TEST REPORT

Application No.:	GZCR2109021051AT
Applicant:	Cosmo Technologies, Inc.
Address of Applicant:	747 Grape St, Denver 80220, Colorado, United States
Manufacturer:	Shenzhen Qinmi Smart Technology Co., Ltd
Address of Manufacturer:	4th floor, Building 9, Tongfuyu Industrial Park, Lezhujiao, Zhoushi Road, Xixiang, Baoan District, Shenzhen, China
Factory:	Shenzhen Qinmi Smart Technology Co., Ltd
Address of Factory:	4th floor, Building 9, Tongfuyu Industrial Park, Lezhujiao, Zhoushi Road, Xixiang, Baoan District, Shenzhen, China
Equipment Under Test (EUT):	
EUT Name:	COSMO JrTrack Kids Smartwatch
Model No.:	JRTV2
Trade mark:	JrTrack
Standard(s) :	47 CFR Part 2 47 CFR Part 22 subpart H 47 CFR Part 24 subpart E 47 CFR Part 27 subpart C
Date of Receipt:	2021-08-03
Date of Test:	2021-08-05 to 2021-09-15
Date of Issue:	2021-09-29
Test Result:	**Pass***

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

Kobe Jian
EMC Laboratory Manager

Revision Record				
Version	**Chapter**	**Date**	**Modifier**	**Remark**
01		*2021-09-29*		*Original*

Authorized for issue by				
		Curry Wu/Project Engineer		
		Ricky Liu/Reviewer		

2 Test Summary

Test Item	FCC Rule No.	Requirements	Verdict
Effective (Isotropic) Radiated Power Output Data	§2.1046, §22.913, §24.232 §27.50(d)	ERP≤7W(WCDMA band V) EIRP≤2W(WCDMA band II) EIRP≤1W(WCDMA Band IV)	PASS
Peak-Average Ratio	§22.913 §24.232 §27.50(d)	≤13dB	PASS
Bandwidth	§2.1049(h)	OBW: No limit EBW: No limit	PASS
Band Edge Compliance	§2.1051, §22.917, §24.238 §27.53(h)	≤ -13dBm/1%*EBW, in 1 MHz bands immediately outside and adjacent to the frequency block.	PASS
Spurious emissions at antenna terminals	§2.1051, §22.917, §24.238 §27.53(h)	≤ -13dBm	PASS
Field strength of spurious radiation	§2.1051, §22.917, §24.238 §27.53(h)	≤ -13dBm	PASS
Frequency stability	§2.1055, §22.355, §24.235 §27.54	≤ ±2.5ppm.	PASS

Note:

E.U.T./EUT means Equipment Under Test.

Pass means the test result passed the test standard requirement, please find the detailed decision rule in the report relative section.

3 Contents

4 General Information

4.1 Details of E.U.T.

Power supply:	DC 3.8V by rechargeable lithium battery and recharged by DC 5V via usb port.
Cable(s):	USB Cable, 0.5m, unshielded
Sample Type:	Portable production
Support Network:	RMC, HSDPA, HSUPA
Operation Frequency Band:	UMTS FDD Band II/IV/V
Modulation Type:	QPSK for WCDMA
Supported Channel Bandwidth:	5MHz for WCDMA
UMTS Power Class:	Level 3
Antenna Type:	PIFA antenna
Antenna Gain:	Band II/IV/V: -0.5dBi
Extreme temp. Tolerance:	-30°C to +50°C
Extreme vol. Limits:	3.4VDC to 4.2VDC (nominal: 3.8VDC)

4.2 Test Frequency

Test Mode	TX/RX	RF Channel		
		Low(L)	Middle (M)	High (H)
WCDMA Band V	TX	Channel 4132	Channel 4183	Channel 4233
		826.4 MHz	836.6 MHz	846.6 MHz
	RX	Channel 4357	Channel 4407	Channel 4458
		871.4 MHz	881.4 MHz	891.6 MHz
Test Mode	TX/RX	RF Channel		
		Low(L)	Middle (M)	High (H)
WCDMA Band IV	TX	Channel 1312	Channel 1413	Channel 1513
		1712.4 MHz	1732.6 MHz	1752.6 MHz
	RX	Channel 1537	Channel 1638	Channel 1738
		2112.4	2132.6MHz	2152.6MHz
Test Mode	TX/RX	RF Channel		
		Low(L)	Middle (M)	High (H)
WCDMA Band II	TX	Channel 9262	Channel 9400	Channel 9538
		1852.4 MHz	1880.0 MHz	1907.6 MHz
	RX	Channel 9662	Channel 9800	Channel 9938
		1932.4 MHz	1960.0 MHz	1987.6 MHz

4.3 Test Environment

Environment Parameter	Selected Values During Tests	
Relative Humidity	52%	
Atmospheric Pressure:	1015Pa	
Temperature:	TL	-30°C
	TN	+20°C
	TH	+50°C
Voltage:	VL	DC 3.4 V
	VN	DC3.8 V
	VH	DC 4.2 V

NOTE: VL= lower extreme test voltage
VN= nominal voltage
VH= upper extreme test voltage
TL= lower extreme test temperature
TN= normal temperature
TH= upper extreme test temperature

4.4 Description of Support Units

The EUT has been tested independent unit.

4.5 Measurement Uncertainty

No.	Item	Measurement Uncertainty
1	Radio Frequency	7.25×10^{-8}
2	Duty cycle	0.37%
3	Occupied Bandwidth	3%
4	RF conducted power	0.75dB
5	RF power density	2.84dB
6	Conducted Spurious emissions	0.75dB
7	RF Radiated power	5.14dB (below 1GHz)
		5.08dB (above 1GHz)
8	Radiated Spurious emission test	5.14dB (below 1GHz)
		5.08dB (above 1GHz)
9	Temperature test	1°C
10	Humidity test	3%
11	Supply voltages	1.5%
12	Time	3%

4.6 Test Location

All tests were performed at:

SGS-CSTC Standards Technical Services Co., Ltd., Guangzhou Branch EMC Laboratory,

198 Kezhu Road, Scientech Park, Guangzhou Economic & Technology Development District, Guangzhou, China 510663

Tel: +86 20 82155555 Fax: +86 20 82075059

No tests were sub-contracted.

4.7 Test Facility

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

- **NVLAP (Lab Code: 200611-0)**

SGS-CSTC Standards Technical Services Co., Ltd., Guangzhou EMC Laboratory is accredited by the National Voluntary Laboratory Accreditation Program (NVLAP/NIST). NVLAP Code: 200611-0.

The report must not be used by the client to claim product certification, approval, or endorsement by NVLAP, NIST, or any agency of the Federal Government.

- **ACMA**

SGS-CSTC Standards Technical Services Co., Ltd., EMC Laboratory can also perform testing for the Australian/New Zealand Regulatory Compliance Mark (RCM).

