

RF TEST REPORT

Report No.:	20240117G01519X-W11			
Product Name:	VERTU IRONFLIP 5G digital mobile phone			
Model No.:	VTL-202302			
FCC ID:	2A6IQ-VTL202302			
IC:	28629-VTL202302			
Applicant:	VERTU INTERNATIONAL CORPORATION LIMITED			
Address:	Chase Business Centre 39-41 Chase Side London England N14 5BP			
Dates of Testing:	01/22/2024 - 04/17/2024			
Issued by:	CCIC Southern Testing Co., Ltd.			
Lab Location:	Electronic Testing Building, No. 43 Shahe Road, Xili Street,			
	Nanshan District, Shenzhen, Guangdong, China.			
	Tel: 86 755 26627338 Fax: 86 755 26627238			

This test report consists of 27 pages in total. It may be duplicated completely for legal use with the approval of the applicant. It should not be reproduced except in full, without the written approval of our laboratory. The client should not use it to claim product endorsement by CCIC-SET. The test results in the report only apply to the tested sample. The test report shall be invalid without all the signatures of testing engineers, reviewer and approver. Any objections must be raised to CCIC-SET within 15 days since the date when the report is received. It will not be taken into consideration beyond this limit.



Test Report

	-		
Product:	VERTU IRONFLIP 5G digital mobile phone		
Brand Name:	VERTU		
Trade Name:	VERTU		
••	VERTU INTERNATIONAL CORPORATION LIMITED		
Applicant Address:	Chase Business Centre 39-41 Chase Side London England N14 5BP		
Manufacturer:	Co., Ltd		
Manufacturer Address:	Room 2308, 23rd Floor, Building 2, No. 1199,North Tianfu Avenue, High-tech Zone, Chengdu, China		
Test Standards:	(Sichuan) Pilot Free Trade Zone 47 CFR Part 2/22 RSS-Gen, Issue 5: Feb 2021 RSS-132, Issue 4: Jan 2023		
Test Result:	Pass		
Test Result:	Pass history 2024.04.17		
	huizwany Zhang		
Tested by:	Chuiwang Zhang, Test Engineer		
	Chuiwang Zhang, Test Engineer		
Tested by:	$\frac{1}{10000000000000000000000000000000000$		
Tested by:	Image: Angle of the stress		



Table of Contents

1.	GENERAL INFORMATION	5
1.1.	EUT Description	5
1.2.	Maximum ERP/EIRP, Frequency Tolerance and Emission Designator	6
1.3.	Test Standards and Results	6
1.4.	Test Configuration of Equipment Under Test	8
1.5.	Measurement Results Explanation Example	8
1.6.	Laboratory Facilities	9
1.7.	Test Environment Conditions	9
2.	47 CFR PART 2 AND RSS-GEN REQUIREMENTS	
2.1.	Conducted Output Power and ERP	
2.2.	Peak-to-average power ratio (PAPR)	
2.3.	99% Occupied Bandwidth and 26dB Emission Bandwidth	14
2.4.	Conducted Band Edge	16
2.5.	Conducted Spurious Emission	
2.6.	Radiated Spurious Emission	20
2.7.	Frequency Stability	24
3.	LIST OF MEASURING EQUIPMENT	
4.	UNCERTAINTY OF EVALUATION	



Change History				
Issue Date Reason for change				
1.0	2024.04.17	First edition		



1. GENERAL INFORMATION

1.1. EUT Description

Product Name	VERTU IRONFLIP 5G digital mobile phone			
Model No.	VTL-202302			
Hardware Version	P10			
Software Version	13.0.0_6.0	01.01.01		
EUT supports Radios application	 CDMA2000 BC0			
Г Р	Tx: 824.70	0 - 848.31MHz;		
Frequency Range	Rx: 869.70 - 893.31MHz			
Maximum Output Power to Antenna	^o CDMA2000 BC0: 24.40dBm			
Type of Modulation	CDMA20	00 1xRTT: BPSK, QPSK		
Antenna Type	Internal A	ntenna		
Antonno goin	Antenna 1: -5.5dBi			
Antenna gain	Antenna 3: -6.5dBi			
Dowor supply	Upper:	Rechargeable Li-ion Polymer Battery DC3.91V/3210mAh		
Power supply	Bottom:	Rechargeable Li-ion Polymer Battery DC3.91V/970mAh		

Note 1: The information of antenna gain and cable loss is provided by the manufacturer and our lab is not responsible for the accuracy of the antenna gain and cable loss information.

- Note 2: EUT supports DPDT(Double Pole Double Throw) transfer switch, CDMA2000 BC0(TX) can switch between Ant1 and Ant3.
- Note 3: The Antenna can Switched automatic base on the signal strength, but the antennas cannot TX at the same time, only one TX.



