FCC RF Test Report

APPLICANT	:	Rolling Wireless S.a r.l.
EQUIPMENT	:	5G module
BRAND NAME	:	Rolling Wireless
MODEL NAME	:	RW350R-GL
FCC ID	:	2AX2URW350RGL
STANDARD	:	47 CFR Part 2, 22(H), 24(E), 27(L)
CLASSIFICATION	:	PCS Licensed Transmitter (PCB)
TEST DATE(S)	:	Mar. 27, 2024 ~ Apr. 10, 2024

We, Sporton International Inc. (Shenzhen), would like to declare that the tested sample has been evaluated in accordance with the procedures given in ANSI C63.26-2015 and shown compliance with the applicable technical standards.

The test results in this report apply exclusively to the tested model / sample. Without written approval of Sporton International Inc. (Shenzhen), the test report shall not be reproduced except in full.

Jason Jia

Approved by: Jason Jia

ACCREDITED
Cert #5145.01

Sporton International Inc. (ShenZhen)

1/F, 2/F, Bldg 5, Shiling Industrial Zone, Xinwei Village, Xili, Nanshan, Shenzhen, 518055

People's Republic of China

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APPENDIX A. TEST RESULTS OF CONDUCTED TEST

APPENDIX B. TEST RESULTS OF RADIATED TEST

APPENDIX C. TEST SETUP PHOTOGRAPHS

REVISION HISTORY

REPORT NO.	VERSION	DESCRIPTION	ISSUED DATE
FG430728A	Rev. 01	Initial issue of report	Jun. 13, 2024

SUMMARY OF TEST RESULT

Report Section	FCC Rule	Description	Limit	Result	Remark
3.4	§2.1046	Conducted Output Power	-	Report Only	-
	§22.913(a)(5)	Effective Radiated Power	< 7 Watts	PASS	-
	§24.232(c)	Equivalent Isotropic Radiated Power	< 2 Watts	PASS	-
	§27.50(d)(4)	Equivalent Isotropic Radiated Power	< 1 Watts	PASS	-
3.5	§24.232(d)	Peak-to-Average Ratio	< 13 dB	PASS	-
3.6	§2.1049	Occupied Bandwidth	Reporting Only	PASS	-
3.7	§2.1051 §22.917(a) §24.238(a) §27.53(h)	Band Edge Measurement	< 43+10log10(P[Watts])	PASS	-
3.8	§2.1051 §22.917(a) §24.238(a) §27.53(h)	Conducted Emission	< 43+10log10(P[Watts])	PASS	-
3.9	§2.1055 §22.355	Frequency Stability for Temperature & Voltage	< 2.5 ppm for Part 22	PASS	-
	§2.1055 §24.235 §27.54		Within Authorized Band		
4.4	§2.1053; §22.917(a); §24.238(a); §27.53(h)	Field Strength of Spurious Radiation	< 43+10log10(P[Watts])	PASS	Under limit 40.25 dB at 6849.60 MHz

Conformity Assessment Condition:

1. The test results (PASS/FAIL) with all measurement uncertainty excluded are presented against the regulation limits or in accordance with the requirements stipulated by the applicant/manufacturer who shall bear all the risks of non-compliance that may potentially occur if measurement uncertainty is taken into account.
2. The measurement uncertainty please refer to each test result in the section “Measurement Uncertainty”

Disclaimer:

The product specifications of the EUT presented in the test report that may affect the test assessments are declared by the manufacturer who shall take full responsibility for the authenticity.

1 General Description

1.1 Applicant

Rolling Wireless S.a r.l.
8-10, rue Mathias Hardt 1717, Luxembourg

1.2 Manufacturer

Rolling Wireless S.a r.l.
8-10, rue Mathias Hardt 1717, Luxembourg

1.3 Product Feature of Equipment Under Test

Product Feature	
Equipment	5G module
Brand Name	Rolling Wireless
Model Name	RW350R-GL
FCC ID	2AX2URW350RGL
IMEI Code	Conducted: 356413950001474 Radiation: 356413950000682 for sample 1 356413950001417 for sample 2
HW Version	V1.1
SW Version	81601.0000.00.29.24.13
EUT Stage	Identical Prototype

1.4 Product Specification of Equipment Under Test

Standards-related Product Specification	
Tx Frequency	**WCDMA:** Band V: 824 MHz ~ 849 MHz Band II: 1850 MHz ~ 1910 MHz Band IV: 1710 MHz ~ 1755 MHz
Rx Frequency	**WCDMA:** Band V: 869 MHz ~ 894 MHz Band II: 1930 MHz ~ 1990 MHz Band IV: 2110 MHz ~ 2155 MHz
Maximum Output Power to Antenna	**WCDMA:** Band V: 24.01 dBm Band II: 24.50 dBm Band IV: 24.29 dBm
Antenna Type	External Monopole Antenna or External PIFA Antenna
Antenna Gain	Cellular Band: 3 dBi

	PCS Band: 4 dBi AWS Band: 3 dBi
Type of Modulation	WCDMA: BPSK (Uplink) HSDPA: QPSK (Uplink) HSUPA: QPSK (Uplink) HSPA+ : 16QAM (Uplink)

Remark:

1. The device has two optional antennas, they are same antenna gain, RSE pretest the two antennas, choose worst antenna to perform final test and recorded in the report.
2. There are two samples under test, sample 1 is 1st source and sample 2 is 2nd source, the detailed differences could be referred to the RW350R-GL_Operational Description of Product Equality Declaration which is exhibit separately. According to the differences, sample 1 perform full test, sample 2 verify conducted power and found less than sample 1, and sample 2 additional verify the worst case of RSE.

1.5 Modification of EUT

No modifications are made to the EUT during all test items.

1.6 Maximum Conducted Power, and Emission Designator

FCC Rule	Frequency Band	Frequency Range (MHz)	Type of Modulation	Maximum Conducted power (W)	Emission Designator
Part 22	WCDMA Band V	826.4 ~ 846.6	BPSK	0.2518	4M16F9W
Part 24	WCDMA Band II	1852.4 ~ 1907.6	BPSK	0.2818	4M16F9W
Part 27	WCDMA Band IV	1712.4 ~ 1752.6	BPSK	0.2685	4M17F9W

1.7 Testing Location

Sporton International Inc. (ShenZhen) is accredited to ISO/IEC 17025:2017 by American Association for Laboratory Accreditation with Certificate Number 5145.01.

Test Firm	Sporton International Inc. (ShenZhen)		
Test Site Location	1/F, 2/F, Bldg 5, Shiling Industrial Zone, Xinwei Village, Xili, Nanshan, Shenzhen, 518055 People's Republic of China TEL: +86-755-86379589 FAX: +86-755-86379595		
Test Site No.	**Sporton Site No.**	**FCC Designation No.**	**FCC Test Firm Registration No.**
	TH01-SZ	CN1256	421272

Test Firm	Sporton International Inc. (ShenZhen)		
Test Site Location	101, 1st Floor, Block B, Building 1, No. 2, Tengfeng 4th Road, Fenghuang Community, Fuyong Street, Baoan District, Shenzhen City, Guangdong Province 518103 People's Republic of China TEL: +86-755-86066985		
Test Site No.	**Sporton Site No.**	**FCC Designation No.**	**FCC Test Firm Registration No.**
	03CH03-SZ	CN1256	421272

1.8 Test Software

Item	Site	Manufacturer	Name	Version
1.	03CH03-SZ	AUDIX	E3	6.2009-8-24

1.9 Applicable Standards

According to the specifications of the manufacturer, the EUT must comply with the requirements of the following standards:

- 47 CFR Part 2, 22(H), 24(E), 27(L)
- ANSI C63.26-2015
- FCC KDB 971168 D01 Power Meas. License Digital Systems v03r01
- FCC KDB 412172 D01 Determining ERP and EIRP v01r01

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, recorded in a separate test report.

2 Test Configuration of Equipment Under Test

2.1 Test Mode

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

Radiated measurements were performed with rotating EUT in different three orthogonal test planes to find the maximum emission.

Radiated emissions were investigated as following frequency range:

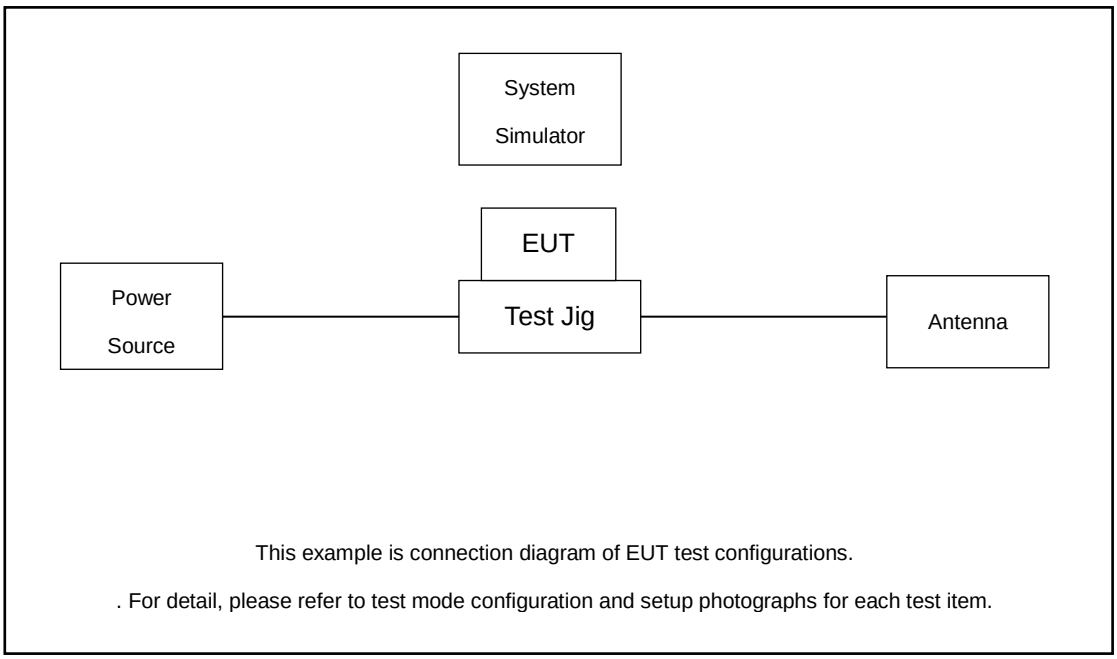
1. 30 MHz to 9000 MHz for GSM850 and WCDMA Band V.
2. 30 MHz to 18000 MHz for WCDMA Band IV.
3. 30 MHz to 19100 MHz for GSM1900 and WCDMA Band II.

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**
WCDMA Band V	■ RMC 12.2Kbps Link	■ RMC 12.2Kbps Link
WCDMA Band II	■ RMC 12.2Kbps Link	■ RMC 12.2Kbps Link
WCDMA Band IV	■ RMC 12.2Kbps Link	■ RMC 12.2Kbps Link

2.2 Connection Diagram of Test System



The EUT has been configuration operated in a manner tended to maximize its emission characteristics in a typical application.