- **SGS UK(Certificate No.: 32), SGS-TUV SAARLAND and SGS-FIMKO**

Have approved SGS-CSTC Standards Technical Services Co., Ltd., EMC Laboratory as a supplier of EMC TESTING SERVICES and SAFETY TESTING SERVICES.

- **CNAS (Lab Code: L0167)**

SGS-CSTC Standards Technical Services Co., Ltd., EMC Laboratory has been assessed and in compliance with CNAS-CL01:2018 accreditation criteria for testing laboratories (identical to ISO/IEC 17025:2017 General Requirements) for the Competence of Testing Laboratories.

- **FCC Recognized Accredited Test Firm(Registration No.: 486818)**

SGS-CSTC Standards Technical Services Co., Ltd., EMC Laboratory has been accredited and fully described in a report filed with the (FCC) Federal Communications Commission. The acceptance letter from the FCC is maintained in our files. Designation Number: CN5016, Test Firm Registration Number: 486818.

- **ISED (Registration No.: 4620B, CAB identifier: CN0052)**

SGS-CSTC Standards Technical Services Co., Ltd., has been registered by Innovation Science and Economic Development Canada for Wireless Device Testing laboratories to test to Canadian radio equipment requirements. Registration No. 4620B, CAB identifier: CN0052.

- **VCCI (Registration No.: R-12460, C-12584, G-20107 and T-11179)**

The 10m Semi-anechoic chamber, 966 Anechoic Chamber and Shielded Room of SGS-CSTC Standards Technical Services Co., Ltd. have been registered in accordance with the Regulations for Voluntary Control Measures with Registration No.: R-12460, C-12584, G-20107 and T-11179 respectively.

- **CBTL (Lab Code: TL129)**

SGS-CSTC Standards Technical Services Co., Ltd., E&E Laboratory has been assessed and fully comply with the requirements of ISO/IEC 17025:2017, the Basic Rules, IECEE 01 and Rules of procedure IECEE 02, and the relevant IECEE CB-Scheme Operational documents.

4.8 Deviation from Standards

None

4.9 Abnormalities from Standard Conditions

None

5 Equipment List

RF conducted test					
Test Equipment	**Manufacturer**	**Model No.**	**Inventory No.**	**Cal. Date**	**Cal. Due date**
EXA Signal Analzer(10Hz-44GHz)	Agilent Technologies	N9010A	EMC2138	2020-09-17	2021-09-16
6dB Attenuator	HP	8491A	EMC2062	2020-04-15	2022-04-14
Measurement Software	TST	TST PASS V1.0.5	N/A	N/A	N/A
MI CABLE	SGS-EMC	0.8M	EMC2136	2019-11-02	2021-11-01
Attenuator	Weinschel Associates	WA41	SEM021-09	N/A	N/A
Wideband Radio Communication Tester(CMW500)	R&S	CMW500	EMC2215	2020-09-20	2021-09-19
Power Meter (U2021XA_Ch2)	Agilent Technologies	U2021XA_Ch2	SEM009-02	2021-05-19	2022-05-18

RE in Chamber(below 1GHz)					
Test Equipment	**Manufacturer**	**Model No.**	**Inventory No.**	**Cal. Date**	**Cal. Due date**
Chamber cable	HangTianXing	N/A	EMC0542	2020-09-09	2022-09-08
Trilog Broadband Antenna(25MHz-1GHz)-Lab	SCHWARZBECK MESS-ELEKTRONIK	VULB 9168	SEM003-18	2019-02-22	2022-02-22
Amplifier(9kHz-1.3GHz)	HP	8447F	EMC2065	2021-05-19	2022-05-18
10m Semi-Anechoic Chamber	ETS	N/A	EMC0530	2019-10-20	2022-10-19
Test Software E3	Audix	Ver.6.120110a	GZE100-61	N/A	N/A
EMI Test Receiver(1Hz-8GHz)	Rohde & Schwarz	ESW8	EMC2220	2021-05-26	2022-05-25
Chamber cable	HangTianXing	N/A	EMC0542	2020-09-09	2022-09-08
Trilog Broadband Antenna(25MHz-1GHz)	SCHWARZBECK	VULB 9160	EMC2025	2020-09-24	2023-09-23
Signal Generator (10MHz-20GHz)	Rohde & Schwarz	SMR20	EMC0516	2021-01-11	2022-01-10
Wideband Radio Communication Tester(CMW500)	R&S	CMW500	EMC2215	2020-09-20	2021-09-19

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RE in Chamber(above 1GHz)					
Test Equipment	**Manufacturer**	**Model No.**	**Inventory No.**	**Cal. Date**	**Cal. Due date**
Chamber cable(Above 1GHz)	Scoflex	KMKM-8.0m	EMC0545	2020-09-09	2022-09-08
Horn Antenna(1GHz-18GHz)	SCHWARZBECK MESS-ELEKTRONIK	BBHA 9120D	EMC2026	2019-09-25	2022-09-24
1GHz-26.5 GHz Pre-Amplifier	Agilent	8449B	EMC0521	2021-01-08	2022-01-07
966 Anechoic Chamber	C.R.T	9m x 6m x 6m	EMC2142	2020-12-20	2023-12-19
EXA Signal Analyzer(10Hz-44GHz)	Keysight	N9010A	EMC2138	2020-09-17	2021-09-16
Test Software E3	Audix	Ver.6.120110a	GZE100-61	N/A	N/A
Horn Antenna(14-40GHz)	SCHWARZBECK	BBHA 9170	EMC2041	2020-06-28	2023-06-27
Microwave Broadband Preamplifier (18-40GHz)	SCHWARZBECK	BBV 9721	EMC2172	2020-09-09	2021-09-08
				2021-09-07	2022-09-06
Wideband Radio Communication Tester(CMW500)	R&S	CMW500	EMC2215	2020-09-20	2021-09-19
Substitution Antenna	SCHWARZBECK MESS-ELEKTRONIK	BBHA 9120D	EMC2026	2019-09-25	2022-09-24
Signal Generator (10MHz-20GHz)	Rohde & Schwarz	SMR20	EMC0516	2021-01-11	2022-01-10

General used equipment					
Equipment	**Manufacturer**	**Model No**	**Inventory No**	**Cal Date**	**Cal Due Date**
DMM	Fluke	73	EMC0006	2021-07-05	2022-07-04
DMM	Fluke	73	EMC0007	2021-07-05	2022-07-04

6 Radio Spectrum Matter Test Results

6.1 Effective (Isotropic) Radiated Power Output Data

Test Requirement: §2.1046, §22.913, §24.232, §27.50(d)

Test Method: ANSI C63.26, KDB 971168 D01 v03

Limit: ERP≤7W(WCDMA BAND V)
EIRP≤2W(WCDMA BAND II)
EIRP≤1W(WCDMA Band IV)