1.2. Maxir

Maximum ERP/EIRP, Frequency Tolerance and Emission Designator

System	Type of Modulation	Emission Designator	Frequency Tolerance (ppm)	Maximum ERP(W)
CDMA2000 BC0	QPSK	1M28F9W	0.0235	0.047

1.3. Test Standards and Results

The purpose of the report is to conduct testing according to the following FCC/IC certification standards:

No.	Identity	Document Title		
1	47 CFR Part 2	Frequency Allocations and Radio Treaty Matters; General		
		Rules and Regulations		
2	47 CFR Part 22	Public Mobile Services		
3	RSS-Gen-Issue 5: Feb 2021	General Requirements for Compliance of Radio Apparatus		
4	RSS-132-Issue 4: Jan 2023	Cellular Telephone Systems Operating in		
4	K35-152-15sue 4. Jan 2025	the Bands 824-849 MHz and 869-894 MHz		
	KDB 971168 D01 Power	Measurement Guidance For Certification of		
5	Meas License Digital			
	Systems v03r01	Licensed Digital Transmitters		
	KDB 412172 D01	Guidelines for Determining the Effective Radiated Power		
6	Determining ERP and EIRP	(ERP) and Equivalent Isotropic Radiated Power (EIRP) of		
	v01r01	an RF Transmitting Systems		
7	ANGL/TLA (02 E 2016	Land Mobile FM or PM Communications Equipment		
/	ANSI/TIA-603-E-2016	Measurement and Performance Standards		
8	ANSI C63.26-2015	American National Standard for Compliance Testing of		
0	AINSI C05.20-2015	Transmitters Used in Licensed Radio Services		



No.	FCC Rule	IC Rule	Description	Limit	Result
1	2.1046	RSS-GEN, 6.12	Conducted Output Power	Reporting Only	PASS
2	22.913(a)(5)	RSS-132,5.4	Effective Radiated Power	ERP < 7Watts	PASS
3	22.913(d)	RSS-132,5.4	Peak to Average Radio	< 13dBm	PASS
4	2.1049	RSS-GEN,6.7	Occupied Bandwidth	Reporting Only	PASS
5	2.1055 22.355	RSS-GEN, 6.11 RSS-132, 5.3	Frequency Stability	FCC: < ±2.5ppm IC: Within the Authorized Band	PASS
6	2.1051 22.917	RSS-GEN,6.13 RSS-132,5.5	Conducted Spurious Emission and Conducted Band Edge	< 43+10log ₁₀ (P[Watts])	PASS
7	2.1053 22.917	RSS-GEN,6.13 RSS-132,5.5	Radiated Spurious Emissions	< 43+10log ₁₀ (P[Watts])	PASS

Test detailed items/section required by FCC/IC rules and results are as below:

Remark:

- 1. All test items were verified and recorded according to the standards and without any deviation during the test.
- 2. This EUT has also been tested and complied with the requirements of FCC Part 15, Subpart B and ICES-003 Issue 7 October 2020, recorded in a separate test report.



1.4. Test Configuration of Equipment Under Test

Antenna port conducted and radiated test items listed below are performed according to KDB 971168 D01 Power Meas License Digital Systems v03r01 with maximum output power.

Radiated measurements are performed by rotating the EUT in three(X: flat, Y: portrait, Z: landscape) different orthogonal test planes to find the maximum emission.

Radiated emissions were investigated as following frequency range:

1. 30 MHz to 9000 MHz for CDMA2000 BC0.

All modes and data rates and positions were investigated.

Test modes are chosen to be reported as the worst case configuration below:

Test Modes					
Band	Radiated TCs	Conducted TCs			
CDMA2000 BC0 (Ant1)	1xRTT Link Mode	1xRTT Link Mode			

Note: The maximum power levels are chosen to test as the worst case configuration as follows:

CDMA2000 BC0 for QPSK modulation and 1xRTT Link Mode, only these modes were used for all tests.

1.5. Measurement Results Explanation Example

For all conduction test items:

The offset level is set in the spectrum analyzer to compensate the RF cable loss and attenuator factor between EUT conducted output port and spectrum analyzer. With the offset compensation, the spectrum analyzer reading level is exactly the EUT RF output level.

The spectrum analyzer offset is derived from RF cable loss and attenuator factor.

Offset = RF cable loss + attenuator factor..

Following shows an offset computation example with cable loss 4dB, 10dB attenuator.

Example: Offset (dB) = RF cable loss(dB) + attenuator factor(dB) = 4 + 10 = 14 (dB).



1.6. Laboratory Facilities

FCC-Registration No.: 406086

CCIC Southern Testing Co., Ltd 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 our files. Designation Number: CN1283, valid time is until June 30, 2025.

ISED Registration: 11185A-1

CCIC Southern Testing Co., Ltd. EMC Laboratory has been registered by Certification and Engineering Bureau of Industry Canada for the performance of radiated measurements with Registration No. 11185A-1 on Aug. 04, 2016, valid time is until June 30, 2025.

A2LA Code: 5721.01

CCIC-SET is a third party testing organization accredited by A2LA according to ISO/IEC 17025.

