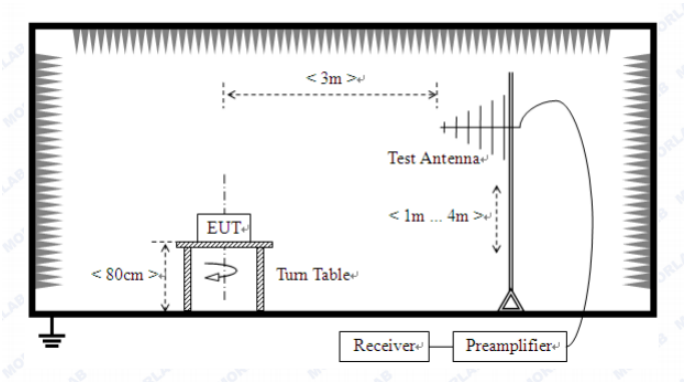
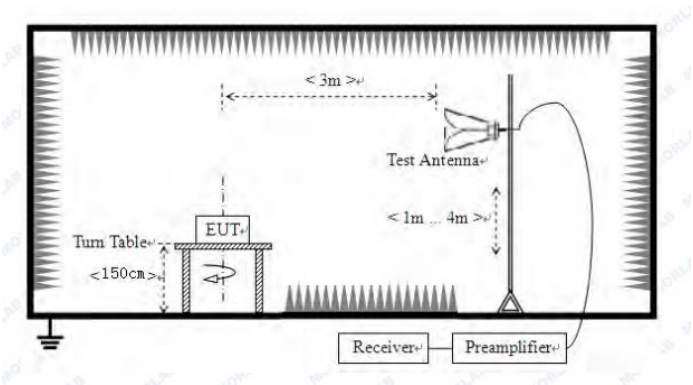
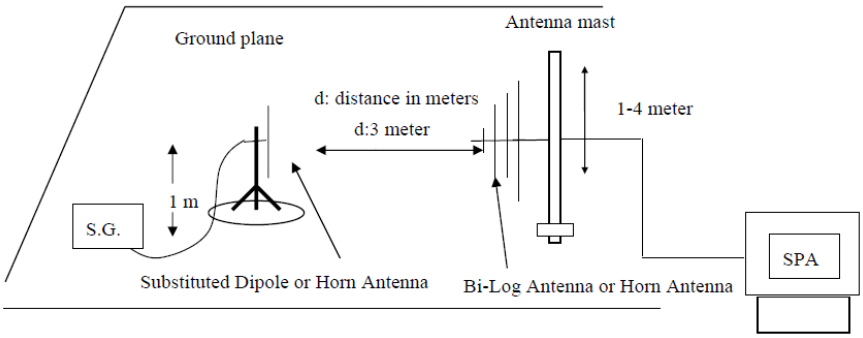
According to FCC § 2.1047(d), Part 22H & 24E there is no specific requirement for digital modulation, therefore modulation characteristic is not presented.

7.7 Out of band emission at antenna terminals

Test Requirement:	FCC part 22.917 and FCC part 24.238
Test Method:	FCC part2.1051
Limit:	-13dBm
Test setup:	 *Note: Measurement setup for testing on Antenna connector*
Test Procedure:	1 The RF output of the transceiver was connected to a spectrum analyzer through appropriate attenuation. 2 The resolution bandwidth of the spectrum analyzer was set at 1MHz, sufficient scans were taken to show the out of band Emissions if any up to 10th harmonic. 3 For the out of band: Set the RBW, VBW = 1MHz, Start=30MHz, Stop= 10th harmonic. 4 Band Edge Requirements: In the 1 MHz bands immediately outside and adjacent to the frequency block, a resolution bandwidth of at least 1 percent of the emission bandwidth of the fundamental emission of the transmitter may be employed to measure the out of band Emissions.
Test Instruments:	Refer to section 5.0 for details
Test mode:	Refer to section 6.1 for details
Test results:	Pass

Measurement Data: The detailed test data see Appendix

7.8 ERP, EIRP Measurement

Test Requirement:	FCC part22.913(a) and FCC part24.232(b)
Test Method:	FCC part 2.1046 and ANSI C63.26:2015
Limit:	GSM850, WCDMA Band V: 7W(38.45dBm) ERP PCS1900, WCDMA Band II: 2W(33dBm) EIRP
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 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)
Test Instruments:	Refer to section 5.0 for details
Test mode:	Refer to section 6.1 for details
Test results:	Pass

Measurement Data:

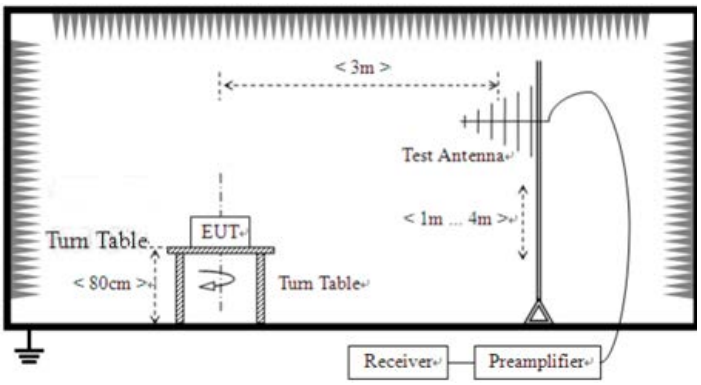
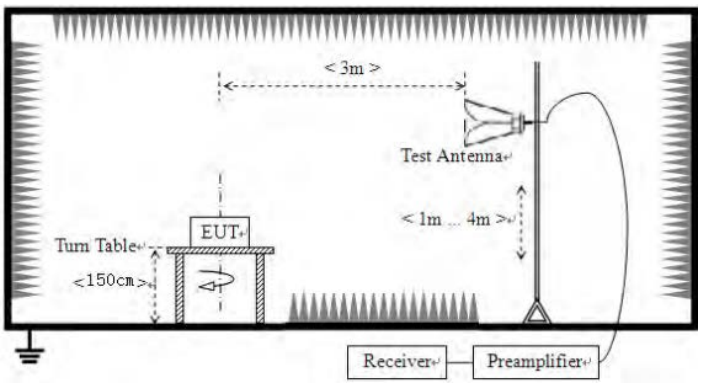
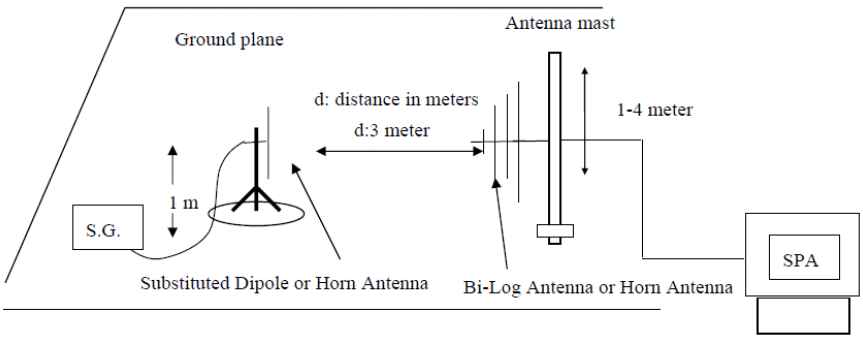
Mode	Channel	Antenna Pol.	ERP	Limit (dBm)	Result
GSM850	128	V	30.24	38.45	Pass
		H	21.95		
	190	V	30.58		
		H	22.45		
	251	V	30.47		
		H	20.74		
GPRS850	128	V	30.51	38.45	Pass
		H	21.80		
	190	V	30.98		
		H	22.13		
	251	V	29.98		
		H	21.14		

Mode	Channel	Antenna Pol.	EIRP	Limit (dBm)	Result
GSM1900	512	V	24.04	33.00	Pass
		H	27.15		
	661	V	24.45		
		H	28.12		
	810	V	25.22		
		H	28.91		
GPRS1900	512	V	24.23	33.00	Pass
		H	27.30		
	661	V	24.77		
		H	28.39		
	810	V	25.33		
		H	29.05		

Mode	Channel	Antenna Pol.	EIRP	Limit (dBm)	Result
WCDMA Band II	9262	V	15.66	33.01	Pass
		H	18.79		
	9400	V	15.57		
		H	19.26		
	9538	V	15.57		
		H	19.47		

Mode	Channel	Antenna Pol.	ERP	Limit (dBm)	Result
WCDMA Band V	4132	V	17.25	38.45	Pass
		H	4.89		
	4182	V	17.11		
		H	4.30		
	4233	V	17.38		
		H	4.71		