2.3 Support Unit used in test configuration

Item	Equipment	Trade Name	Model No.	FCC ID	Data Cable	Power Cord
1.	System Simulator	R&S	CMU 200	N/A	N/A	Unshielded, 1.8 m
2.	System Simulator	Agilent	E5515C	N/A	N/A	Unshielded, 1.8 m
3.	Antenna	N/A	N/A	N/A	N/A	N/A
4.	Adapter	N/A	N/A	N/A	N/A	N/A
5.	Test Jig	N/A	N/A	N/A	N/A	N/A

2.4 Measurement Results Explanation Example

For all conducted test items:

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

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

Offset = RF cable loss + attenuator factor.

The following shows an offset computation example with RF cable loss 4.0 dB and a 10dB attenuator.

Example :

Offset(dB) = RF cable loss(dB) + attenuator factor(dB).

= 4.0 + 10 = 14.0 (dB)

2.5 Frequency List of Low/Middle/High Channels

Frequency List				
Band	**Channel/Frequency(MHz)**	**Lowest**	**Middle**	**Highest**
WCDMA Band V	Channel	4132	4182	4233
	Frequency	826.4	836.4	846.6
WCDMA Band II	Channel	9262	9400	9538
	Frequency	1852.4	1880.0	1907.6
WCDMA Band IV	Channel	1312	1413	1513
	Frequency	1712.4	1732.6	1752.6

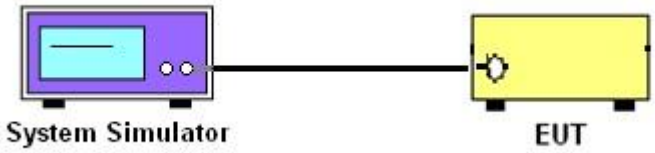
3 Conducted Test Result

3.1 Measuring Instruments

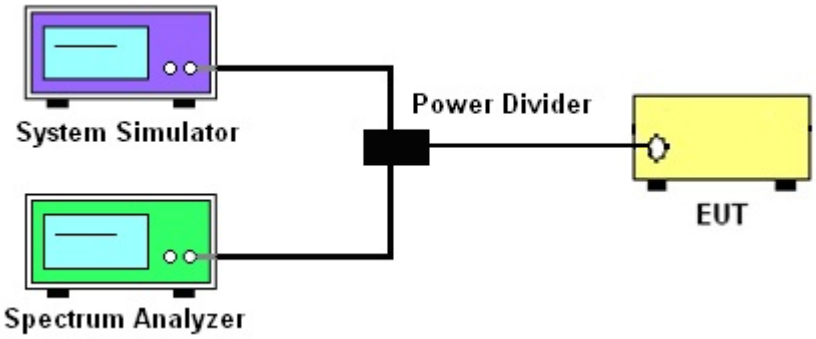
See list of measuring instruments of this test report.

3.2 Test Setup

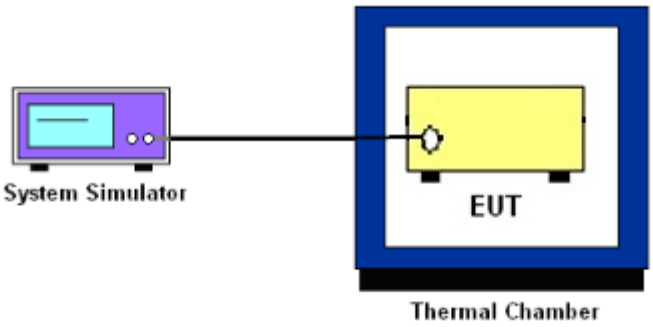
3.2.1 Conducted Output Power



3.2.2 Peak-to-Average Ratio, Occupied Bandwidth, Conducted Band-Edge and Conducted Spurious Emission



3.2.3 Frequency Stability



3.3 Test Result of Conducted Test

Please refer to Appendix A.

3.4 Conducted Output Power and ERP/EIRP

3.4.1 Description of the Conducted Output Power and ERP/EIRP

A system simulator was used to establish communication with the EUT. Its parameters were set to enforce EUT transmitting at the maximum power. The measured power in the radio frequency on the transmitter output terminals shall be reported.

The ERP of mobile transmitters must not exceed 7 Watts for GSM850 and WCDMA Band V.

The EIRP of mobile transmitters must not exceed 2 Watts for GSM1900 and WCDMA Band II.

The EIRP of mobile transmitters must not exceed 1 Watts for WCDMA Band IV.

According to KDB 412172 D01 Power Approach,

EIRP = $P_T + G_T – L_C$, 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

3.4.2 Test Procedures

1. The testing follows ANSI C63.26 Section 5.2
2. The transmitter output port was connected to the system simulator.
3. Set EUT at maximum power through the system simulator.
4. Select lowest, middle, and highest channels for each band and different modulation.
5. Measure and record the power level from the system simulator.

3.5 Peak-to-Average Ratio

3.5.1 Description of the PAR Measurement

The peak-to-average ratio (PAR) of the transmission may not exceed 13 dB.

3.5.2 Test Procedures

1. The testing follows ANSI C63.26 Section 5.2.3.4 (CCDF).
2. The EUT was connected to spectrum and system simulator via a power divider.
3. Set the CCDF (Complementary Cumulative Distribution Function) option in spectrum analyzer.
4. The highest RF powers were measured and recorded the maximum PAPR level associated with a probability of 0.1 %.
5. Record the deviation as Peak to Average Ratio.

3.6 99% Occupied Bandwidth and 26dB Bandwidth Measurement

3.6.1 Description of 99% Occupied Bandwidth and 26dB Bandwidth Measurement

The occupied bandwidth is the width of a frequency band such that, below the lower and above the upper frequency limits, the mean powers emitted are each equal to a specified percentage 0.5% of the total mean transmitted power.

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.

3.6.2 Test Procedures

1. The testing follows ANSI C63.26 Section 5.4
2. The EUT was connected to spectrum analyzer and system simulator via a power divider.
3. The spectrum analyzer center frequency is set to the nominal EUT channel center frequency. The span range for the spectrum analyzer shall be between two and five times the anticipated OBW.
4. The nominal resolution bandwidth (RBW) shall be in the range of 1 to 5 % of the anticipated OBW, and the VBW shall be at least 3 times the RBW.
5. Set the detection mode to peak, and the trace mode to max hold.
6. Determine the reference value: Set the EUT to transmit a modulated signal. Allow the trace to stabilize. Set the spectrum analyzer marker to the highest level of the displayed trace.
   (this is the reference value)
7. Determine the “-26 dB down amplitude” as equal to (Reference Value – X).
8. Place two markers, one at the lowest and the other at the highest frequency of the envelope of the spectral display such that each marker is at or slightly below the “–X dB down amplitude” determined in step 6. If a marker is below this “-X dB down amplitude” value it shall be placed as close as possible to this value. The OBW is the positive frequency difference between the two markers.
9. Use the 99 % power bandwidth function of the spectrum analyzer and report the measured bandwidth.

3.7 Conducted Band Edge

3.7.1 Description of Conducted Band Edge Measurement

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.

3.7.2 Test Procedures

1. The testing follows ANSI C63.26 section 5.7
2. The EUT was connected to the spectrum analyzer and system simulator via a power divider.
3. The RF output of EUT was connected to the spectrum analyzer by an RF cable and attenuator. The path loss was compensated to the results for each measurement.
4. The band edges of low and high channels for the highest RF powers were measured.
5. The RF fundamental frequency should be excluded against the limit line in the operating frequency band.
6. The limit line is derived from 43 + 10log(P) dB below the transmitter power P(Watts)

3.8 Conducted Spurious Emission

3.8.1 Description of Conducted Spurious Emission Measurement

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.

It is measured by means of a calibrated spectrum analyzer and scanned from 30 MHz up to a frequency including its 10th harmonic.

3.8.2 Test Procedures

1. The testing follows ANSI C63.26 section 5.7
2. The EUT was connected to the spectrum analyzer and system simulator via a power divider.
3. The RF output of EUT was connected to the spectrum analyzer by an RF cable and attenuator. The path loss was compensated to the results for each measurement.
4. The middle channel for the highest RF power within the transmitting frequency was measured.
5. The conducted spurious emission for the whole frequency range was taken.
6. The RF fundamental frequency should be excluded against the limit line in the operating frequency band.
7. The limit line is derived from 43 + 10log(P) dB below the transmitter power P(Watts)

3.9 Frequency Stability

3.9.1 Description of Frequency Stability Measurement

The frequency stability shall be measured by variation of ambient temperature and variation of primary supply voltage to ensure that the fundamental emission stays within the authorized frequency block. The frequency stability of the transmitter shall be maintained within ±0.00025% (±2.5ppm) of the center frequency.

3.9.2 Test Procedures for Temperature Variation

1. The testing follows ANSI C63.26 section 5.6.4
2. The EUT was set up in the thermal chamber and connected with the system simulator.
3. 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.
4. 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.

3.9.3 Test Procedures for Voltage Variation

1. The testing follows ANSI C63.26 section 5.6.5
2. The EUT was placed in a temperature chamber at 20±5°C and connected with the system simulator.
3. The power supply voltage to the EUT was varied from 85% to 115% of the nominal value for other than hand carried battery equipment.
4. For hand carried, battery powered equipment, reduce the primary ac or dc supply voltage to the battery operating end point, which shall be specified by the manufacturer.
5. The variation in frequency was measured for the worst case.