1.7. Test Environment Conditions

During the measurement, the environmental conditions were within the listed ranges:

Temperature (°C):	15℃- 35℃
Relative Humidity (%):	30% -60%
Atmospheric Pressure (kPa):	86kPa-106kPa



2. 47 CFR Part 2 and RSS-Gen Requirements

2.1. Conducted Output Power and ERP

2.1.1. Requirement

According to FCC section 2.1046(a), for transmitters other than single sideband, independent sideband and controlled carrier radiotelephone, power output shall be measured at the RF output terminals when the transmitter is adjusted in accordance with the tune-up procedure to give the values of current and voltage on the circuit elements specified in FCC section 2.1033(c)(8).

According to RSS-Gen section 6.12, before performing this measurement, the power of the EUT shall be set or controlled to the maximum rating of the range for which equipment certification or verification is sought.Except where otherwise specified, tests shall be performed at the ambient temperature, at the manufacturer's rated supply voltage, and with the transmitter modulating signal representative (i.e.typical) of those encountered in a real system operation.

The ERP of mobile transmitters must not exceed 7 Watts for CDMA2000 BC0

According to KDB 412172 D01 Determining ERP and EIRP v01r01.

 $EIRP = P_T + _{GT} - L_C$, ERP = EIRP - 2.15, where

 P_T = transmitter output power in dBm;

 G_T = gain of the transmitting antenna in dBi;

 L_C = signal attenuation in the connecting cable between the transmitter and antenna in dB.

2.1.2. Measuring Instruments

The measuring equipment is listed in the section 3 of this test report.

2.1.3. Test Setup



2.1.4. Test Procedures

- 1. The transmitter output port was connected to the system simulator.
- 2. Set EUT at maximum power through system simulator.
- 3. Select lowest, middle, and highest channels for each band and different modulation.
- 4. Measure and record the power level from the system simulator.



CDMA2000 BC0 - Ant1 Average power (dBm) Ant. Max. ERP 1013 384 Gain ERP EUT Mode 777 Limit 824.70MHz 836.52MHz 848.31MHz (dBi) (dBm) (dBm) RC1 + SO55 24.22 24.36 24.40 24.24 24.17 RC3 + SO55 24.22 -5.5 16.75 38.45 RC3 + SO32(+F-SCH) 23.90 23.88 23.97 24.14 RC3 + SO32(+SCH) 24.16 24.23 CDMA2000 BC0 - Ant3 Average power (dBm) Ant. ERP Max. EUT Mode 1013 384 777 Gain ERP Limit 824.70MHz 836.52MHz 848.31MHz (dBi) (dBm) (dBm) RC1 + SO55 24.05 24.02 24.21 RC3 + SO55 24.01 23.97 24.12 -6.5 15.56 38.45 RC3 + SO32(+F-SCH) 23.65 23.63 23.72 RC3 + SO32(+SCH) 23.89 23.98 23.91

2.1.5. Test Results of Conducted Output Power and ERP



2.2. Peak-to-average power ratio (PAPR)

2.2.1. Requirement

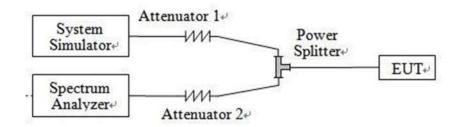
Power Complementary Cumulative Distribution Function (CCDF) curves provide a means for characterizing the power peaks of a digitally modulated signal on a statistical basis. A CCDF curve depicts the probability of the peak signal amplitude exceeding the average power level. Most contemporary measurement instrumentation include the capability to produce CCDF curves for an input signal provided that the instrument's resolution bandwidth can be set wide enough to accommodate the entire input signal bandwidth.

In measuring transmissions in this band using an average power technique, the Peak-to-average power ratio (PAPR) of the transmission may not exceed 13 dB.

2.2.2. Measuring Instruments

The measuring equipment is listed in the section 3 of this test report.