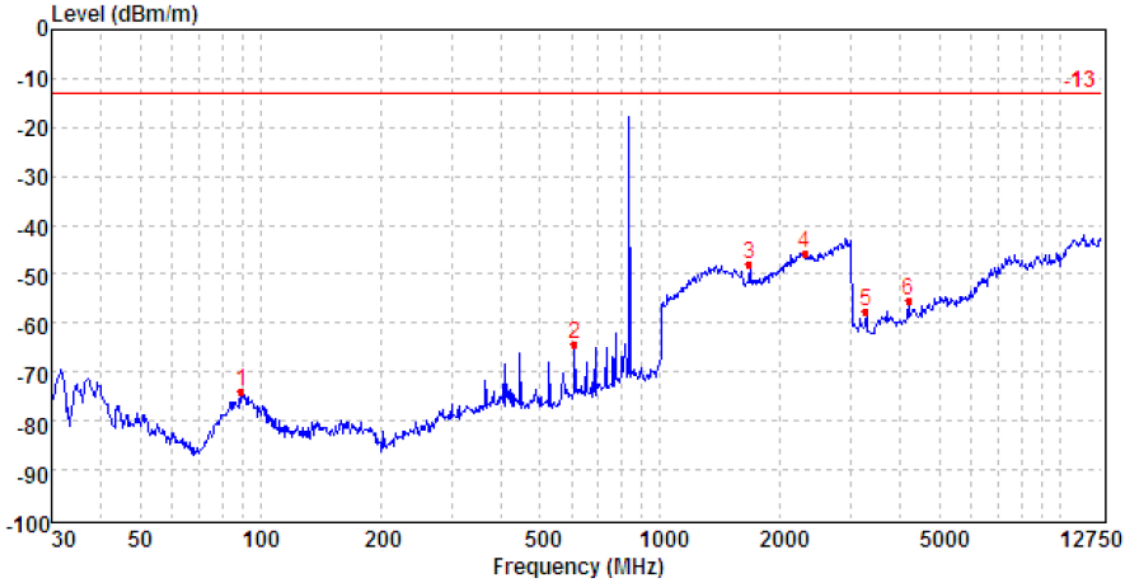
7.9 Field strength of spurious radiation measurement

Test Requirement:	FCC part22.917 and FCC part24.238
Test Method:	FCC part 2.1053 and ANSI C63.26:2015
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. EIRP = S.G. output (dBm) + Antenna Gain(dB/dBi) – Cable Loss (dB) ERP=EIRP-2.15
Test Instruments:	Refer to section 5.0 for details
Test mode:	Refer to section 6.1 for details
Test results:	Pass

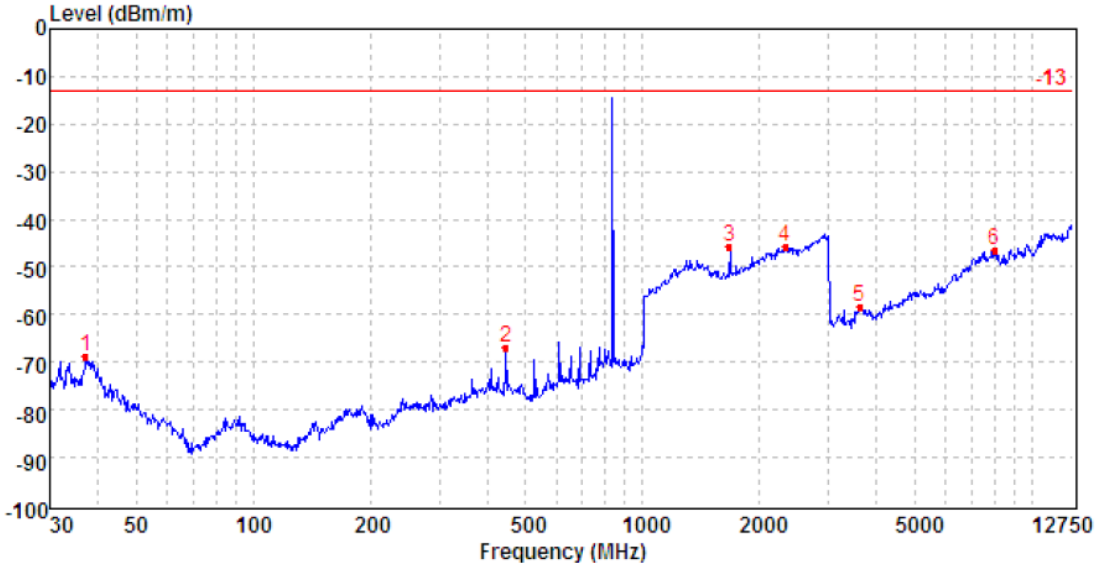
Measurement Data:

GSM850	Vertical	Channel	190



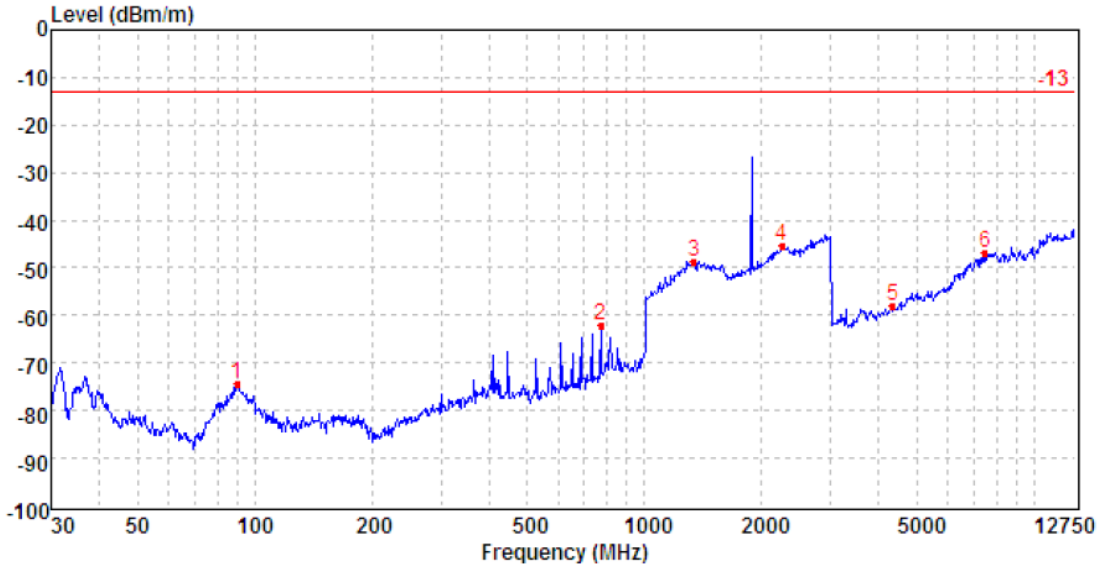
Mark	Frequency MHz	Reading dBm	Antenna dB	Cable dB	Preamp dB	Level dBm	Limit dBm	Over limit	Remark
1	89.55	-78.31	28.12	6.92	30.67	-73.94	-13.00	-60.94	Peak
2	610.85	-69.89	27.90	8.98	31.19	-64.20	-13.00	-51.20	Peak
3	1674.06	-66.90	36.17	11.68	29.07	-48.12	-13.00	-35.12	Peak
4	2297.11	-69.68	40.53	12.87	29.34	-45.62	-13.00	-32.62	Peak
5	3276.05	-70.39	40.74	8.95	36.84	-57.54	-13.00	-44.54	Peak
6	4179.88	-71.70	42.43	10.22	36.25	-55.30	-13.00	-42.30	Peak

GSM850	Horizontal	Channel	190



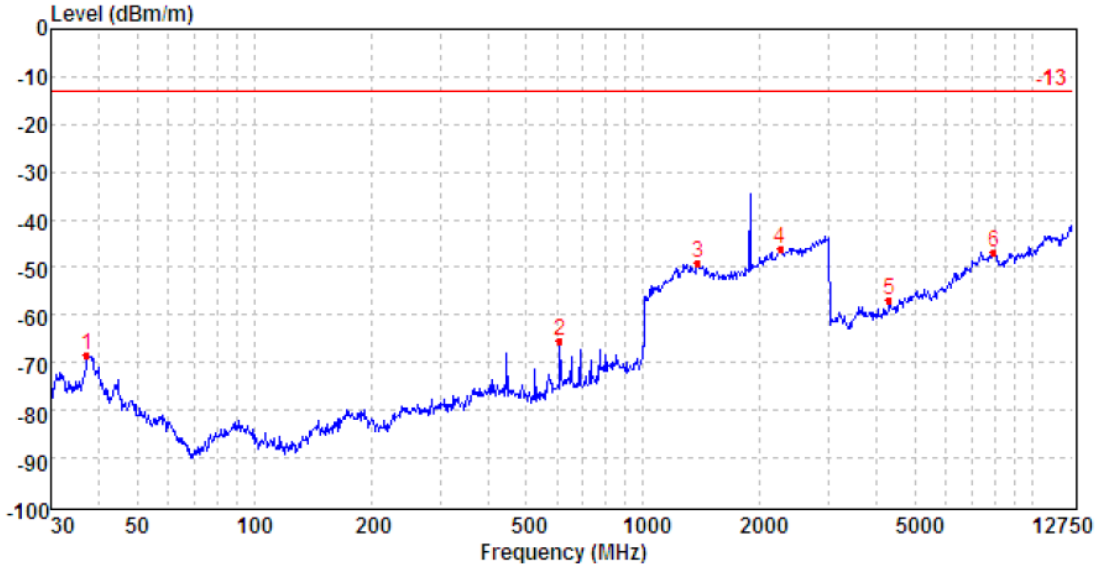
Mark	Frequency MHz	Reading dBm	Antenna dB	Cable dB	Preamp dB	Level dBm	Limit dBm	Over limit	Remark
1	37.05	-73.00	28.65	6.53	30.78	-68.60	-13.00	-55.60	Peak
2	446.69	-71.38	26.14	8.48	30.34	-67.10	-13.00	-54.10	Peak
3	1674.06	-64.76	36.25	11.68	29.07	-45.90	-13.00	-32.90	Peak
4	2327.59	-69.77	40.22	12.97	29.04	-45.62	-13.00	-32.62	Peak
5	3605.13	-73.90	42.38	10.08	36.95	-58.39	-13.00	-45.39	Peak
6	8027.71	-75.39	48.03	14.28	33.31	-46.39	-13.00	-33.39	Peak