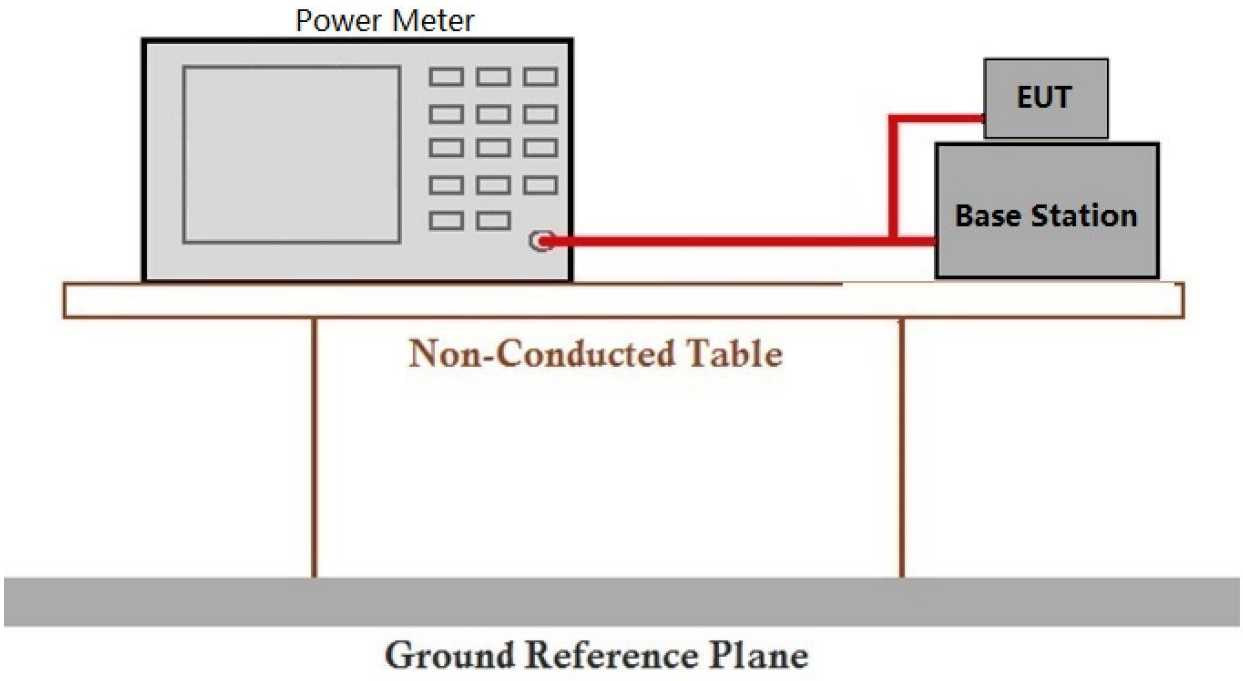
6.1.1 E.U.T. Operation

Operating Environment:

Temperature: 19.5 °C Humidity: 45.5 % RH Atmospheric Pressure: 1010 mbar

Test mode: 20: TX mode_Keep the EUT in transmitting mode

6.1.2 Test Setup Diagram



6.1.3 Measurement Data

Band: 2								
ENV	Mode		Frequency (MHz)	Conducted Power (dBm)	Gain (dbi)	EIRP (dBm)		Verdict
	Network	Subset				Result	Limit	
NTNV	RMC	12.2kbps RMC	1852.4	21.35	-0.5	20.85	<=33.01	Pass
			1880	21.50	-0.5	21	<=33.01	Pass
			1907.6	21.51	-0.5	21.01	<=33.01	Pass
	HSDPA	Subtest 1	1852.4	21.24	-0.5	20.74	<=33.01	Pass
		Subtest 2	1852.4	21.21	-0.5	20.71	<=33.01	Pass
		Subtest 3	1852.4	21.13	-0.5	20.63	<=33.01	Pass
		Subtest 4	1852.4	21.20	-0.5	20.7	<=33.01	Pass
		Subtest 1	1880	21.60	-0.5	21.1	<=33.01	Pass
		Subtest 2	1880	21.78	-0.5	21.28	<=33.01	Pass
		Subtest 3	1880	21.69	-0.5	21.19	<=33.01	Pass
		Subtest 4	1880	21.68	-0.5	21.18	<=33.01	Pass
		Subtest 1	1907.6	21.48	-0.5	20.98	<=33.01	Pass
		Subtest 2	1907.6	21.67	-0.5	21.17	<=33.01	Pass
		Subtest 3	1907.6	21.64	-0.5	21.14	<=33.01	Pass
		Subtest 4	1907.6	21.60	-0.5	21.1	<=33.01	Pass
	HSUPA	Subtest 1	1852.4	19.16	-0.5	18.66	<=33.01	Pass
		Subtest 2	1852.4	19.13	-0.5	18.63	<=33.01	Pass
		Subtest 3	1852.4	18.58	-0.5	18.08	<=33.01	Pass
		Subtest 4	1852.4	18.57	-0.5	18.07	<=33.01	Pass
		Subtest 5	1852.4	18.69	-0.5	18.19	<=33.01	Pass
		Subtest 1	1880	19.49	-0.5	18.99	<=33.01	Pass
		Subtest 2	1880	19.00	-0.5	18.5	<=33.01	Pass
		Subtest 3	1880	19.10	-0.5	18.6	<=33.01	Pass
		Subtest 4	1880	19.10	-0.5	18.6	<=33.01	Pass
		Subtest 5	1880	19.50	-0.5	19	<=33.01	Pass
		Subtest 1	1907.6	19.17	-0.5	18.67	<=33.01	Pass
		Subtest 2	1907.6	19.66	-0.5	19.16	<=33.01	Pass
		Subtest 3	1907.6	18.46	-0.5	17.96	<=33.01	Pass
		Subtest 4	1907.6	18.45	-0.5	17.95	<=33.01	Pass
		Subtest 5	1907.6	18.45	-0.5	17.95	<=33.01	Pass
Note1: EIRP=Conducted Power+Antenna Gain								