2.2.3. Test Description



2.2.4. Test Procedures

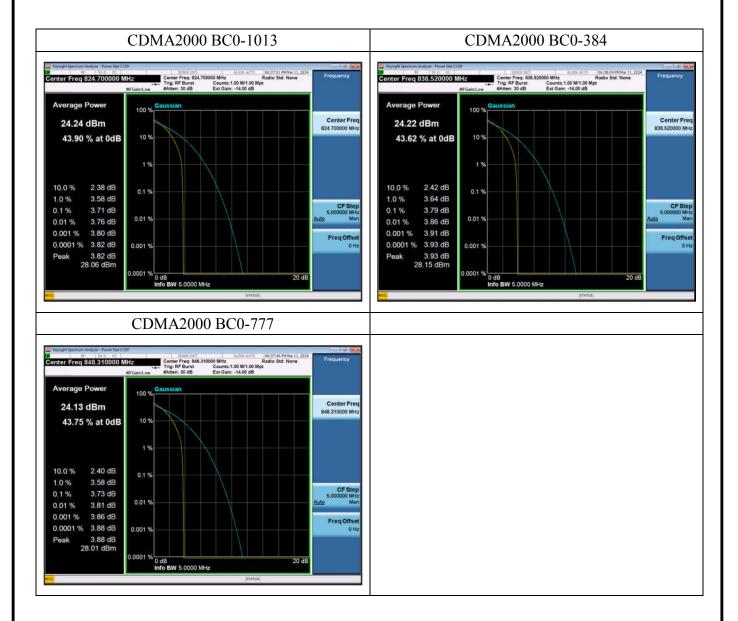
- 1. The testing follows the of KDB 971168 D01 v03r01 Section 5.7.2 and ANSI C63.26-2015 Section 5.2.3.4.
- 2. The EUT was connected to spectrum analyzer and system simulator via a power divider, Path loss compensation is then performed on the spectrum analyzer and the system simulator respectively.
- 3. Set the CCDF (Complementary Cumulative Distribution Function) option in spectrum analyzer.
- 4. Set resolution/measurement bandwidth \geq OBW or specified reference bandwidth.
- 5. Set the number of counts to a value that stabilizes the measured CCDF curve.
- 6. Set the EUT working in highest power level, measured and recorded the 0.1% as PAPR level.
- 7. Repeat step 3~6 at other frequency and modulations.



2.2.5.

Test Results of Peak-to-average power ratio (PAPR)

Band	Channel	Frequency (MHz)	Peak to Average radio (dB)	Limit (dB)	Verdict
CDMA2000 BC0	1013	824.70	3.71		PASS
	384	836.52	3.79	13	PASS
	777	848.31	3.73		PASS





2.3. 99% Occupied Bandwidth and 26dB Emission Bandwidth

2.3.1. Requirement

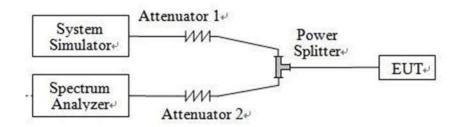
The Occupied Bandwidth is the frequency bandwidth such that, below its lower and above its upper frequency limits, the mean powers are each equal to 0.5% of the total mean power of the given emission.

The 26 dB emission bandwidth is defined as the frequency range between two points, one above and one below the carrier frequency, at which the spectral density of the emission is attenuated 26 dB below the maximum in-band spectral density of the modulated signal Spectral density (power per unit bandwidth) is to be measured with a detector of resolution bandwidth equal to approximately 1.0% of the emission bandwidth.

2.3.2. Measuring Instruments

The measuring equipment is listed in the section 3 of this test report.

2.3.3. Test Setup



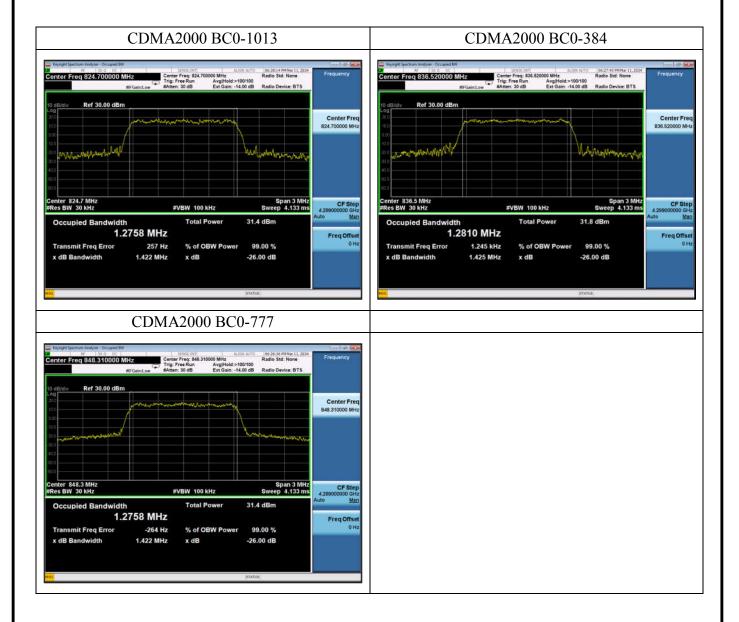
2.3.4. Test Procedures

- 1. The testing follows the of KDB 971168 D01 v03r01 Section 4 and ANSI C63.26-2015 Section 5.4.
- 2. The EUT was connected to spectrum analyzer and system simulator via a power divider, Path loss compensation is then performed on the spectrum analyzer and the system simulator respectively.
- 3. The spectrum analyzer center frequency is set to the nominal EUT channel center frequency.
- 4. Set span to be approximately 1.5 to 5 times the OBW.
- 5. The nominal RBW shall be in the range of 1% to 5% of the anticipated OBW.
- 6. Set VBW \geq 3 × RBW.
- 7. Set Detection mode = peak.
- 8. Set Trace mode = max hold.
- 9. Allow trace to stabilize.
- 10. Repeat step $3 \sim 9$ at other frequency and modulations.