GSM1900	Vertical	Channel	661



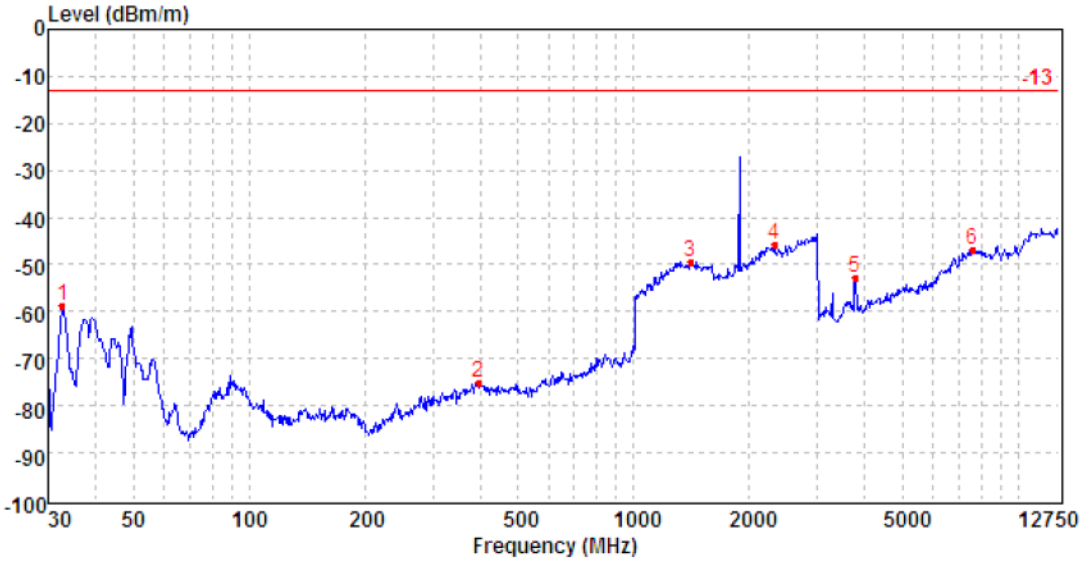
Mark	Frequency MHz	Reading dBm	Antenna dB	Cable dB	Preamp dB	Level dBm	Limit dBm	Over limit	Remark
1	90.19	-78.93	28.23	6.92	30.67	-74.45	-13.00	-61.45	Peak
2	773.13	-70.34	29.37	9.45	30.52	-62.04	-13.00	-49.04	Peak
3	1343.83	-69.68	37.52	12.73	29.26	-48.69	-13.00	-35.69	Peak
4	2254.60	-69.76	41.05	12.75	29.47	-45.43	-13.00	-32.43	Peak
5	4340.50	-75.26	42.87	10.71	36.21	-57.89	-13.00	-44.89	Peak
6	7498.75	-75.26	48.42	14.12	33.93	-46.65	-13.00	-33.65	Peak