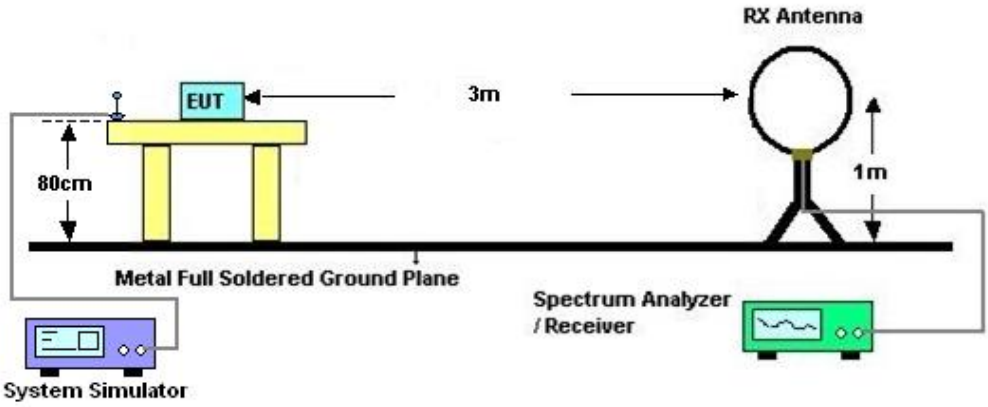
4 Radiated Test Items

4.1 Measuring Instruments

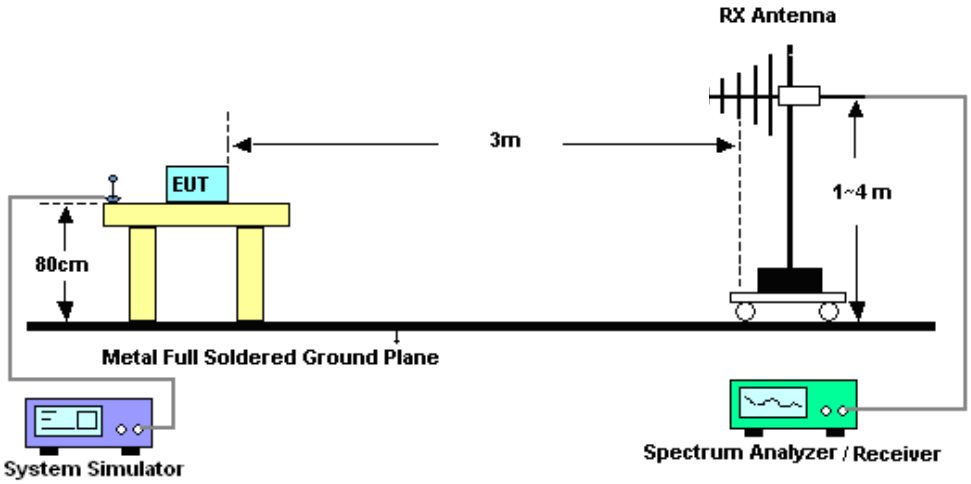
See list of measuring instruments of this test report.

4.2 Test Setup

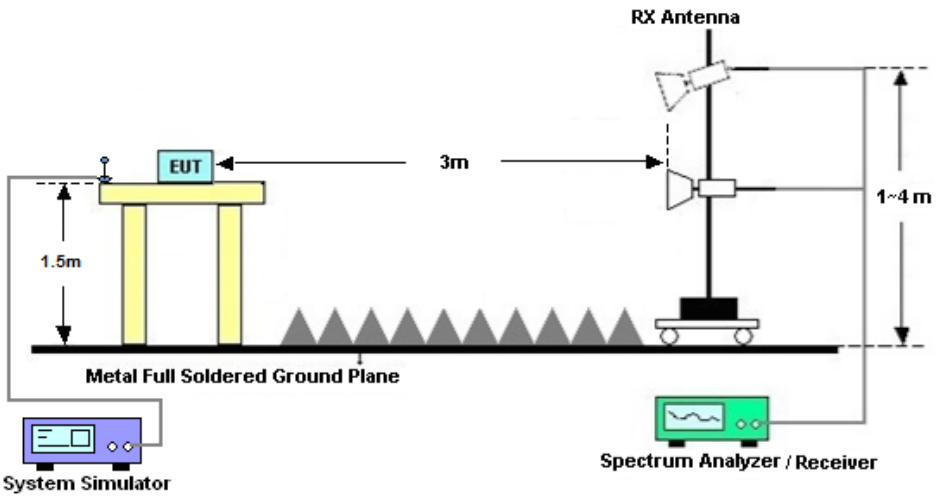
4.2.1 For radiated test below 30MHz



4.2.2 For radiated test from 30MHz to 1GHz



4.2.3 For radiated test above 1GHz



4.3 Test Result of Radiated Test

The low frequency, which started from 9 kHz to 30MHz, was pre-scanned and the result which was 20dB lower than the limit line was not reported.

Please refer to Appendix B.

4.4 Field Strength of Spurious Radiation Measurement

4.4.1 Description of Field Strength of Spurious Radiated Measurement

The power of any emission outside of the authorized operating frequency ranges must be attenuated below the transmitter power (P) by a factor of at least 43 + 10 log (P) dB. The spectrum is scanned from 30 MHz up to a frequency including its 10th harmonic.

4.4.2 Test Procedures

1. The testing follows ANSI C63.26 Section 5.5
2. The EUT was placed on a rotatable wooden table 0.8 meters for frequency below 1GHz and 1.5 meter for frequency above 1GHz above the ground.
3. The EUT was set 3 meters from the receiving antenna, which was mounted on the antenna tower.
4. The table was rotated 360 degrees to determine the position of the highest spurious emission.
5. The height of the receiving antenna is varied between one meter and four meters to search for the maximum spurious emission for both horizontal and vertical polarizations.
6. Make the measurement with the spectrum analyzer's RBW = 1MHz, VBW = 3MHz, taking record of maximum spurious emission.
7. A horn antenna was substituted in place of the EUT and was driven by a signal generator.
8. Tune the output power of signal generator to the same emission level with EUT maximum spurious emission.
9. Taking the record of output power at antenna port.
10. Repeat step 7 to step 8 for another polarization.
11. EIRP (dBm) = S.G. Power – Tx Cable Loss + Tx Antenna Gain
12. ERP (dBm) = EIRP - 2.15
13. The RF fundamental frequency should be excluded against the limit line in the operating frequency band.
14. The limit line is derived from 43 + 10log(P) dB below the transmitter power P(Watts)

5 List of Measuring Equipment

Instrument	Manufacturer	Model No.	Serial No.	Characteristics	Calibration Date	Test Date	Due Date	Remark
Spectrum Analyzer	R&S	FSV40	101915	10Hz~40GHz	Jul. 05, 2023	Mar. 27, 2024	Jul. 04, 2024	Conducted (TH01-SZ)
DC Power Supply	TTI	PL330P	290070	Max 32V，3A	Oct. 16, 2023	Mar. 27, 2024	Oct. 15, 2024	Conducted (TH01-SZ)
Power Divider	TOJOIN	PS-2SM-04 265	60.06.020.007 7	0.4GHz~26.5GHz	Dec. 25, 2023	Mar. 27, 2024	Dec. 24, 2024	Conducted (TH01-SZ)
Power Divider	SOLVANG TECHNOLOY	STI08-0055	-	Max 40GHz	Mar. 20, 2024	Mar. 27, 2024	Mar. 19, 2025	Conducted (TH01-SZ)
Thermal Chamber	Ten Billion Hongzhangroup	LP-150U	H2014081803	-40~+150°C	Jul. 05, 2023	Mar. 27, 2024	Jul. 04, 2024	Conducted (TH01-SZ)
EMI Test Receiver&SA	KEYSIGHT	N9038A	MY54450083	20Hz~8.4GHz	Apr. 09, 2024	Apr. 10, 2024	Apr. 08, 2025	Radiation (03CH03-SZ)
Loop Antenna	R&S	HFH2-Z2	100354	9kHz~30MHz	Jun. 28, 2022	Apr. 10, 2024	Jun. 27, 2024	Radiation (03CH03-SZ)
EXA Spectrum Anaiyzer	KEYSIGHT	N9010A	MY55150246	10Hz~44GHz;	Apr. 09, 2024	Apr. 10, 2024	Apr. 08, 2025	Radiation (03CH03-SZ
Bilog Antenna	TeseQ	CBL6112D	35408	30MHz-2GHz	Aug. 20, 2023	Apr. 10, 2024	Aug. 19, 2025	Radiation (03CH03-SZ)
Double Ridge Horn Antenna	SCHWARZBECK	BBHA9120D	9120D-1355	1GHz~18GHz	Apr. 09, 2024	Apr. 10, 2024	Apr. 08, 2025	Radiation (03CH03-SZ)
Amplifier	Burgeon	BPA-530	102211	0.01Hz ~3000MHz	Oct. 18, 2023	Apr. 10, 2024	Oct. 17, 2024	Radiation (03CH03-SZ)
HF Amplifier	MITEQ	TTA1840-35 -HG	1871923	18GHz~40GHz	Jul. 07, 2023	Apr. 10, 2024	Jul.06, 2024	Radiation (03CH03-SZ)
SHF-EHF Horn	com-power	AH-840	101071	18Ghz-40GHz	Apr. 09, 2024	Apr. 10, 2024	Apr. 08, 2025	Radiation (03CH03-SZ)
Amplifier	Agilent Technologies	83017A	MY39501302	500MHz~26.5GHz	Dec. 27, 2023	Apr. 10, 2024	Dec. 26, 2024	Radiation (03CH03-SZ)
AC Power Source	Chroma	61601	61601000272 9	N/A	Oct. 18, 2023	Apr. 10, 2024	Oct. 17, 2024	Radiation (03CH03-SZ)
Turn Table	EM	EM1000	N/A	0~360 degree	NCR	Apr. 10, 2024	NCR	Radiation (03CH03-SZ)
Antenna Mast	EM	EM1000	N/A	1 m~4 m	NCR	Apr. 10, 2024	NCR	Radiation (03CH03-SZ)

NCR: No Calibration Required

6 Measurement Uncertainty

The measurement uncertainties shown below were calculated in accordance with the requirements of ANSI 63.26-2015. All the measurement uncertainty value were shown with a coverage K=2 to indicate 95% level of confidence. The measurement data show herein meets or exceeds the CISPR measurement uncertainty values specified in CISPR 16-4-2 and can be compared directly to specified limit to determine compliance.

Uncertainty of Conducted Measurement

Test Item	Uncertainty
Conducted Spurious Emission & Bandedge	±1.34 dB
Occupied Channel Bandwidth	±0.012 MHz
Conducted Power	±1.34 dB
Peak to Average Ratio	±1.34 dB
Frequency Stability	±1.3 Hz

Uncertainty of Radiated Emission Measurement (30 MHz ~ 1000 MHz)

Measuring Uncertainty for a Level of Confidence of 95% (U = 2Uc(y))	3.0 dB

Uncertainty of Radiated Emission Measurement (1 GHz ~ 18 GHz)

Measuring Uncertainty for a Level of Confidence of 95% (U = 2Uc(y))	3.6 dB

Uncertainty of Radiated Emission Measurement (18 GHz ~ 40 GHz)

Measuring Uncertainty for a Level of Confidence of 95% (U = 2Uc(y))	3.8 dB

---------- THE END ----------

Appendix A. Test Results of Conducted Test

Test Engineer :	Lorenzo Liu	Temperature :	24~26℃
		Relative Humidity :	50~53%

Conducted Output Power(Average power)