2.3.5. Test Result of 99% Occupied Bandwidth and 26dB Emission Bandwidth

Band	Channel	Frequency (MHz)	26dB EBW (MHz)	99% OBW (MHz)	Verdict
CDMA2000 BC0	1013	824.70	1.422	1.2758	PASS
	384	836.52	1.425	1.2810	PASS
	777	848.31	1.422	1.2758	PASS





2.4. Conducted Band Edge

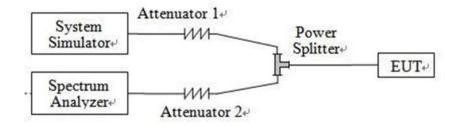
2.4.1. Requirement

The power of any emission outside of the authorized operating frequency ranges must be lower than the transmitter power (P) by a factor of at least $43 + 10 \log (P) dB$.

2.4.2. Measuring Instruments

The measuring equipment is listed in the section 3 of this test report.

2.4.3. Test Setup

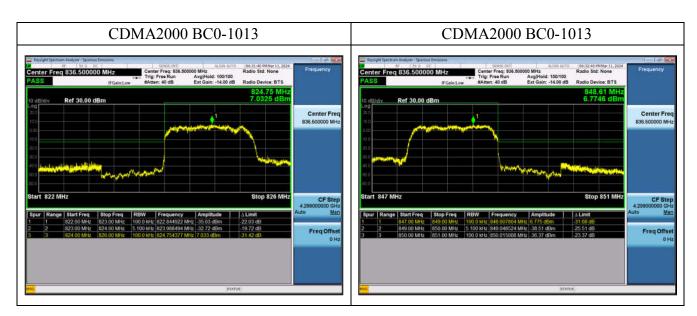


2.4.4. Test Procedures

- 1. The testing follows the of KDB 971168 D01 v03r01 Section 6 and ANSI C63.26-2015 Section 5.7.
- 2. The EUT was connected to spectrum analyzer and system simulator via a power divider, Path loss compensation is then performed on the spectrum analyzer and the system simulator respectively.
- 3. Span was set large enough so as to capture all out of band emissions near the Channel Edge.
- 4. Use RBW ≥ 1% EBW in the 1 megahertz bands immediately outside and adjacent to the licensee's authorized frequency channel, and use RBW = 1 MHz outside 1 MHz of the authorized frequency channel.
- 5. Set VBW \ge 3 × RBW
- 6. Set Detector = power averaging (rms).
- 7. Set the number of points in sweep $\geq 2 \times \text{span} / \text{RBW}$.
- 8. Set sweep trigger to "free run."
- 9. Set the Sweep time > (number of points in sweep) × (transmitter period) (i.e., the transmit on-time + the off-time).
- 10. Perform a trace average of at least 100 traces.
- 11. Repeat step 3~10 at other frequency and modulations.



2.4.5. Test Result of Conducted Band Edge





2.5. Conducted Spurious Emission

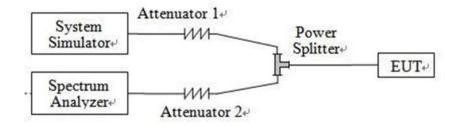
2.5.1. Requirement

The power of any emission outside of the authorized operating frequency ranges must be lower than the transmitter power (P) by a factor of at least $43 + 10 \log (P) dB$.

2.5.2. Measuring Instruments

The measuring equipment is listed in the section 3 of this test report.