GSM1900	Horizontal	Channel	661



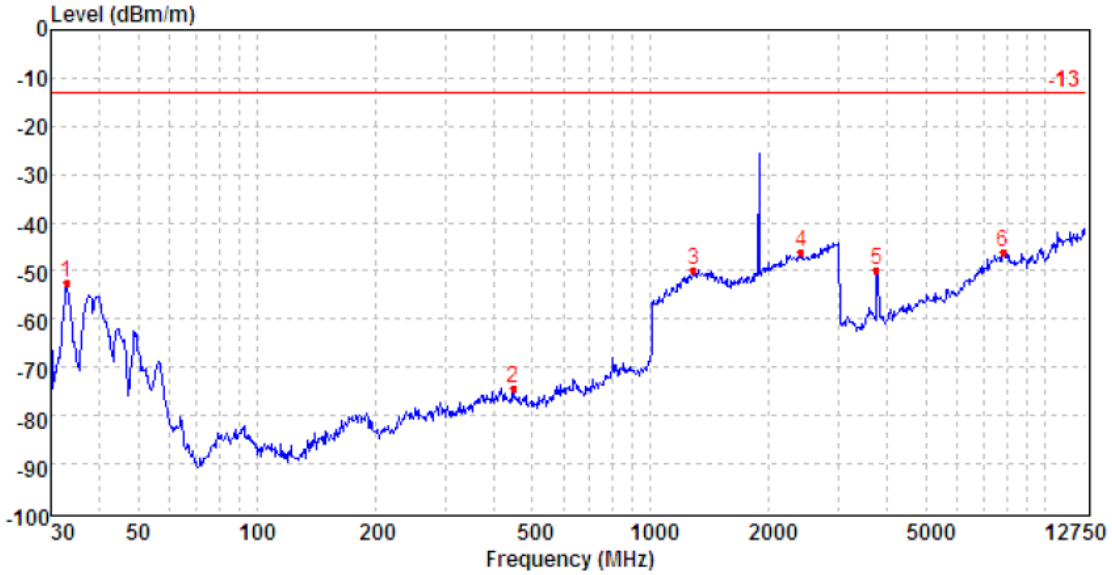
Mark	Frequency MHz	Reading dBm	Antenna dB	Cable dB	Preamp dB	Level dBm	Limit dBm	Over limit	Remark
1	37.18	-72.83	28.64	6.53	30.78	-68.44	-13.00	-55.44	Peak
2	610.85	-71.65	28.36	8.98	31.19	-65.50	-13.00	-52.50	Peak
3	1381.25	-69.74	37.12	12.53	29.15	-49.24	-13.00	-36.24	Peak
4	2254.60	-69.96	40.65	12.75	29.47	-46.03	-13.00	-33.03	Peak
5	4302.90	-73.99	42.62	10.75	36.10	-56.72	-13.00	-43.72	Peak
6	7969.71	-75.92	48.09	14.38	33.32	-46.77	-13.00	-33.77	Peak

WCDMA BAND 2	Vertical	Channel	9400



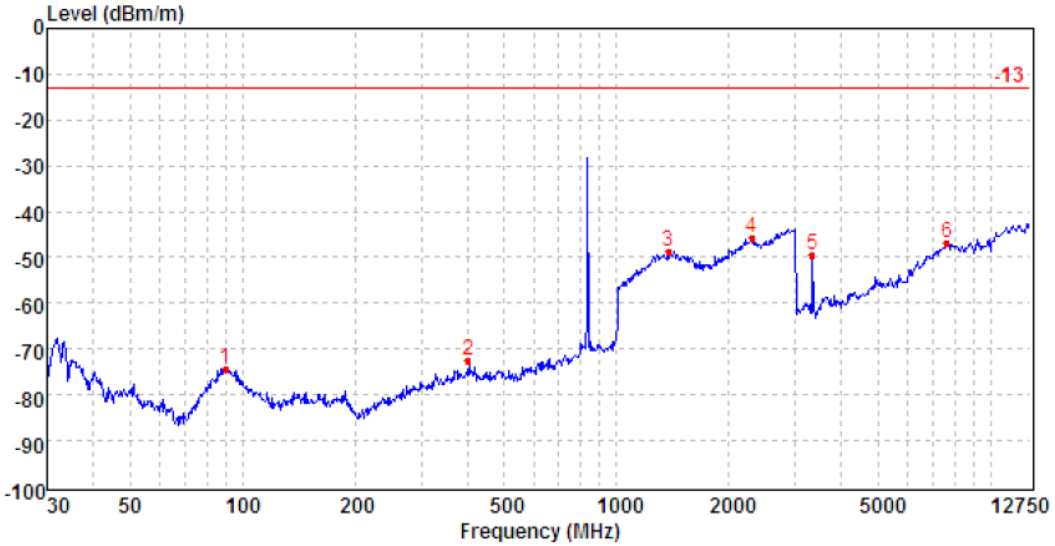
Mark	Frequency MHz	Reading dBm	Antenna dB	Cable dB	Preamp dB	Level dBm	Limit dBm	Over limit	Remark
1	32.64	-55.27	20.94	6.48	30.81	-58.66	-13.00	-45.66	Peak
2	394.97	-79.22	25.87	8.30	30.11	-75.16	-13.00	-62.16	Peak
3	1404.21	-70.38	37.76	12.40	29.10	-49.32	-13.00	-36.32	Peak
4	2325.03	-69.91	40.20	12.96	29.07	-45.82	-13.00	-32.82	Peak
5	3759.98	-67.76	42.14	9.82	37.12	-52.92	-13.00	-39.92	Peak
6	7597.27	-76.52	48.25	14.66	33.21	-46.82	-13.00	-33.82	Peak