Band		WCDMA V			ERP(W)		
TX Channel		4132	4182	4233			
Rx Channel		4357	4407	4458			
Frequency (MHz)		826.4	836.4	846.6	L	M	H
3GPP Rel 99	RMC 12.2Kbps	24.01	23.94	24.00	0.3062	0.3013	0.3055
3GPP Rel 6	HSDPA Subtest-1	23.06	22.98	23.00	0.2460	0.2415	0.2427
3GPP Rel 6	HSDPA Subtest-2	23.04	22.99	22.97	0.2449	0.2421	0.2410
3GPP Rel 6	HSDPA Subtest-3	22.55	22.49	22.51	0.2188	0.2158	0.2168
3GPP Rel 6	HSDPA Subtest-4	22.54	22.48	22.48	0.2183	0.2153	0.2153
3GPP Rel 8	DC-HSDPA Subtest-1	22.96	22.89	22.95	0.2404	0.2366	0.2399
3GPP Rel 8	DC-HSDPA Subtest-2	22.98	22.89	22.93	0.2415	0.2366	0.2388
3GPP Rel 8	DC-HSDPA Subtest-3	22.50	22.46	22.38	0.2163	0.2143	0.2104
3GPP Rel 8	DC-HSDPA Subtest-4	22.48	22.41	22.45	0.2153	0.2118	0.2138
3GPP Rel 6	HSUPA Subtest-1	21.01	20.98	21.01	0.1535	0.1524	0.1535
3GPP Rel 6	HSUPA Subtest-2	21.03	21.00	20.97	0.1542	0.1531	0.1521
3GPP Rel 6	HSUPA Subtest-3	22.03	21.98	22.00	0.1941	0.1919	0.1928
3GPP Rel 6	HSUPA Subtest-4	20.54	20.50	20.53	0.1377	0.1365	0.1374
3GPP Rel 6	HSUPA Subtest-5	22.00	22.00	22.00	0.1928	0.1928	0.1928
3GPP Rel 7	HSPA+ (16QAM) Subtest-1	20.98	20.93	20.85	0.1524	0.1507	0.1479

Band		WCDMA IV			EIRP(W)		
TX Channel		1312	1413	1513			
Rx Channel		1537	1638	1738			
Frequency (MHz)		1712.4	1732.6	1752.6	L	M	H
3GPP Rel 99	RMC 12.2Kbps	24.15	24.29	24.25	0.5188	0.5358	0.5309
3GPP Rel 6	HSDPA Subtest-1	23.15	23.22	23.30	0.4121	0.4188	0.4266
3GPP Rel 6	HSDPA Subtest-2	23.11	23.23	23.31	0.4083	0.4198	0.4276
3GPP Rel 6	HSDPA Subtest-3	22.66	22.78	22.84	0.3681	0.3784	0.3837
3GPP Rel 6	HSDPA Subtest-4	22.61	22.73	22.80	0.3639	0.3741	0.3802
3GPP Rel 8	DC-HSDPA Subtest-1	23.04	23.16	23.26	0.4018	0.4130	0.4227
3GPP Rel 8	DC-HSDPA Subtest-2	23.04	23.11	23.27	0.4018	0.4083	0.4236
3GPP Rel 8	DC-HSDPA Subtest-3	22.63	22.70	22.77	0.3656	0.3715	0.3776
3GPP Rel 8	DC-HSDPA Subtest-4	22.55	22.66	22.69	0.3589	0.3681	0.3707
3GPP Rel 6	HSUPA Subtest-1	21.07	21.27	21.29	0.2553	0.2673	0.2685
3GPP Rel 6	HSUPA Subtest-2	21.11	21.26	21.29	0.2576	0.2667	0.2685
3GPP Rel 6	HSUPA Subtest-3	22.12	22.24	22.33	0.3251	0.3342	0.3412
3GPP Rel 6	HSUPA Subtest-4	20.75	20.76	20.88	0.2371	0.2377	0.2443
3GPP Rel 6	HSUPA Subtest-5	22.10	22.20	22.20	0.3236	0.3311	0.3311
3GPP Rel 7	HSPA+ (16QAM) Subtest-1	21.17	21.10	21.35	0.2612	0.2570	0.2723

Band		WCDMA II			EIRP(W)		
TX Channel		9262	9400	9538			
Rx Channel		9662	9800	9938			
Frequency (MHz)		1852.4	1880	1907.6	L	M	H
3GPP Rel 99	RMC 12.2Kbps	23.81	24.16	24.50	0.6039	0.6546	0.7079
3GPP Rel 6	HSDPA Subtest-1	23.24	23.17	23.48	0.5297	0.5212	0.5598
3GPP Rel 6	HSDPA Subtest-2	23.21	23.09	23.46	0.5260	0.5117	0.5572
3GPP Rel 6	HSDPA Subtest-3	22.77	22.66	22.97	0.4753	0.4634	0.4977
3GPP Rel 6	HSDPA Subtest-4	22.70	22.62	22.98	0.4677	0.4592	0.4989
3GPP Rel 8	DC-HSDPA Subtest-1	23.21	23.09	23.46	0.5260	0.5117	0.5572
3GPP Rel 8	DC-HSDPA Subtest-2	23.20	23.03	23.42	0.5248	0.5047	0.5521
3GPP Rel 8	DC-HSDPA Subtest-3	22.76	22.59	22.88	0.4742	0.4560	0.4875
3GPP Rel 8	DC-HSDPA Subtest-4	22.62	22.60	22.92	0.4592	0.4571	0.4920
3GPP Rel 6	HSUPA Subtest-1	21.23	21.14	21.47	0.3334	0.3266	0.3524
3GPP Rel 6	HSUPA Subtest-2	21.19	21.12	21.44	0.3304	0.3251	0.3499
3GPP Rel 6	HSUPA Subtest-3	22.24	22.18	22.53	0.4207	0.4150	0.4498
3GPP Rel 6	HSUPA Subtest-4	20.75	20.65	21.02	0.2985	0.2917	0.3177
3GPP Rel 6	HSUPA Subtest-5	22.20	22.00	22.40	0.4169	0.3981	0.4365
3GPP Rel 7	HSPA+ (16QAM) Subtest-1	21.17	21.10	21.35	0.3289	0.3236	0.3428

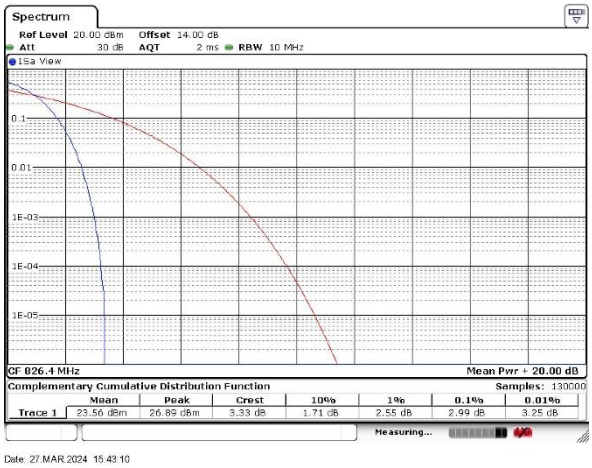
A2. WCDMA

Peak-to-Average Ratio

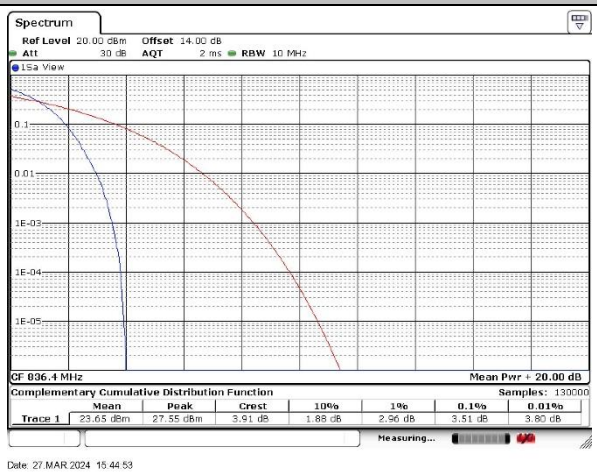
Mode	WCDMA Band V(dB)	WCDMA Band II(dB)	WCDMA Band IV(dB)	Limit: 13dB
Mod.	RMC 12.2Kbps	RMC 12.2Kbps	RMC 12.2Kbps	Result
Lowest CH	2.99	2.61	2.41	PASS
Middle CH	3.51	2.61	2.90	
Highest CH	3.22	2.49	2.58	

WCDMA Band V (RMC 12.2Kbps)

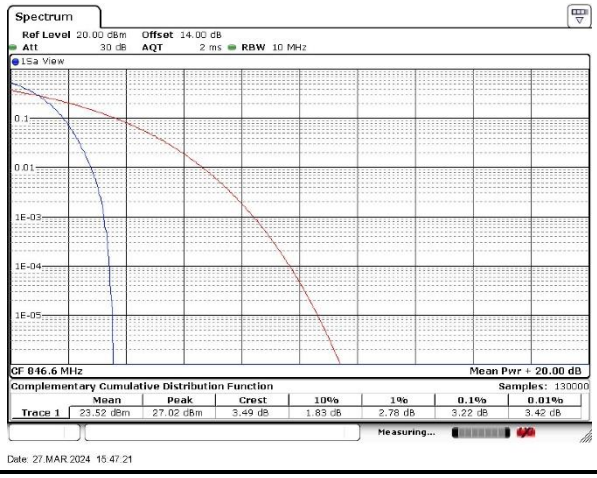
Lowest Channel



Middle Channel

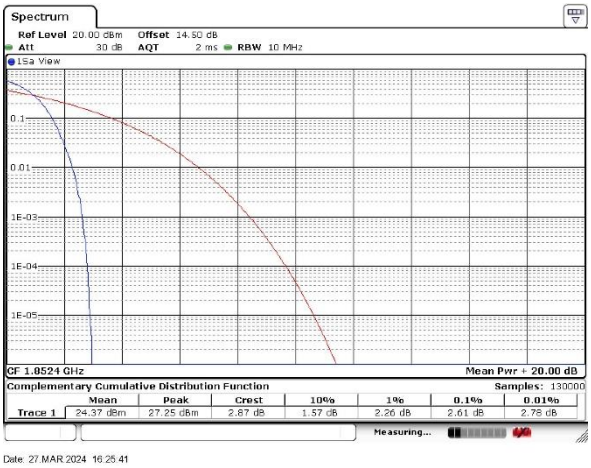


Highest Channel

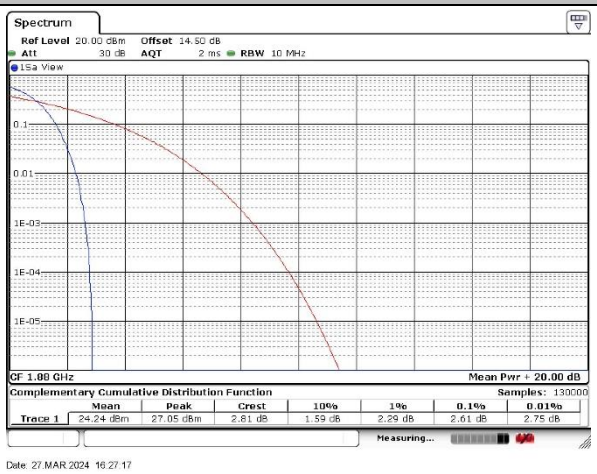


WCDMA Band II (RMC 12.2Kbps)