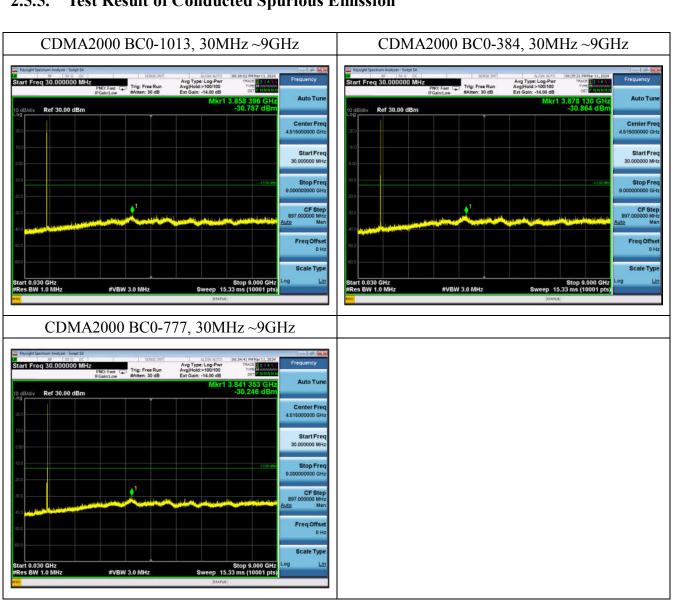
2.5.3. Test Setup



2.5.4. Test Procedures

- 1. The testing follows the of KDB 971168 D01 v03r01 Section 6 and ANSI C63.26-2015 Section 5.7.
- 2. The EUT was connected to spectrum analyzer and system simulator via a power divider, Path loss compensation is then performed on the spectrum analyzer and the system simulator respectively.
- 3. Set the spectrum analyzer start frequency to 9kHz and stop frequency to the tenth harmonic of the highest fundamental frequency.
- 4. Set RBW = 1MHz, VBW $\ge 3 \times$ RBW
- 5. Set Detector = peak.
- 6. Set Trace mode = max hold.
- 7. Set Sweep time = auto-couple.
- 8. Identify and measure the highest spurious emission levels in each frequency range.
- 9. Compare the results with the corresponding limit in the applicable regulation.
- 10. Repeat step 3~9 at other frequency and modulations.
- Note: For 9 kHz to 30MHz: the amplitude of spurious emissions is attenuated by more than 20dB below the permissible value, so we not provide the test result here.





2.5.5. Test Result of Conducted Spurious Emission



2.6. Radiated Spurious Emission

2.6.1. Requirement

The radiated spurious emission was measured by substitution method according to ANSI/TIA-603-E-2016.

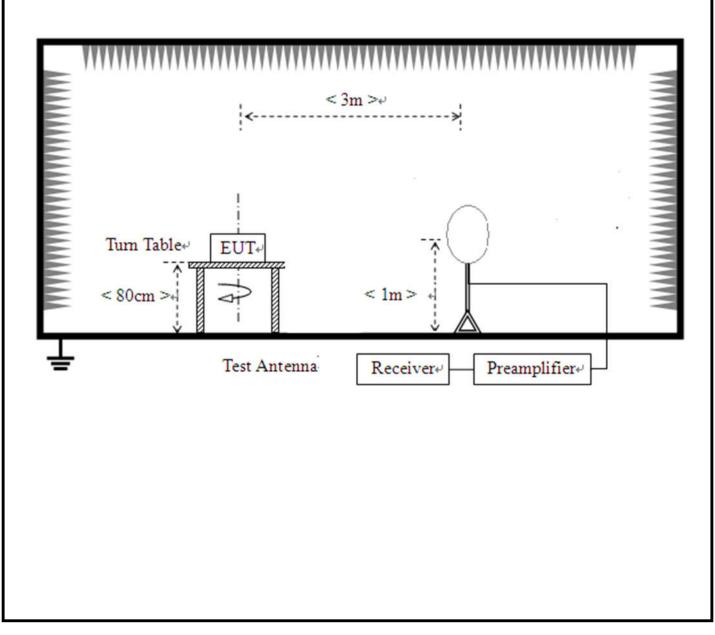
The power of any emission outside of the authorized operating frequency ranges must be lower than the transmitter power (P) by a factor of at least $43 + 10 \log (P) dB$.

2.6.2. Measuring Instruments

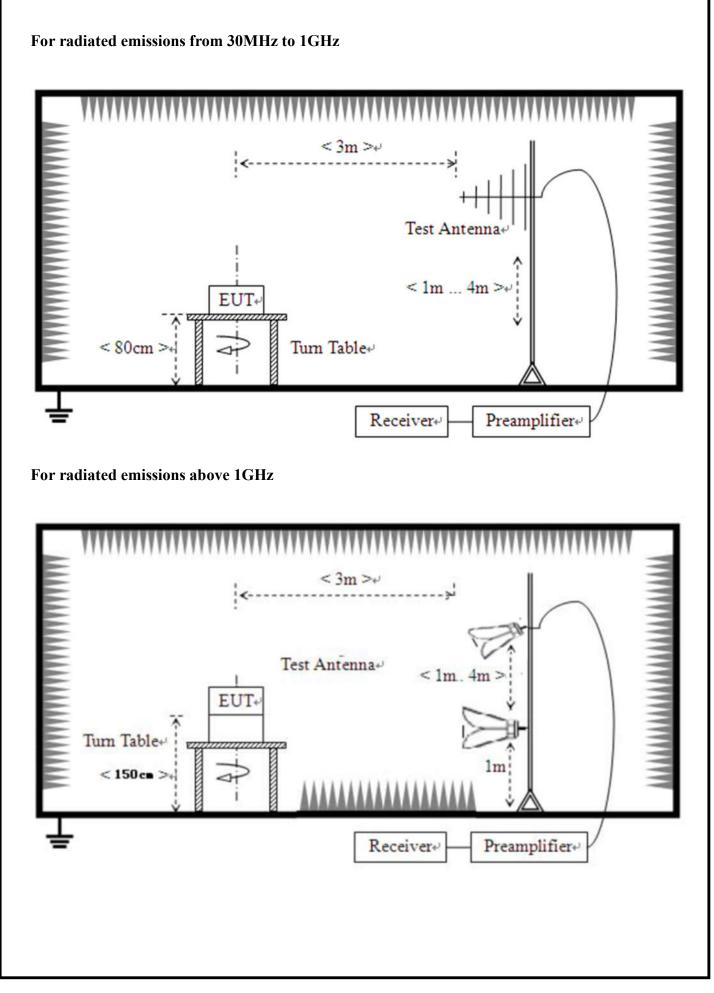
The measuring equipment is listed in the section 3 of this test report.