WCDMA BAND 2	Horizontal	Channel	9400



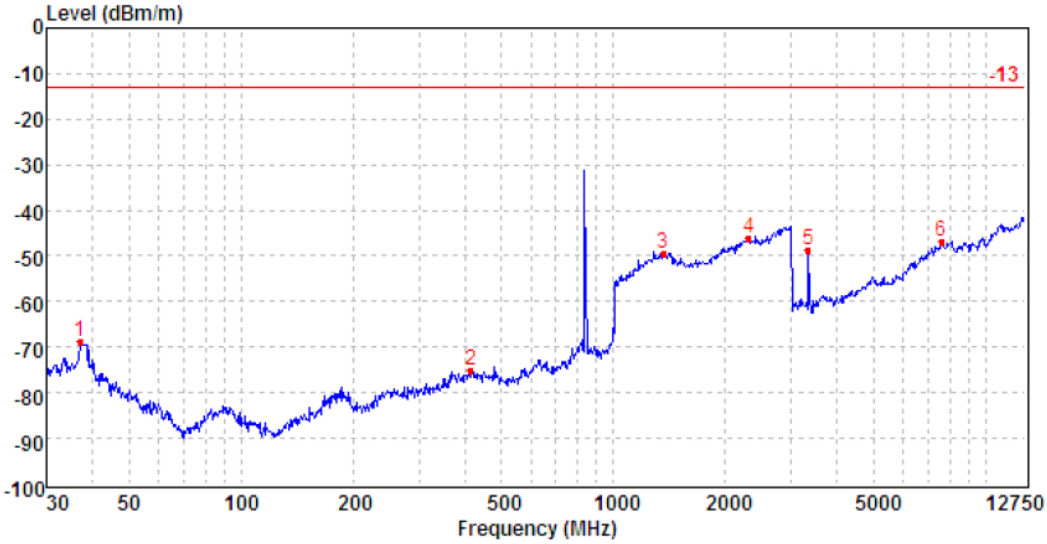
Mark	Frequency MHz	Reading dBm	Antenna dB	Cable dB	Preamp dB	Level dBm	Limit dBm	Over limit	Remark
1	32.87	-56.87	28.75	6.48	30.80	-52.44	-13.00	-39.44	Peak
2	448.27	-78.50	26.14	8.48	30.35	-74.23	-13.00	-61.23	Peak
3	1283.24	-69.96	36.92	12.68	29.39	-49.75	-13.00	-36.75	Peak
4	2410.87	-70.78	39.76	13.27	28.24	-45.99	-13.00	-32.99	Peak
5	3754.53	-64.91	42.23	9.82	37.13	-49.99	-13.00	-36.99	Peak
6	7854.96	-75.29	47.95	14.47	33.27	-46.14	-13.00	-33.14	Peak