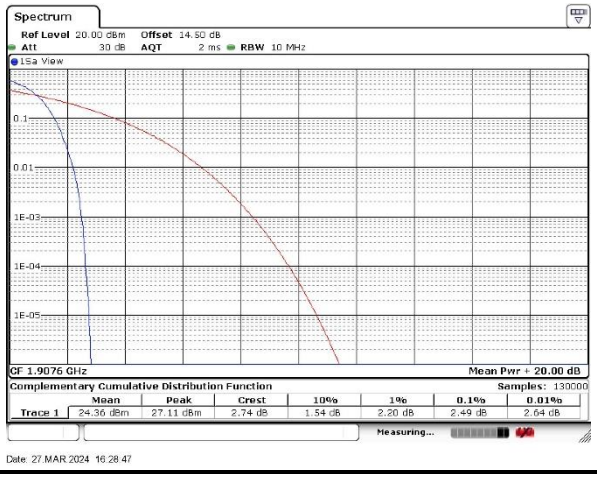
Lowest Channel

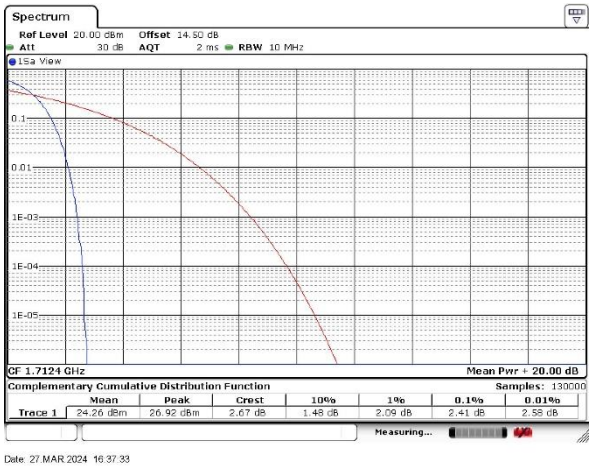
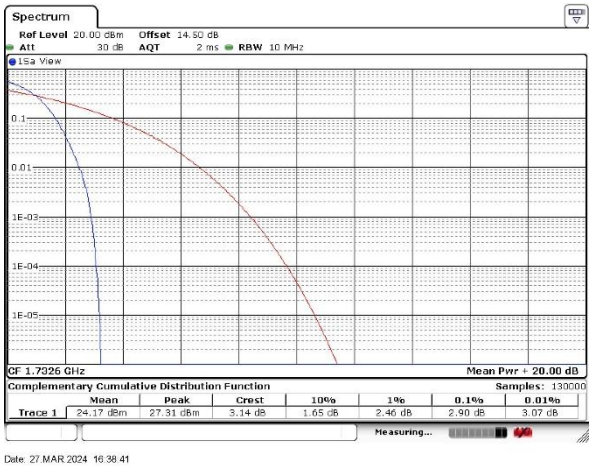
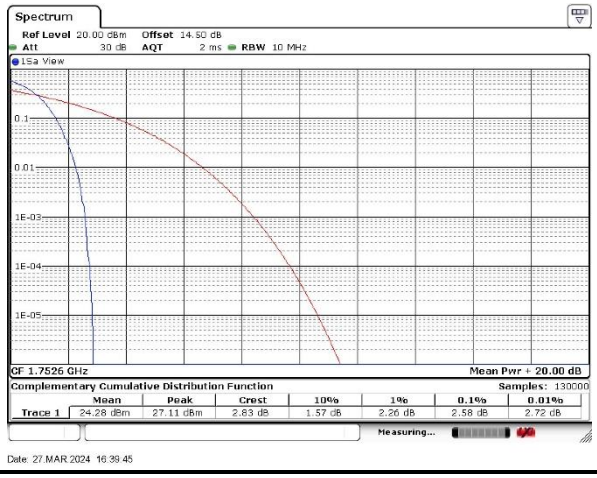


Middle Channel



Highest Channel



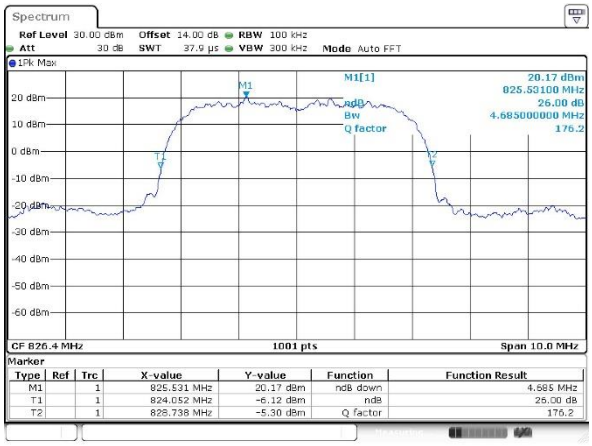
WCDMA Band IV (RMC 12.2Kbps)	
Lowest Channel	
	
Middle Channel	
	
Highest Channel	
	

26dB Bandwidth

Mode	WCDMA Band V(MHz)	WCDMA Band II(MHz)	WCDMA Band IV(MHz)
Mod.	RMC 12.2Kbps	RMC 12.2Kbps	RMC 12.2Kbps
Lowest CH	4.68	4.72	4.75
Middle CH	4.67	4.71	4.71
Highest CH	4.71	4.74	4.74

WCDMA Band V (RMC 12.2Kbps)

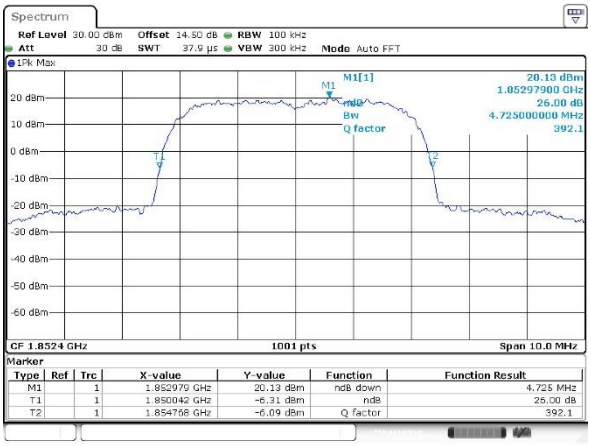
Lowest Channel



Type	Ref	Trc	X-value	Y-value	Function	Function Result
M1		1	825.531 MHz	20.17 dBm	ndB down	4.685 MHz
T1		1	824.052 MHz	-6.12 dBm	ndB	26.00 dB
T2		1	828.738 MHz	-5.30 dBm	Q factor	176.2

Date: 27.MAR.2024 15:41:44

Lowest Channel

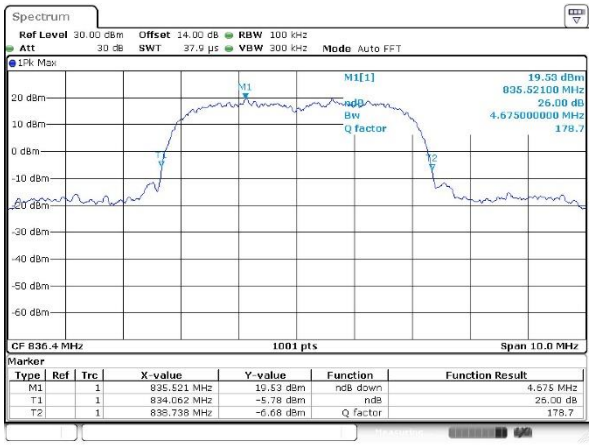


Type	Ref	Trc	X-value	Y-value	Function	Function Result
M1		1	1.852979 GHz	20.13 dBm	ndB down	4.725 MHz
T1		1	1.850042 GHz	-6.31 dBm	ndB	26.00 dB
T2		1	1.854768 GHz	-6.09 dBm	Q factor	392.1

Date: 27.MAR.2024 16:21:03

WCDMA Band II (RMC 12.2Kbps)

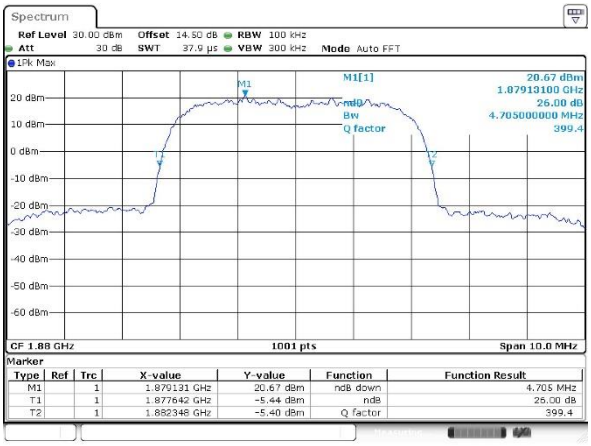
Middle Channel



Type	Ref	Trc	X-value	Y-value	Function	Function Result
M1		1	835.521 MHz	19.53 dBm	ndB down	4.675 MHz
T1		1	834.062 MHz	-5.78 dBm	ndB	26.00 dB
T2		1	838.738 MHz	-6.68 dBm	Q factor	178.7

Date: 27.MAR.2024 15:43:40

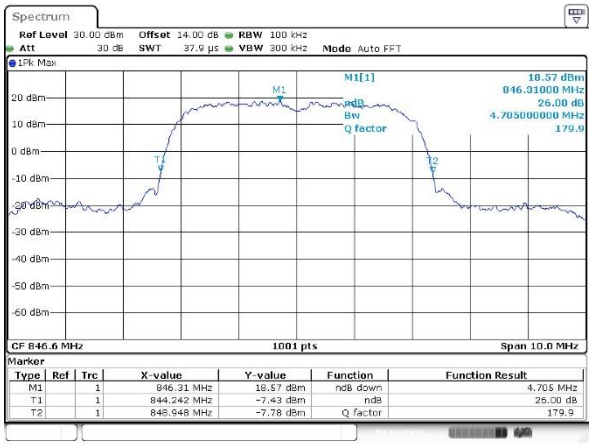
Middle Channel



Type	Ref	Trc	X-value	Y-value	Function	Function Result
M1		1	1.879131 GHz	20.67 dBm	ndB down	4.705 MHz
T1		1	1.877642 GHz	-5.44 dBm	ndB	26.00 dB
T2		1	1.882348 GHz	-5.40 dBm	Q factor	399.4

Date: 27.MAR.2024 16:26:10

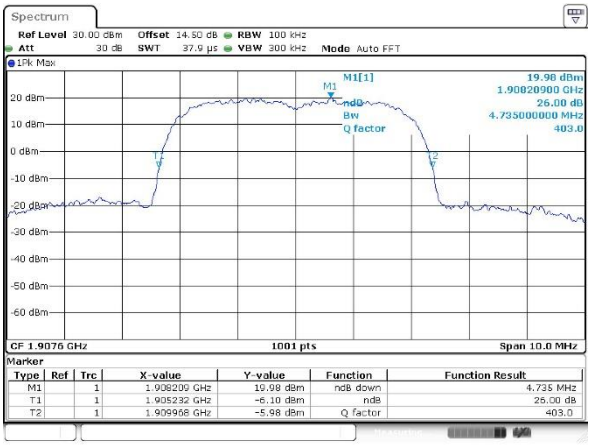
Highest Channel



Type	Ref	Trc	X-value	Y-value	Function	Function Result
M1		1	846.31 MHz	18.57 dBm	ndB down	4.705 MHz
T1		1	844.242 MHz	-7.43 dBm	ndB	26.00 dB
T2		1	848.948 MHz	-7.78 dBm	Q factor	179.9