2.6.3. Test Setup

For radiated emissions from 9kHz to 30MHz









2.6.4. Test Procedures

- 1. The EUT was placed on a rotatable wooden table with 0.8 meter (for below 1GHz) / 1.5 meters (for above 1GHz) above ground.
- 2. The EUT was set 3 meters from the receiving antenna, which was mounted on the antenna tower.
- 3. The table was rotated 360 degrees to determine the position of the highest spurious emission.
- 4. The height of the receiving antenna is varied between one meter and four meters to search the maximum spurious emission for both horizontal and vertical polarizations.
- 5. Make the measurement with the spectrum analyzer's RBW = 1MHz, VBW = 3MHz, taking the record of maximum spurious emission.
- 6. A horn antenna was substituted in place of the EUT and was driven by a signal generator.
- 7. Tune the output power of signal generator to the same emission level with EUT maximum spurious emission.
- 8. Taking the record of output power at antenna port.
- 9. Repeat step 7 to step 8 for another polarization.
- 10. The RF fundamental frequency should be excluded against the limit line in the operating frequency band.
- 11. This device employs BPSK and QPSK technology with CDMA2000 1xRTT capabilities. All configurations were investigated and the worst case emissions were found in QPSK technology.
- 12. All Spurious Emission tests were performed in X, Y, Z axis direction and low, middle, high channel. And only the worst axis test condition was recorded in this test report.
- 13. The spectrum is measured from 9 kHz to the 10th harmonic of the fundamental frequency of the transmitter using CISPR quasi peak detector below 1GHz. The worst case emissions are reported however emissions whose levels were not within 20dB of the respective limits were not reported.

2.6.5. Test Result of Radiated Spurious Emission

- Note: 1. The emission levels of above 18GHz are lower than the limit 20dB and not show in test report.
- Note: 2. Absolute Level = Reading Level + Factor.
- Note: 3. Worst-Case test data provide as below.

30MHz~10GHz: CDMA2000 BC0 Middle Channel								
NO.	Freq.	Reading	Level	Limit	Margin	Factor	Delevity	
	[MHz]	[dBm]	[dBm]	[dBm]	[dB]	[dB]	Polarity	
1	41.65	-92.98	-71.79	-13.00	58.79	21.19	Horizontal	
2	106.18	-89.43	-70.01	-13.00	57.01	19.42	Horizontal	
3	240.11	-98.15	-76.25	-13.00	63.25	21.90	Horizontal	
4	3071.93	-58.13	-50.90	-13.00	37.90	7.23	Horizontal	
5	7416.60	-59.77	-40.07	-13.00	27.07	19.70	Horizontal	
6	11825.3	-62.58	-38.98	-13.00	25.98	23.60	Horizontal	
NO.	Freq.	Reading	Level	Limit	Margin	Factor	Dolority	
	[MHz]	[dBm]	[dBm]	[dBm]	[dB]	[dB]	Polarity	
1	41.65	-93.42	-73.49	-13.00	60.49	19.93	Vertical	
2	106.18	-90.11	-66.25	-13.00	53.25	23.86	Vertical	
3	250.30	-99.00	-74.56	-13.00	61.56	24.44	Vertical	
4	5002.28	-58.57	-44.37	-13.00	31.37	14.20	Vertical	
5	7660.98	-60.28	-40.85	-13.00	27.85	19.43	Vertical	
6	10924.2	-61.23	-38.25	-13.00	25.25	22.98	Vertical	



2.7. Frequency Stability

2.7.1. Requirement

According to FCC section 22.355, The frequency stability of the transmitter shall be maintained within $\pm 0.00025\%$ (± 2.5 ppm).

According to RSS-132 section 5.3, The frequency stability shall be sufficient to ensure that the occupied bandwidth stays within each of the sub-bands when tested at the temperature and supply voltage variations specified in RSS-Gen.

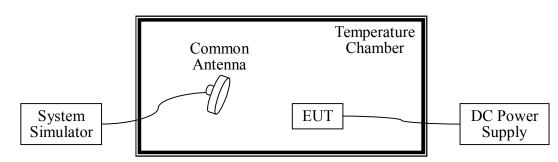
According to FCC section 2.1055 and RSS-Gen section 6.11, the test conditions are:

- (1) The temperature is varied from -30°C to +50°C at intervals of not more than 10°C.
- (2) For hand carried battery powered equipment, the primary supply voltage is reduced to the battery operating end point which shall be specified by the manufacture. The supply voltage shall be measured at the input to the cable normally provided with the equipment, or at the power supply terminals if cables are not normally provided.