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Band: 4								
ENV	Mode		Frequency (MHz)	Conducted Power (dBm)	Gain (dbi)	EIRP (dBm)		Verdict
	Network	Subset				Result	Limit	
NTNV	RMC	12.2kbps RMC	1712.4	22.20	-0.5	21.7	<=30	Pass
			1732.6	22.19	-0.5	21.69	<=30	Pass
			1752.6	22.16	-0.5	21.66	<=30	Pass
	HSDPA	Subtest 1	1712.4	22.05	-0.5	21.55	<=30	Pass
		Subtest 2	1712.4	22.09	-0.5	21.59	<=30	Pass
		Subtest 3	1712.4	22.12	-0.5	21.62	<=30	Pass
		Subtest 4	1712.4	22.06	-0.5	21.56	<=30	Pass
		Subtest 1	1732.6	22.53	-0.5	22.03	<=30	Pass
		Subtest 2	1732.6	22.65	-0.5	22.15	<=30	Pass
		Subtest 3	1732.6	22.69	-0.5	22.19	<=30	Pass
		Subtest 4	1732.6	22.64	-0.5	22.14	<=30	Pass
		Subtest 1	1752.6	21.82	-0.5	21.32	<=30	Pass
		Subtest 2	1752.6	21.84	-0.5	21.34	<=30	Pass
		Subtest 3	1752.6	21.86	-0.5	21.36	<=30	Pass
		Subtest 4	1752.6	21.82	-0.5	21.32	<=30	Pass
	HSUPA	Subtest 1	1712.4	19.20	-0.5	18.7	<=30	Pass
		Subtest 2	1712.4	19.18	-0.5	18.68	<=30	Pass
		Subtest 3	1712.4	19.10	-0.5	18.6	<=30	Pass
		Subtest 4	1712.4	19.09	-0.5	18.59	<=30	Pass
		Subtest 5	1712.4	19.10	-0.5	18.6	<=30	Pass
		Subtest 1	1732.6	20.55	-0.5	20.05	<=30	Pass
		Subtest 2	1732.6	20.52	-0.5	20.02	<=30	Pass
		Subtest 3	1732.6	20.04	-0.5	19.54	<=30	Pass
		Subtest 4	1732.6	20.21	-0.5	19.71	<=30	Pass
		Subtest 5	1732.6	20.48	-0.5	19.98	<=30	Pass
		Subtest 1	1752.6	20.10	-0.5	19.6	<=30	Pass
		Subtest 2	1752.6	20.26	-0.5	19.76	<=30	Pass
		Subtest 3	1752.6	19.75	-0.5	19.25	<=30	Pass
		Subtest 4	1752.6	19.75	-0.5	19.25	<=30	Pass
		Subtest 5	1752.6	19.81	-0.5	19.31	<=30	Pass
Note1: EIRP=Conducted Power+Antenna Gain								

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Band: 5								
ENV	Mode		Frequency (MHz)	Conducted Power (dBm)	Gain (dbi)	ERP (dBm)		Verdict
	Network	Subset				Result	Limit	
NTNV	RMC	12.2kbps RMC	826.4	22.77	-0.5	20.12	<=38.45	Pass
			836.6	22.77	-0.5	20.12	<=38.45	Pass
			846.6	22.78	-0.5	20.13	<=38.45	Pass
	HSDPA	Subtest 1	826.4	22.80	-0.5	20.15	<=38.45	Pass
		Subtest 2	826.4	22.92	-0.5	20.27	<=38.45	Pass
		Subtest 3	826.4	22.94	-0.5	20.29	<=38.45	Pass
		Subtest 4	826.4	22.90	-0.5	20.25	<=38.45	Pass
		Subtest 1	836.6	22.34	-0.5	19.69	<=38.45	Pass
		Subtest 2	836.6	22.54	-0.5	19.89	<=38.45	Pass
		Subtest 3	836.6	22.59	-0.5	19.94	<=38.45	Pass
		Subtest 4	836.6	22.50	-0.5	19.85	<=38.45	Pass
		Subtest 1	846.6	22.70	-0.5	20.05	<=38.45	Pass
		Subtest 2	846.6	22.88	-0.5	20.23	<=38.45	Pass
		Subtest 3	846.6	22.91	-0.5	20.26	<=38.45	Pass
		Subtest 4	846.6	22.86	-0.5	20.21	<=38.45	Pass
	HSUPA	Subtest 1	826.4	20.80	-0.5	18.15	<=38.45	Pass
		Subtest 2	826.4	20.78	-0.5	18.13	<=38.45	Pass
		Subtest 3	826.4	20.31	-0.5	17.66	<=38.45	Pass
		Subtest 4	826.4	20.30	-0.5	17.65	<=38.45	Pass
		Subtest 5	826.4	20.58	-0.5	17.93	<=38.45	Pass
		Subtest 1	836.6	20.27	-0.5	17.62	<=38.45	Pass
		Subtest 2	836.6	20.20	-0.5	17.55	<=38.45	Pass
		Subtest 3	836.6	19.74	-0.5	17.09	<=38.45	Pass
		Subtest 4	836.6	19.69	-0.5	17.04	<=38.45	Pass
		Subtest 5	836.6	19.73	-0.5	17.08	<=38.45	Pass
		Subtest 1	846.6	20.68	-0.5	18.03	<=38.45	Pass
		Subtest 2	846.6	20.42	-0.5	17.77	<=38.45	Pass
		Subtest 3	846.6	20.17	-0.5	17.52	<=38.45	Pass
		Subtest 4	846.6	20.17	-0.5	17.52	<=38.45	Pass
		Subtest 5	846.6	20.46	-0.5	17.81	<=38.45	Pass
Note1: ERP=Conducted Power+Antenna Gain-2.15								

6.2 Peak-Average Ratio

Test Requirement: §22.913, §24.232, §27.50(d)

Test Method: ANSI C63.26, KDB 971168 D01 v03

Limit: ≤13dB

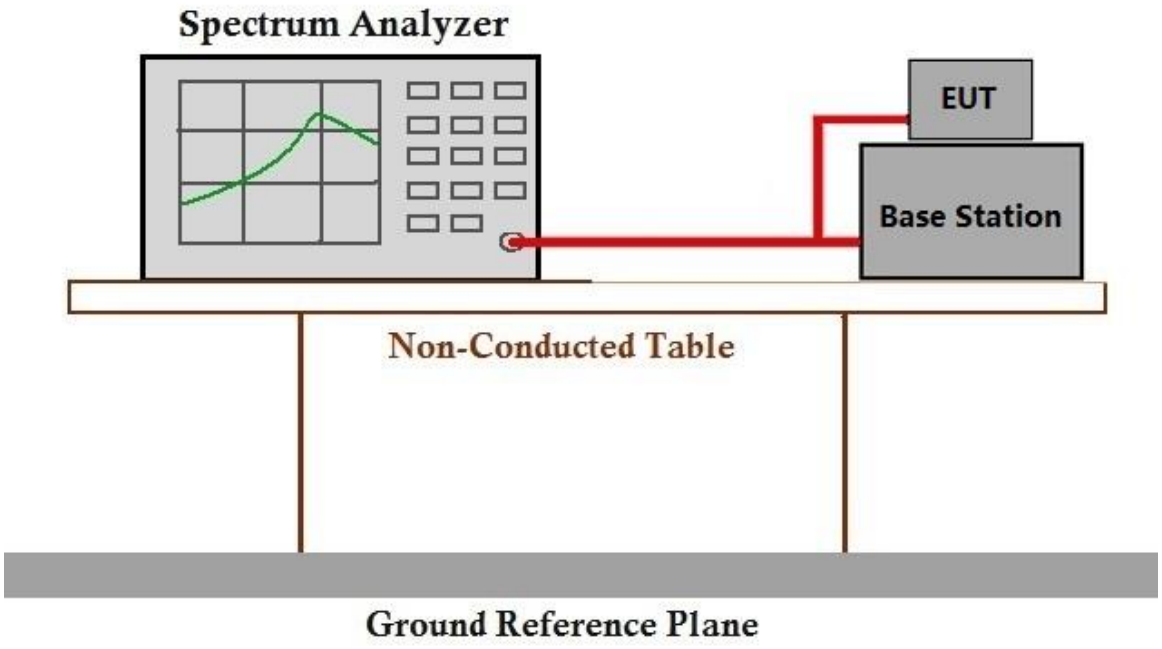
6.2.1 E.U.T. Operation

Operating Environment:

Temperature: 19.5 °C Humidity: 45.5 % RH Atmospheric Pressure: 1010 mbar

Test mode: 20: TX mode_Keep the EUT in transmitting mode

6.2.2 Test Setup Diagram



6.2.3 Measurement Data

Please Refer to Appendix WCDMA

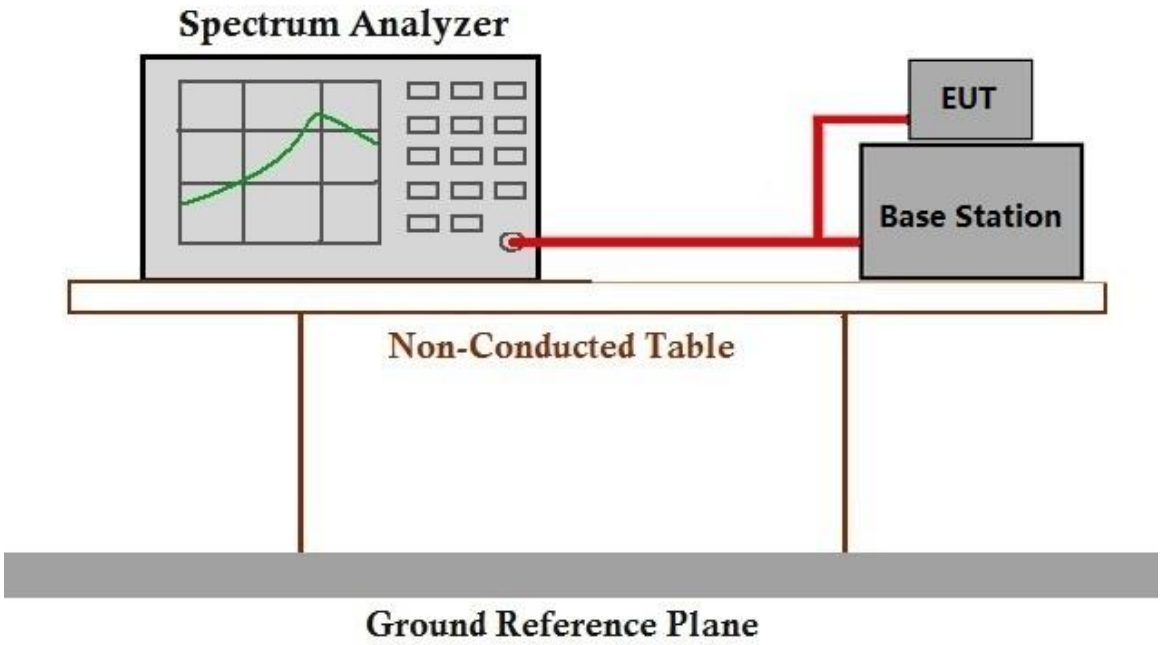
6.3 Bandwidth

Test Requirement: §2.1049(h)
Test Method: ANSI C63.26, KDB 971168 D01 v03
Limit: OBW: No limit
EBW: No limit

6.3.1 E.U.T. Operation

Operating Environment:
Temperature: 19.5 °C Humidity: 45.5 % RH Atmospheric Pressure: 1010 mbar
Test mode: 20: TX mode_Keep the EUT in transmitting mode

6.3.2 Test Setup Diagram



6.3.3 Measurement Data

Please Refer to Appendix WCDMA

6.4 Band Edge Compliance

Test Requirement: §2.1051, §22.917, §24.238, §27.53(h)

Test Method: ANSI C63.26, KDB 971168 D01 v03

Limit: ≤ -13dBm/1%*EBW, in 1 MHz bands immediately outside and adjacent to the frequency block.

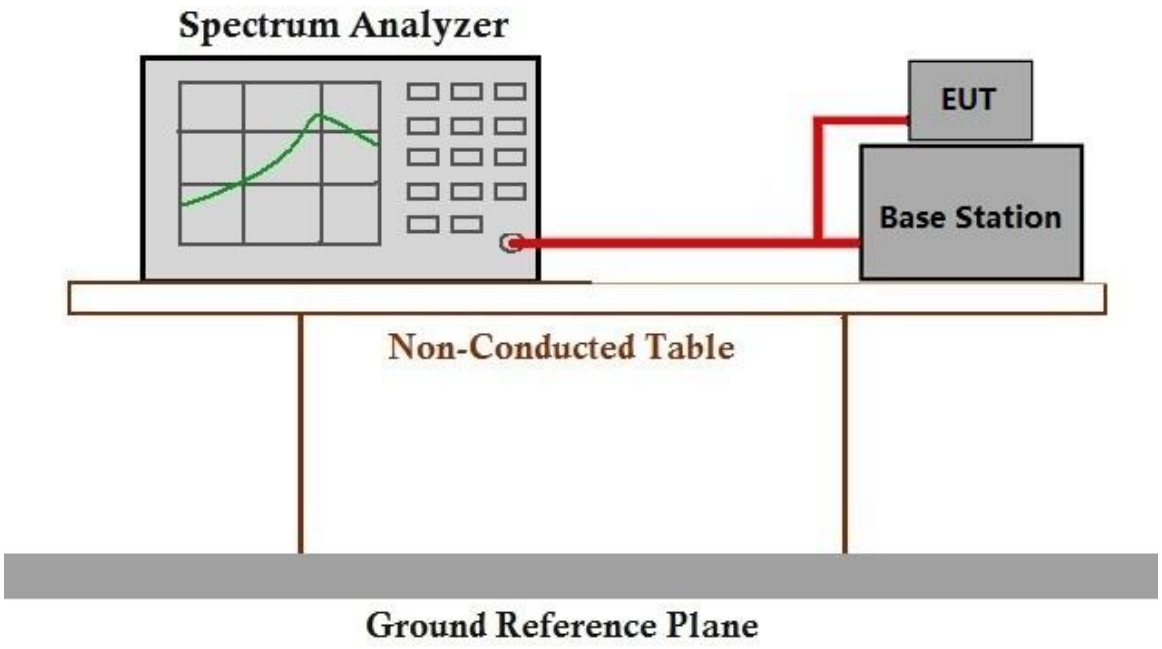
6.4.1 E.U.T. Operation

Operating Environment:

Temperature: 19.5 °C Humidity: 45.5 % RH Atmospheric Pressure: 1010 mbar

Test mode: 20: TX mode_Keep the EUT in transmitting mode

6.4.2 Test Setup Diagram



6.4.3 Measurement Data

Please Refer to Appendix WCDMA

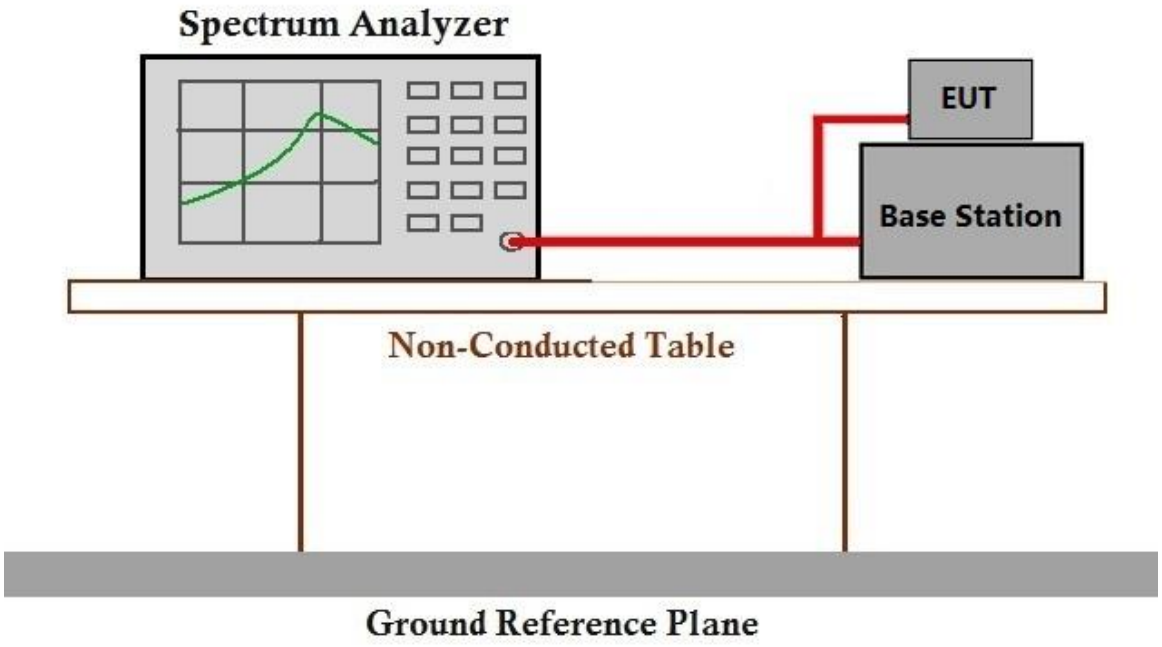
6.5 Spurious emissions at antenna terminals

Test Requirement: §2.1051, §22.917, §24.238, §27.53(h)
Test Method: ANSI C63.26, KDB 971168 D01 v03
Limit: ≤ -13dBm

6.5.1 E.U.T. Operation

Operating Environment:
Temperature: 19.5 °C Humidity: 45.5 % RH Atmospheric Pressure: 1010 mbar
Test mode: 20: TX mode_Keep the EUT in transmitting mode

6.5.2 Test Setup Diagram



6.5.3 Measurement Data

Please Refer to Appendix WCDMA

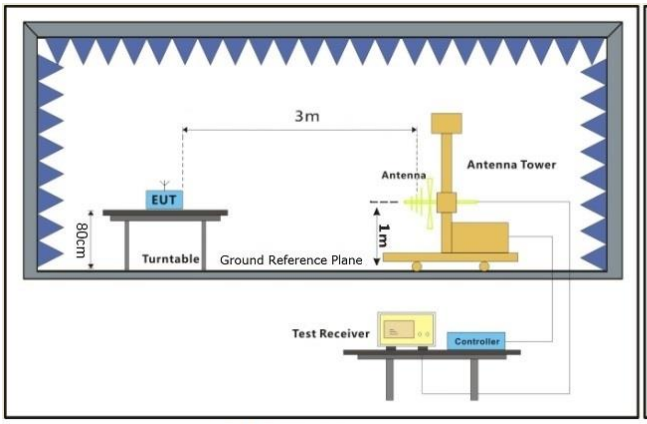
6.6 Field strength of spurious radiation

Test Requirement: §2.1051, §22.917, §24.238, §27.53(h)
Test Method: ANSI C63.26, KDB 971168 D01 v03
Limit: ≤ -13dBm

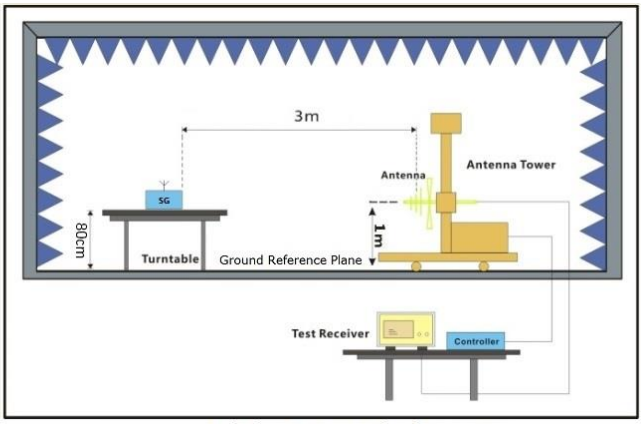
6.6.1 E.U.T. Operation

Operating Environment:
Temperature: 19.5 °C Humidity: 45.5 % RH Atmospheric Pressure: 1010 mbar
Test mode: 20: TX mode_Keep the EUT in transmitting mode

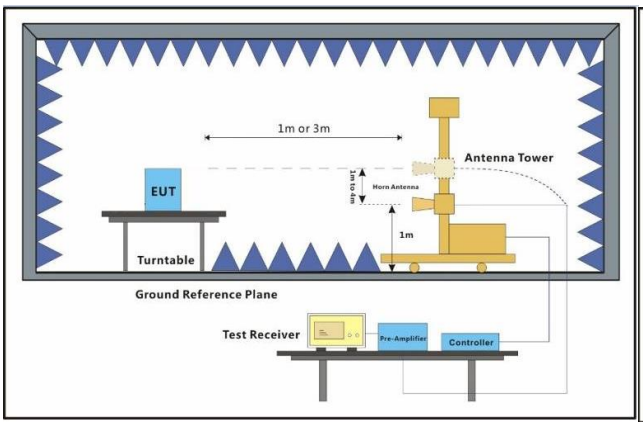
6.6.2 Test Setup Diagram



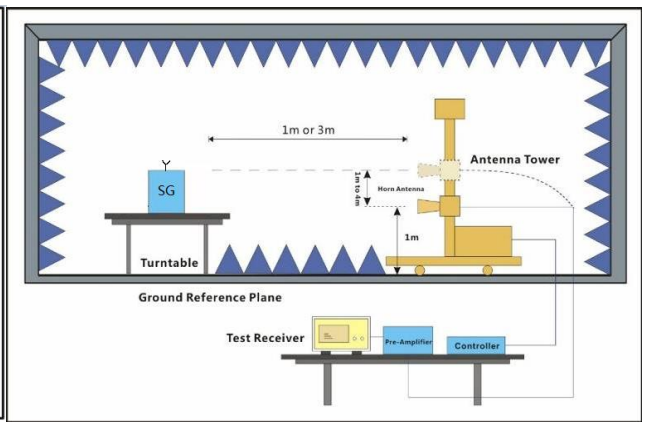
EUT



Substiute Antenna+Signal Generator



EUT



Substiute Antenna+Signal Generator

6.6.3 Measurement Procedure and Data

Test Procedure:

(1)On a test site, the EUT shall be placed on a turntable and in the position closest to the normal use as declared by the user.
(2)The test antenna shall be oriented initially for vertical polarization located 3m from the EUT to correspond to the transmitter.
(3)The output of the antenna shall be connected to the measuring receiver and either a peak or quasi-peak detector was used for the measurement as indicated on the report. The detector selection is based on how close the emission level was approaching the limit.
(4)The transmitter shall be switched on; if possible, without the modulation and the measurement receiver shall be tuned to the frequency of the transmitter under test.
(5)The test antenna shall be raised and lowered through the specified range of height until the measuring receiver detects a maximum signal level.
(6)The transmitter shall than be rotated through 360°in the horizontal plane, until the maximum signal level is detected by the measuring receiver.
(7)The test antenna shall be raised and lowered again through the specified range of height until the measuring receiver detects a maximum signal level.
(8)The maximum signal level detected by the measuring receiver shall be noted.
(9)The measurement shall be repeated with the test antenna set to horizontal polarization.
(10) Replace the antenna with a proper Antenna (substitution antenna).
(11)The substitution antenna shall be oriented for vertical polarization and, if necessary, the length of the substitution antenna shall be adjusted to correspond to the frequency of transmitting.
(12)The substitution antenna shall be connected to a calibrated signal generator.
(13)If necessary, the input attenuator setting of the measuring receiver shall be adjusted in order to increase the sensitivity of the measuring receiver.
(14)The test antenna shall be raised and lowered through the specified range of the height to ensure that the maximum signal is received.
(15)The input signal to substitution antenna shall be adjusted to the level that produces a level detected by the measuring receiver, that is equal to the level noted while the transmitter radiated power was measured, corrected for the change of input attenuation setting of the measuring receiver.
(16)The input level to the substitution antenna shall be recorded as power level in dBm, corrected for any change of input attenuator setting of the measuring receiver.
(17)The measurement shall be repeated with the test antenna and the substitution antenna oriented for horizontal polarization.

WCDMA BAND V-Low channel								
Frequency (MHz)	EIRP (dBm)	Limit(dBm)	Over Limit (dB)	S.G. Power (dBm)	Cable loss (dB)	Antenna Gain (dBi)	Polarization (H/V)	Result
1652.8	-40	-13	-27	-45.48	0.52	6	Horizontal	Pass
2479.2	-49.71	-13	-36.71	-54.98	0.53	5.8	Horizontal	Pass
3305.6	-36.96	-13	-23.96	-42.51	0.65	6.2	Horizontal	Pass
1652.8	-51.93	-13	-38.93	-57.41	0.52	6	Vertical	Pass
2479.2	-51.81	-13	-38.81	-57.08	0.53	5.8	Vertical	Pass
3305.6	-46.63	-13	-33.63	-52.18	0.65	6.2	Vertical	Pass

WCDMA BAND V-Middle channel								
Frequency (MHz)	EIRP (dBm)	Limit(dBm)	Over Limit (dB)	S.G. Power (dBm)	Cable loss (dB)	Antenna Gain (dBi)	Polarization (H/V)	Result
1672.8	-40.34	-13	-27.34	-45.82	0.52	6	Horizontal	Pass
2509.2	-51.33	-13	-38.33	-56.04	0.59	5.3	Horizontal	Pass
3345.6	-38.38	-13	-25.38	-43.93	0.65	6.2	Horizontal	Pass
1672.8	-51.62	-13	-38.62	-57.1	0.52	6	Vertical	Pass
2509.2	-52.59	-13	-39.59	-57.3	0.59	5.3	Vertical	Pass
3345.6	-47.51	-13	-34.51	-53.06	0.65	6.2	Vertical	Pass

WCDMA BAND V-High channel								
Frequency (MHz)	EIRP (dBm)	Limit(dBm)	Over Limit (dB)	S.G. Power (dBm)	Cable loss (dB)	Antenna Gain (dBi)	Polarization (H/V)	Result
1693.2	-46.72	-13	-33.72	-52.2	0.52	6	Horizontal	Pass
2539.8	-47.29	-13	-34.29	-52	0.59	5.3	Horizontal	Pass
3386.4	-36.88	-13	-23.88	-42.43	0.65	6.2	Horizontal	Pass
1693.2	-55.48	-13	-42.48	-60.96	0.52	6	Vertical	Pass
2539.8	-52.05	-13	-39.05	-56.76	0.59	5.3	Vertical	Pass
3386.4	-48.18	-13	-35.18	-53.73	0.65	6.2	Vertical	Pass

WCDMA Band II-Low channel								
Frequency (MHz)	EIRP (dBm)	Limit(dBm)	Over Limit (dB)	S.G. Power (dBm)	Cable loss (dB)	Antenna Gain (dBi)	Polarization (H/V)	Result
3704.8	-45.14	-13	-32.14	-52.03	0.71	7.6	Horizontal	Pass
5557.2	-45.68	-13	-32.68	-55.13	0.85	10.3	Horizontal	Pass
7409.6	-44.23	-13	-31.23	-56.13	1	12.9	Horizontal	Pass
3704.8	-49.15	-13	-36.15	-56.04	0.71	7.6	Vertical	Pass
5557.2	-45.74	-13	-32.74	-55.19	0.85	10.3	Vertical	Pass
7409.6	-44.55	-13	-31.55	-56.45	1	12.9	Vertical	Pass

WCDMA Band II-Middle channel								
Frequency (MHz)	EIRP (dBm)	Limit(dBm)	Over Limit (dB)	S.G. Power (dBm)	Cable loss (dB)	Antenna Gain (dBi)	Polarization (H/V)	Result
3760	-48.46	-13	-35.46	-55.35	0.71	7.6	Horizontal	Pass
5640	-46.71	-13	-33.71	-56.16	0.85	10.3	Horizontal	Pass
7520	-43.83	-13	-30.83	-56.04	0.99	13.2	Horizontal	Pass
3760	-50.18	-13	-37.18	-57.07	0.71	7.6	Vertical	Pass
5640	-46.83	-13	-33.83	-56.28	0.85	10.3	Vertical	Pass
7520	-42.97	-13	-29.97	-55.18	0.99	13.2	Vertical	Pass