Date: 27.MAR.2024 15:45:34

Highest Channel

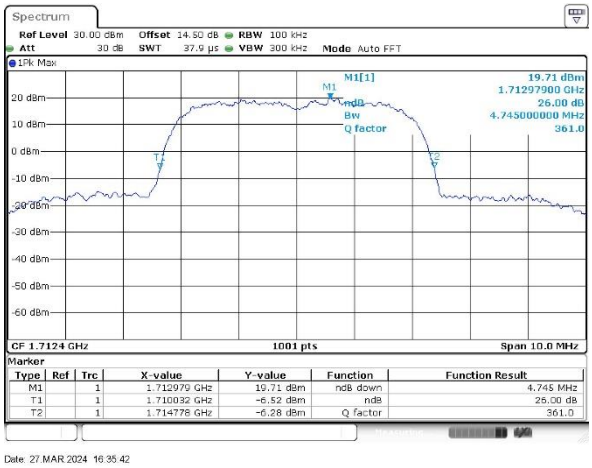


Type	Ref	Trc	X-value	Y-value	Function	Function Result
M1		1	1.908209 GHz	19.98 dBm	ndB down	4.735 MHz
T1		1	1.905232 GHz	-6.10 dBm	ndB	26.00 dB
T2		1	1.909968 GHz	-5.98 dBm	Q factor	403.0

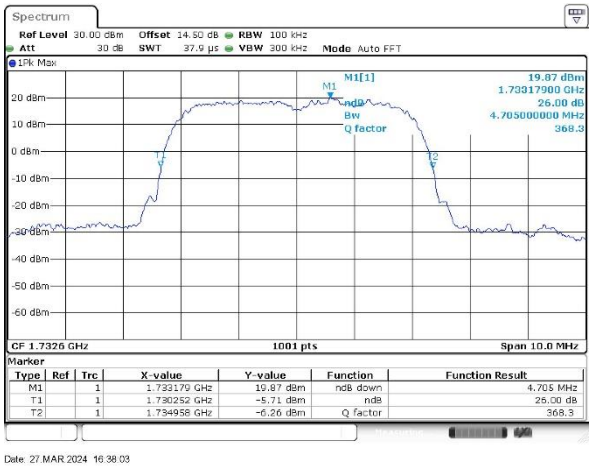
Date: 27.MAR.2024 16:27:44

WCDMA Band IV (RMC 12.2Kbps)

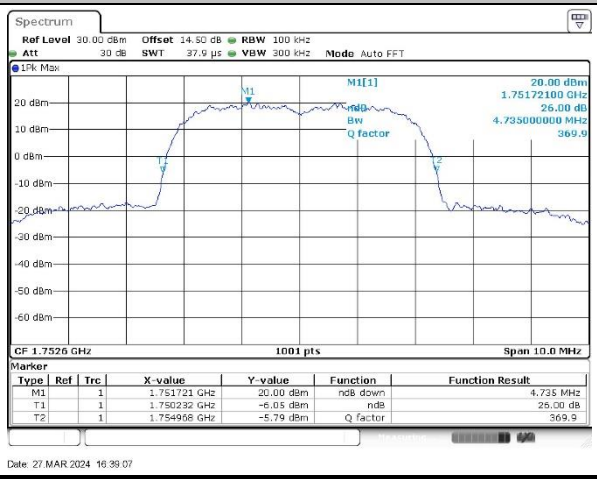
Lowest Channel



Middle Channel



Highest Channel

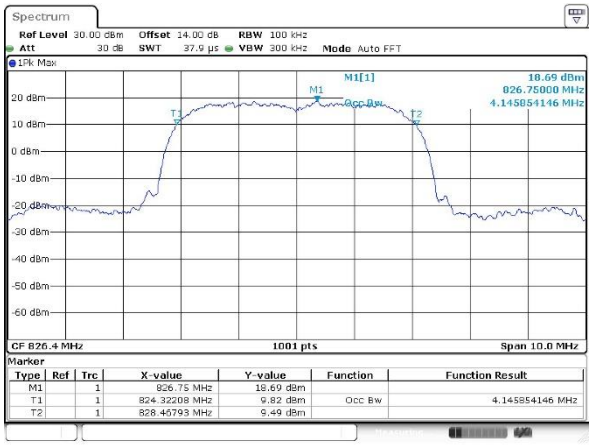


Occupied Bandwidth

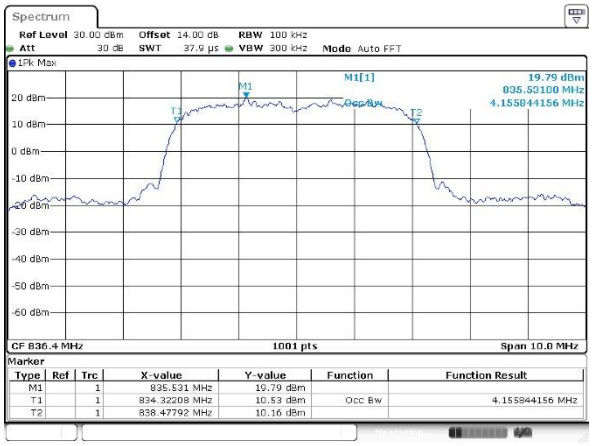
Mode	WCDMA Band V(MHz)	WCDMA Band II(MHz)	WCDMA Band IV(MHz)
Mod.	RMC 12.2Kbps	RMC 12.2Kbps	RMC 12.2Kbps
Lowest CH	4.15	4.16	4.17
Middle CH	4.16	4.14	4.15
Highest CH	4.14	4.16	4.16

WCDMA Band V (RMC 12.2Kbps)

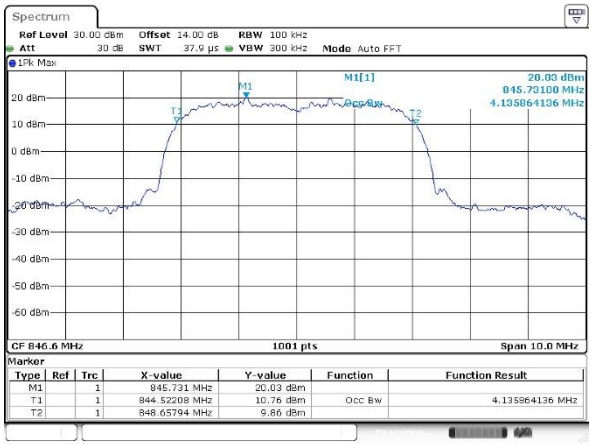
Lowest Channel



Middle Channel

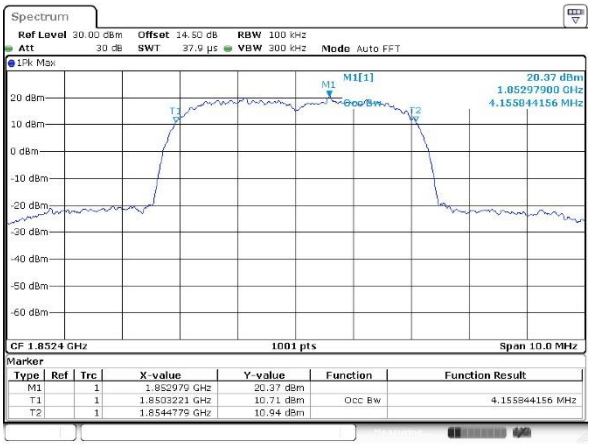


Highest Channel

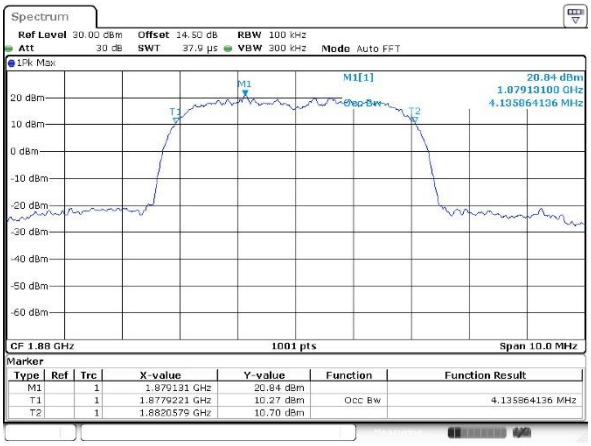


WCDMA Band II (RMC 12.2Kbps)

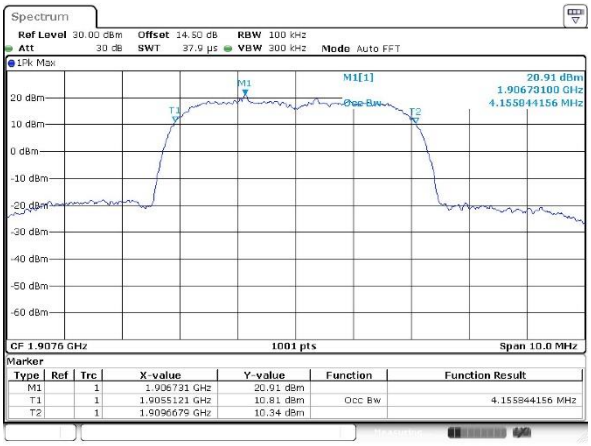
Lowest Channel



Middle Channel

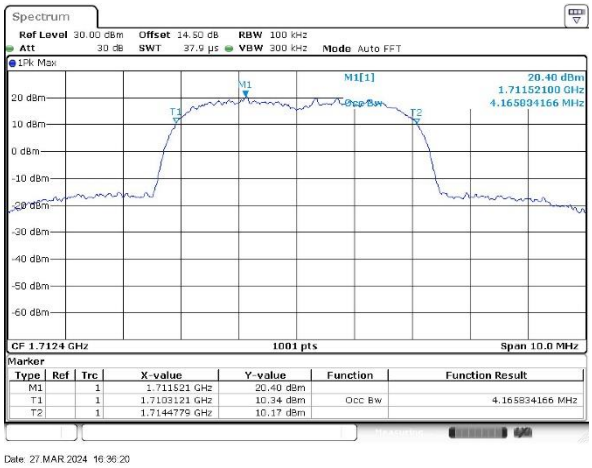


Highest Channel

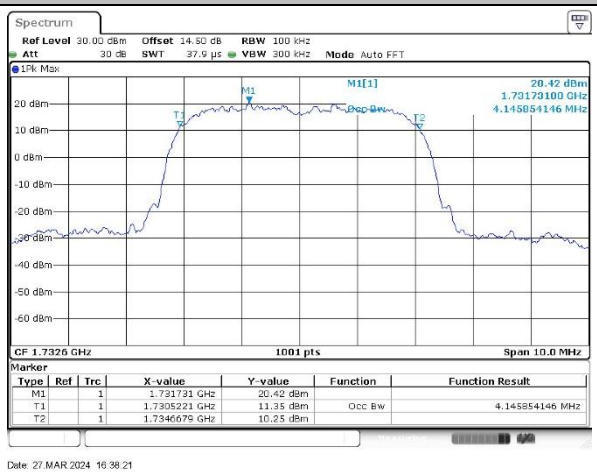


WCDMA Band IV (RMC 12.2Kbps)