2.7.2. Measuring Instruments

The measuring equipment is listed in the section 3 of this test report.

2.7.3. Test Setup



2.7.4. Test Procedures

- 1. The EUT was set up in the thermal chamber and connected with the system simulator.
- 2. With power OFF, the temperature was decreased to -30°C and the EUT was stabilized before testing. Power was applied and the maximum change in frequency was recorded within one minute.
- 3. With power OFF, the temperature was raised in 10°C step up to 50°C. The EUT was stabilized at each step for at least half an hour. Power was applied and the maximum frequency change was recorded within one minute.
- 4. The nominal, highest and lowest extreme voltages were tested, which are specified by the applicant; the normal temperature here used is 20°C.
- 5. The variation in frequency was measured for the worst case.



2.7.5. **Test Result of Frequency Stability** CDMA2000 BC0 1xRTT_RC3+SO55, Channel=777, Frequency=836.52 MHz Power Temperature Deviation Limit(ppm) Result (Vdc) (°C) (ppm) -30 0.0221 0.0210 -20 -10 0.0201 0.0127 0 FCC: ±2.5 3.91 +100.0148 IC: Within 0.0174 +20authorized band PASS +300.0211 for CDMA2000 BC0 +400.0235 +500.0126 3.65 +200.0217 4.50 +200.0173



3. List of measuring equipment

Item	Test Equipment	Manufacturer	Model No.	Serial No.	Cal Date	Due Date
1	EMI Test Receiver	ROHDE&SCHWARZ	ESW26	A180502935	2023.06.08	2024.06.07
2	5M Anechoic Chamber	Albatross	SAC-5MAC 12.8x6.8x6.4m	A0304210	2022.06.09	2026.06.08
3	Loop Antenna	Schwarz beck	HFH2-Z2	A0304220	2022.05.02	2025.05.01
4	Broadband antenna (30MHz~1GHz)	R&S	HL562	A0304224	2023.06.08	2024.06.07
5	EMI Horn Ant. (1-18G)	ETC	MCTD-1209	A150402241	2023.05.16	2026.05.15
6	Horn antenna (18GHz~26.5GHz)	AR	AT4510	A0804450	2023.06.01	2024.05.31
7	Amplifier 30M~1GHz	MILMEGA	80RF1000-1000	A140101634	2023.10.20	2024.10.19
8	Amplifier 1G~18GHz	MILMEGA	AS0104R-800/400	A160302517	2023.10.20	2024.10.19
9	Spectrum Analyzer	KEYSIGHT	N9030A	A160702554	2024.01.18	2025.01.17
10	Test Receiver	R&S	ESIB7	A0501375	2023.03.16 2024.02.28	2024.03.15 2025.02.27
11	Broadband Ant.	ETC	MCTD 2786	A150402240	2024.02.28	2025.02.27
12	3M Anechoic Chamber	Albatross	SAC-3MAC	A0412375	2019.03.26	2024.03.25
			9*6*6m		2024.02.27	2027.02.26
13	Constant Temperature	ESPEC	SU-642	A150802409	2023.03.18	2024.03.17
15	Humidity Chamber	Loi Le	50 012	11150002109	2024.02.22	2025.02.21
14	Wideband Radio Communication tester	R&S	CMW500	A130101034	2023.07.13	2024.07.12
15	Wideband Radio Communication tester	R&S	CMW500	A150802214	2023.06.01	2024.05.31
16	Test Receiver	KEYSIGHT	N9038A	A141202036	2023.06.12	2024.06.11
17	LISN	ROHDE&SCHWARZ	ENV216	A140701847	2023.06.08	2024.06.07
18	Power Supply	R&S	WYJ-60100	A141102031	2023.07.12	2026.07.11



4. Uncertainty of Evaluation

The measurement uncertainties shown below were calculated in accordance with the requirements of ANSI C63.10-2013. 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.

Uncertainty of Conducted Emission Measurement (150kHz~30MHz)

Measuring Uncertainty for a level of confidence of 95%(U=2Uc(y))	2.8dB			
Uncertainty of Radiated Emission Measurement (9kHz~30MHz)				
Measuring Uncertainty for a level of confidence of 95%(U=2Uc(y))	3.5dB			
Uncertainty of Radiated Emission Measurement (30MHz~1GHz)				
Measuring Uncertainty for a level of confidence of 95%(U=2Uc(y))	3.91dB			
Uncertainty of Radiated Emission Measurement (1GHz~18GHz)				
Measuring Uncertainty for a level of confidence of 95%(U=2Uc(y))	4.5dB			
Uncertainty of Radiated Emission Measurement (18GHz~40GHz)				
Measuring Uncertainty for a level of confidence of 95%(U=2Uc(y))	4.9dB			
Uncertainty of RF Conducted Measurement (9kHz~40GHz)				
Measuring Uncertainty for a level of confidence of 95%(U=2Uc(y))	1.2dB			
** END OF REPORT **				