WCDMA BAND 5	Vertical	Channel	4182



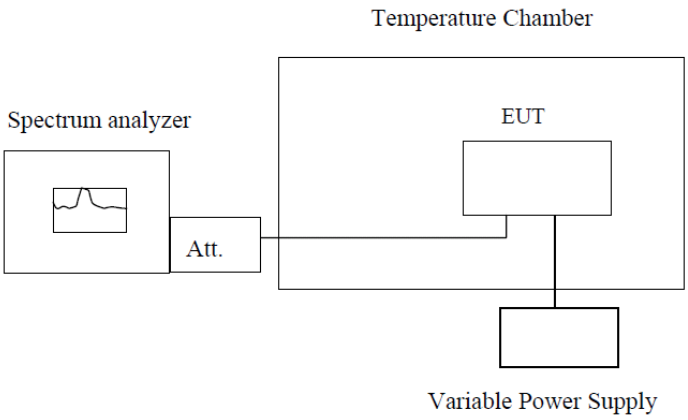
Mark	Frequency MHz	Reading dBm	Antenna dB	Cable dB	Preamp dB	Level dBm	Limit dBm	Over limit	Remark
1	90.19	-78.82	28.23	6.92	30.67	-74.34	-13.00	-61.34	Peak
2	400.56	-76.72	26.03	8.32	30.11	-72.48	-13.00	-59.48	Peak
3	1376.71	-69.73	37.66	12.55	29.17	-48.69	-13.00	-35.69	Peak
4	2297.11	-69.66	40.53	12.87	29.34	-45.60	-13.00	-32.60	Peak
5	3338.41	-61.79	40.15	9.07	36.93	-49.50	-13.00	-36.50	Peak
6	7663.67	-76.78	48.35	14.71	33.16	-46.88	-13.00	-33.88	Peak

WCDMA BAND 5	Horizontal	Channel	4182



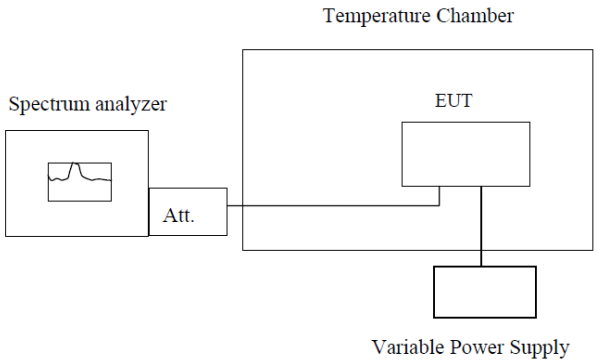
Mark	Frequency MHz	Reading dBm	Antenna dB	Cable dB	Preamp dB	Level dBm	Limit dBm	Over limit	Remark
1	36.92	-73.14	28.65	6.53	30.78	-68.74	-13.00	-55.74	Peak
2	413.44	-79.27	25.99	8.35	30.18	-75.11	-13.00	-62.11	Peak
3	1363.16	-69.85	37.09	12.62	29.20	-49.34	-13.00	-36.34	Peak
4	2314.84	-70.29	40.30	12.93	29.17	-46.23	-13.00	-33.23	Peak
5	3338.41	-61.12	40.12	9.07	36.93	-48.86	-13.00	-35.86	Peak
6	7608.30	-75.85	47.64	14.68	33.19	-46.72	-13.00	-33.72	Peak

7.10 Frequency stability V.S. Temperature measurement

Test Requirement:	FCC part 22.355 and FCC part 24.235
Test Method:	FCC Part2.1055(a)(1)(b)
Limit:	±2.5ppm
Test setup:	 **Note :** Measurement setup for testing on Antenna connector
Test procedure:	1. The equipment under test was connected to an external DC power supply and input rated voltage. 2. RF output was connected to a frequency counter or spectrum analyzer via feed through attenuators. 3. The EUT was placed inside the temperature chamber. 4. Set the spectrum analyzer RBW low enough to obtain the desired frequency resolution and measure EUT 25°C operating frequency as reference frequency. 5. Turn EUT off and set the chamber temperature to –20°C. After the temperature stabilized for approximately 30 minutes recorded the frequency. 6. Repeat step measure with 10°C increased per stage until the highest temperature of +50°C reached.
Test Instruments:	Refer to section 5.0 for details
Test mode:	Refer to section 6.1 for details
Test results:	Pass

Measurement Data: The detailed test data see Appendix

7.11 Frequency stability V.S. Voltage measurement

Test Requirement:	FCC part 22.355 and FCC part 24.235
Test Method:	FCC Part2.1055(d)(1)(2)
Limit:	±2.5ppm
Test setup:	 **Note :** Measurement setup for testing on Antenna connector
Test procedure:	1. Set chamber temperature to 25°C. Use a variable DC power source to power the EUT and set the voltage to rated voltage. 2. Set the spectrum analyzer RBW low enough to obtain the desired frequency resolution and recorded the frequency. 3. Reduce the input voltage to specified extreme voltage variation (+/- 15%) and endpoint, record the maximum frequency change.
Test Instruments:	Refer to section 5.0 for details
Test mode:	Refer to section 6.1 for details
Test results:	Pass

Measurement Data: The detailed test data see Appendix

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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