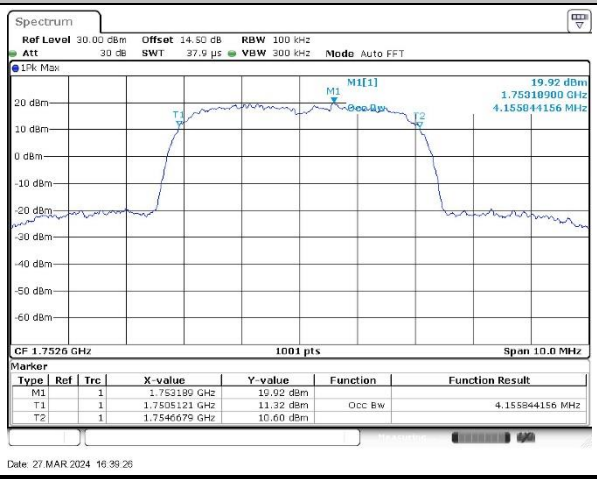
Lowest Channel



Middle Channel



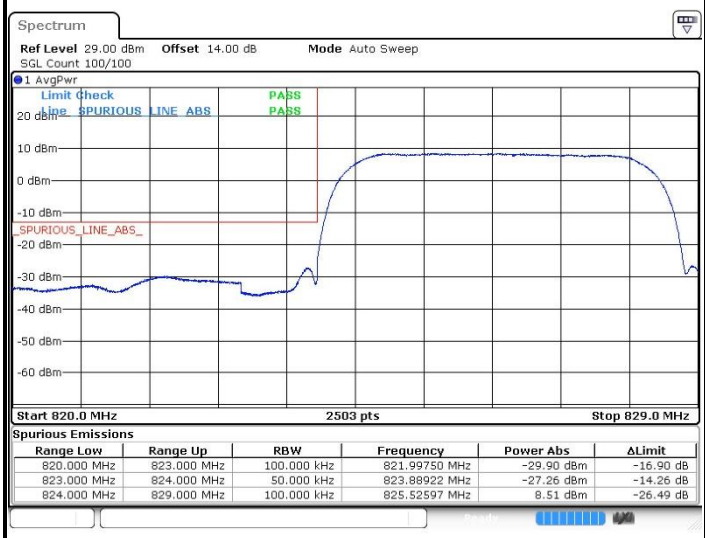
Highest Channel



Conducted Band Edge

WCDMA Band V (RMC 12.2Kbps)

Lowest Band Edge

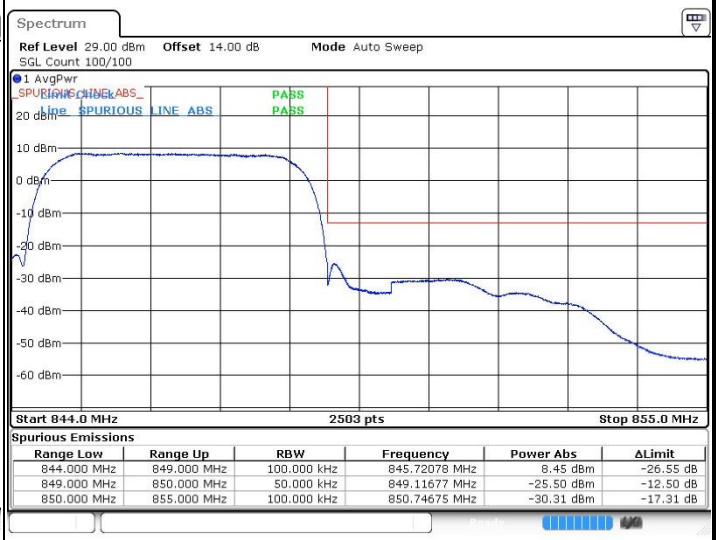


Spurious Emissions

Range Low	Range Up	RBW	Frequency	Power Abs	ΔLimit
820.000 MHz	823.000 MHz	100.000 kHz	821.99750 MHz	-29.90 dBm	-16.90 dB
823.000 MHz	824.000 MHz	50.000 kHz	823.88922 MHz	-27.26 dBm	-14.26 dB
824.000 MHz	829.000 MHz	100.000 kHz	825.52597 MHz	8.51 dBm	-26.49 dB

Date: 27.MAR.2024 15:42:42

Highest Band Edge



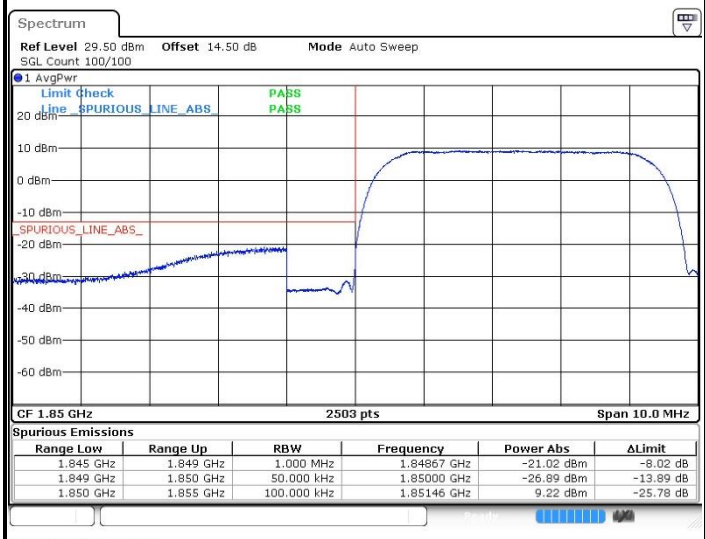
Spurious Emissions

Range Low	Range Up	RBW	Frequency	Power Abs	ΔLimit
844.000 MHz	849.000 MHz	100.000 kHz	845.72078 MHz	8.45 dBm	-26.55 dB
849.000 MHz	850.000 MHz	50.000 kHz	849.11677 MHz	-25.50 dBm	-12.50 dB
850.000 MHz	855.000 MHz	100.000 kHz	850.74675 MHz	-30.31 dBm	-17.31 dB

Date: 27.MAR.2024 15:46:45

WCDMA Band II (RMC 12.2Kbps)

Lowest Band Edge

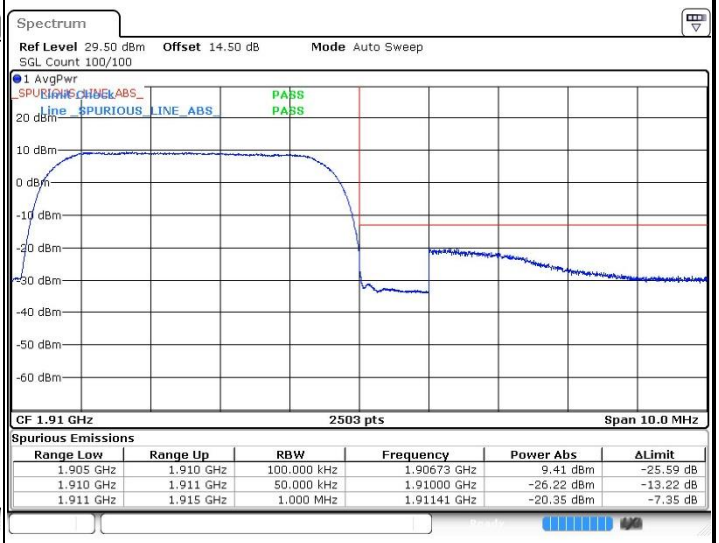


Spurious Emissions

Range Low	Range Up	RBW	Frequency	Power Abs	ΔLimit
1.845 GHz	1.849 GHz	1.000 MHz	1.84867 GHz	-21.02 dBm	-8.02 dB
1.849 GHz	1.850 GHz	50.000 kHz	1.85000 GHz	-26.89 dBm	-13.89 dB
1.850 GHz	1.855 GHz	100.000 kHz	1.85146 GHz	9.22 dBm	-25.78 dB

Date: 27.MAR.2024 16:23:59

Highest Band Edge



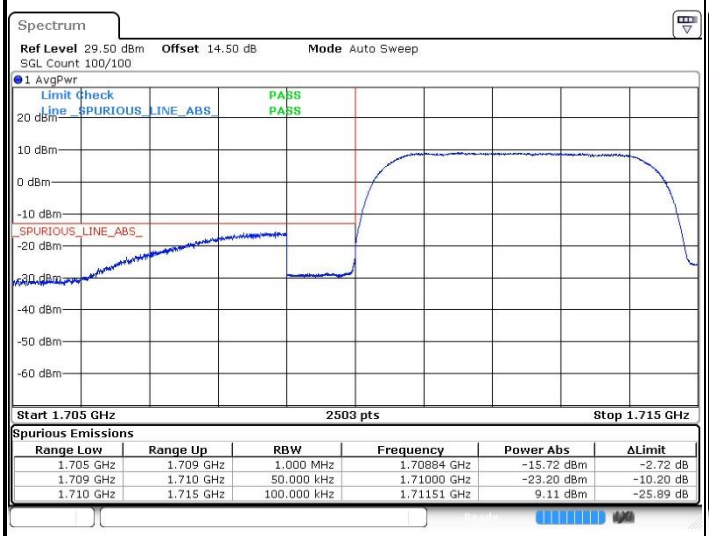
Spurious Emissions

Range Low	Range Up	RBW	Frequency	Power Abs	ΔLimit
1.905 GHz	1.910 GHz	100.000 kHz	1.90673 GHz	9.41 dBm	-25.59 dB
1.910 GHz	1.911 GHz	50.000 kHz	1.91000 GHz	-26.22 dBm	-13.22 dB
1.911 GHz	1.915 GHz	1.000 MHz	1.91141 GHz	-20.35 dBm	-7.35 dB

Date: 27.MAR.2024 16:29:26

WCDMA Band IV (RMC 12.2Kbps)