WCDMA Band II-High channel								
Frequency (MHz)	EIRP (dBm)	Limit(dBm)	Over Limit (dB)	S.G. Power (dBm)	Cable loss (dB)	Antenna Gain (dBi)	Polarization (H/V)	Result
3815.2	-47.4	-13	-34.4	-54.29	0.71	7.6	Horizontal	Pass
5722.8	-47.73	-13	-34.73	-57.18	0.85	10.3	Horizontal	Pass
7630.4	-43.75	-13	-30.75	-55.96	0.99	13.2	Horizontal	Pass
3815.2	-49.65	-13	-36.65	-56.54	0.71	7.6	Vertical	Pass
5722.8	-46.79	-13	-33.79	-56.24	0.85	10.3	Vertical	Pass
7630.4	-43.96	-13	-30.96	-56.17	0.99	13.2	Vertical	Pass

WCDMA Band IV-Low channel								
Frequency (MHz)	EIRP (dBm)	Limit(dBm)	Over Limit (dB)	S.G. Power (dBm)	Cable loss (dB)	Antenna Gain (dBi)	Polarization (H/V)	Result
3424.8	-49.98	-13	-36.98	-55.53	0.65	6.2	Horizontal	Pass
5137.2	-46.03	-13	-33.03	-54.81	0.82	9.6	Horizontal	Pass
6849.6	-45.48	-13	-32.48	-56.33	0.95	11.8	Horizontal	Pass
3424.8	-50.3	-13	-37.3	-55.85	0.65	6.2	Vertical	Pass
5137.2	-45.95	-13	-32.95	-54.73	0.82	9.6	Vertical	Pass
6849.6	-45.6	-13	-32.6	-56.45	0.95	11.8	Vertical	Pass

WCDMA Band IV-Middle channel								
Frequency (MHz)	EIRP (dBm)	Limit(dBm)	Over Limit (dB)	S.G. Power (dBm)	Cable loss (dB)	Antenna Gain (dBi)	Polarization (H/V)	Result
3465.2	-49.33	-13	-36.33	-54.88	0.65	6.2	Horizontal	Pass
5197.8	-46.09	-13	-33.09	-54.87	0.82	9.6	Horizontal	Pass
6930.4	-44.92	-13	-31.92	-55.77	0.95	11.8	Horizontal	Pass
3465.2	-49.84	-13	-36.84	-55.39	0.65	6.2	Vertical	Pass
5197.8	-40.75	-13	-27.75	-49.53	0.82	9.6	Vertical	Pass
6930.4	-44.15	-13	-31.15	-55	0.95	11.8	Vertical	Pass

WCDMA Band IV-High channel								
Frequency (MHz)	EIRP (dBm)	Limit(dBm)	Over Limit (dB)	S.G. Power (dBm)	Cable loss (dB)	Antenna Gain (dBi)	Polarization (H/V)	Result
3505.2	-49.95	-13	-36.95	-56.84	0.71	7.6	Horizontal	Pass
5257.8	-45.41	-13	-32.41	-54.19	0.82	9.6	Horizontal	Pass
7010.4	-43.88	-13	-30.88	-55.78	1	12.9	Horizontal	Pass
3505.2	-49.15	-13	-36.15	-56.04	0.71	7.6	Vertical	Pass
5257.8	-45.67	-13	-32.67	-54.45	0.82	9.6	Vertical	Pass
7010.4	-44.09	-13	-31.09	-55.99	1	12.9	Vertical	Pass

Note:

All modes have been tested and we found RMC Test mode has the worst test result. Only record the worst test result.

6.7 Frequency stability

Test Requirement: §2.1055, §22.355, §24.235, §27.54

Test Method: ANSI C63.26, KDB 971168 D01 v03

Limit: ≤ ±2.5ppm.

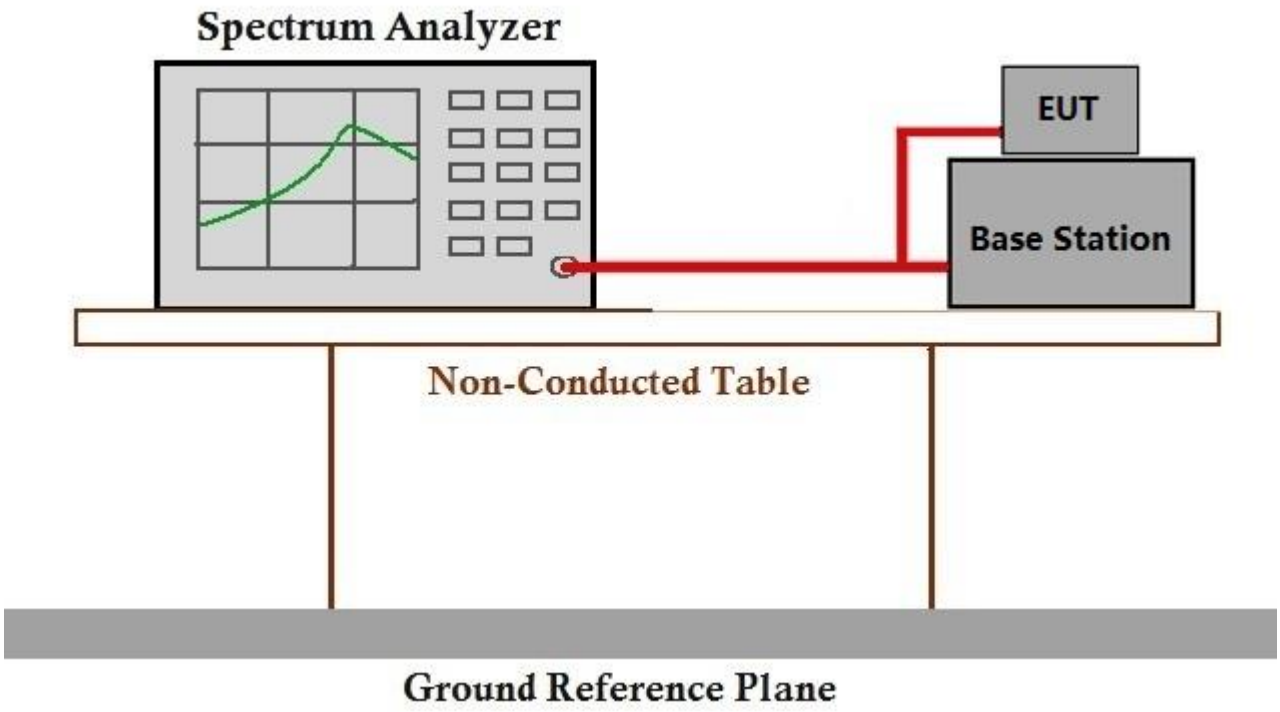
6.7.1 E.U.T. Operation

Operating Environment:

Temperature: 19.5 °C Humidity: 45.5 % RH Atmospheric Pressure: 1010 mbar

Test mode: 20: TX mode_Keep the EUT in transmitting mode

6.7.2 Test Setup Diagram



6.7.3 Measurement Data

Please Refer to Appendix WCDMA

7 Photographs

7.1 Test Setup Photos

Refer to Appendix – Setup Photos for 2G/3G/4G.

7.2 EUT Constructional Details (EUT Photos)

Refer to Appendix - External and Internal Photos for GZCR2109021051AT

- End of the Report -