Lowest Band Edge

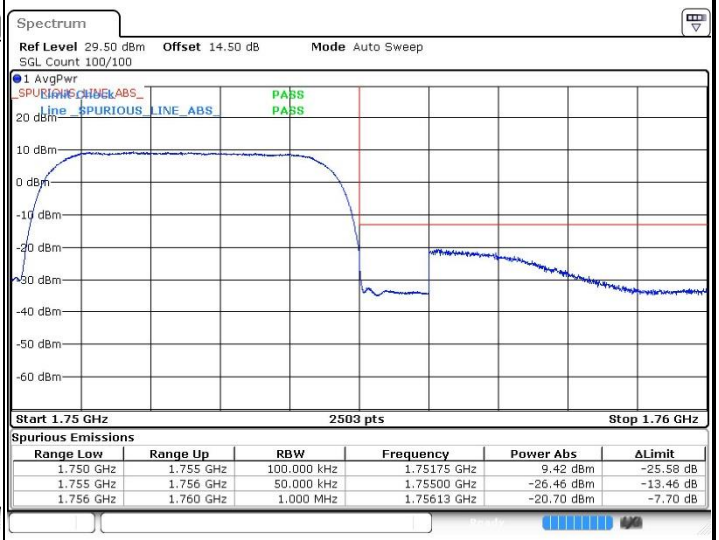


Spurious Emissions

Range Low	Range Up	RBW	Frequency	Power Abs	ΔLimit
1.705 GHz	1.709 GHz	1.000 MHz	1.70884 GHz	-15.72 dBm	-2.72 dB
1.709 GHz	1.710 GHz	50.000 kHz	1.71000 GHz	-23.20 dBm	-10.20 dB
1.710 GHz	1.715 GHz	100.000 kHz	1.71151 GHz	9.11 dBm	-25.89 dB

Date: 27.MAR.2024 16:37:08

Highest Band Edge



Spurious Emissions

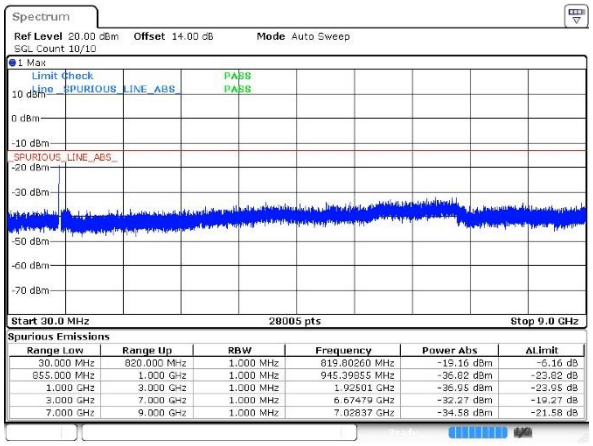
Range Low	Range Up	RBW	Frequency	Power Abs	ΔLimit
1.750 GHz	1.755 GHz	100.000 kHz	1.75175 GHz	9.42 dBm	-25.58 dB
1.755 GHz	1.756 GHz	50.000 kHz	1.75500 GHz	-26.46 dBm	-13.46 dB
1.756 GHz	1.760 GHz	1.000 MHz	1.75613 GHz	-20.70 dBm	-7.70 dB

Date: 27.MAR.2024 16:40:24

Conducted Spurious Emission

WCDMA Band V (RMC 12.2Kbps)

Lowest Channel

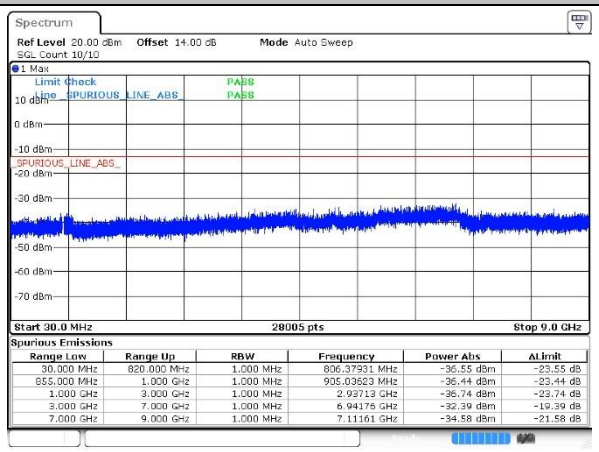


Spurious Emissions

Range Low	Range Up	RBW	Frequency	Power Abs	ΔLimit
30.000 MHz	820.000 MHz	1.000 MHz	819.80260 MHz	-19.16 dBm	-6.16 dB
855.000 MHz	1.000 GHz	1.000 MHz	945.39955 MHz	-36.82 dBm	-23.82 dB
1.000 GHz	3.000 GHz	1.000 MHz	1.92501 GHz	-36.95 dBm	-23.95 dB
3.000 GHz	7.000 GHz	1.000 MHz	6.67479 GHz	-32.27 dBm	-19.27 dB
7.000 GHz	9.000 GHz	1.000 MHz	7.02837 GHz	-34.58 dBm	-21.58 dB

Date: 27.MAR.2024 15:42:57

Middle Channel



Spurious Emissions

Range Low	Range Up	RBW	Frequency	Power Abs	ΔLimit
30.000 MHz	820.000 MHz	1.000 MHz	806.37931 MHz	-36.55 dBm	-23.55 dB
855.000 MHz	1.000 GHz	1.000 MHz	905.03623 MHz	-36.44 dBm	-23.44 dB
1.000 GHz	3.000 GHz	1.000 MHz	2.93713 GHz	-36.74 dBm	-23.74 dB
3.000 GHz	7.000 GHz	1.000 MHz	6.94176 GHz	-32.39 dBm	-19.39 dB
7.000 GHz	9.000 GHz	1.000 MHz	7.11161 GHz	-34.58 dBm	-21.58 dB

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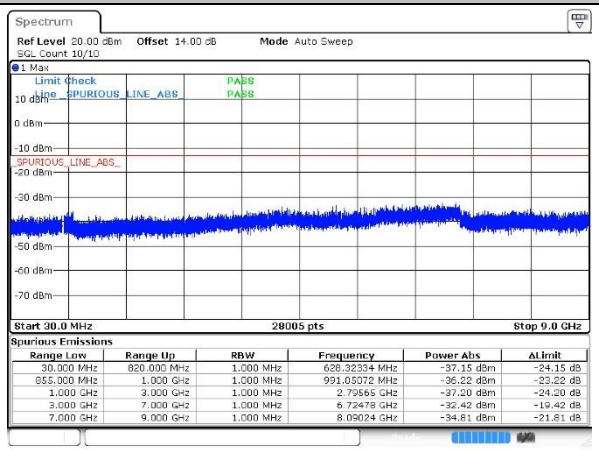
Highest Channel



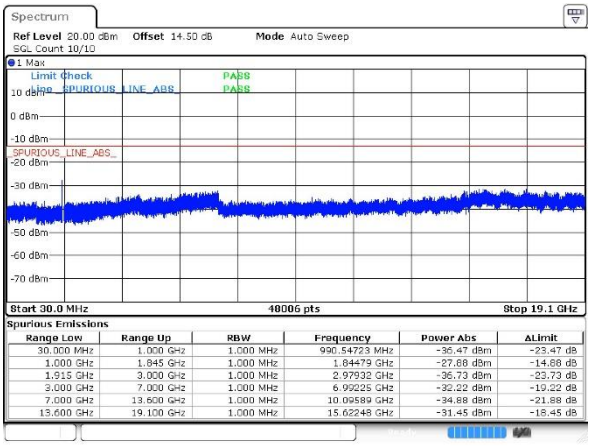
Spurious Emissions

Range Low	Range Up	RBW	Frequency	Power Abs	ΔLimit
30.000 MHz	820.000 MHz	1.000 MHz	628.32334 MHz	-37.15 dBm	-24.15 dB
855.000 MHz	1.000 GHz	1.000 MHz	991.05072 MHz	-36.22 dBm	-23.22 dB
1.000 GHz	3.000 GHz	1.000 MHz	2.79565 GHz	-37.20 dBm	-24.20 dB
3.000 GHz	7.000 GHz	1.000 MHz	6.72478 GHz	-32.42 dBm	-19.42 dB
7.000 GHz	9.000 GHz	1.000 MHz	8.09024 GHz	-34.81 dBm	-21.81 dB

Date: 27.MAR.2024 15:47:03

WCDMA Band II (RMC 12.2Kbps)

Lowest Channel

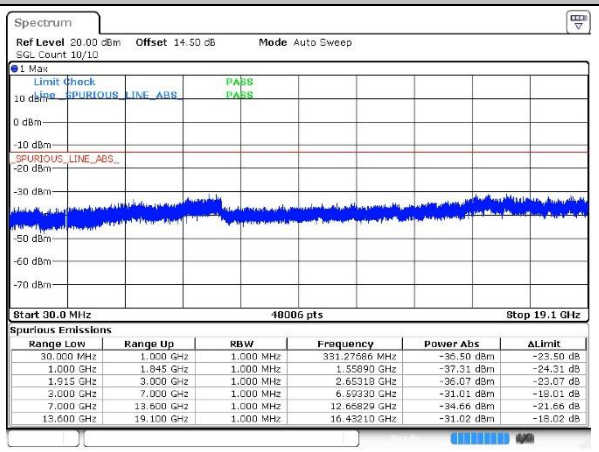


Spurious Emissions

Range Low	Range Up	RBW	Frequency	Power Abs	ΔLimit
30.000 MHz	1.000 GHz	1.000 MHz	990.54723 MHz	-36.47 dBm	-23.47 dB
1.000 GHz	1.845 GHz	1.000 MHz	1.84479 GHz	-27.88 dBm	-14.88 dB
1.915 GHz	3.000 GHz	1.000 MHz	2.97932 GHz	-36.73 dBm	-23.73 dB
3.000 GHz	7.000 GHz	1.000 MHz	6.99225 GHz	-32.22 dBm	-19.22 dB
7.000 GHz	13.600 GHz	1.000 MHz	10.09589 GHz	-34.88 dBm	-21.88 dB
13.600 GHz	19.100 GHz	1.000 MHz	15.62248 GHz	-31.45 dBm	-18.45 dB

Date: 27.MAR.2024 16:25:35

Middle Channel



Spurious Emissions

Range Low	Range Up	RBW	Frequency	Power Abs	ΔLimit
30.000 MHz	1.000 GHz	1.000 MHz	331.27586 MHz	-36.50 dBm	-23.50 dB
1.000 GHz	1.845 GHz	1.000 MHz	1.55890 GHz	-37.31 dBm	-24.31 dB
1.915 GHz	3.000 GHz	1.000 MHz	2.65319 GHz	-36.07 dBm	-23.07 dB
3.000 GHz	7.000 GHz	1.000 MHz	6.59930 GHz	-31.01 dBm	-18.01 dB
7.000 GHz	13.600 GHz	1.000 MHz	12.65829 GHz	-34.66 dBm	-21.66 dB
13.600 GHz	19.100 GHz	1.000 MHz	16.43210 GHz	-31.02 dBm	-18.02 dB

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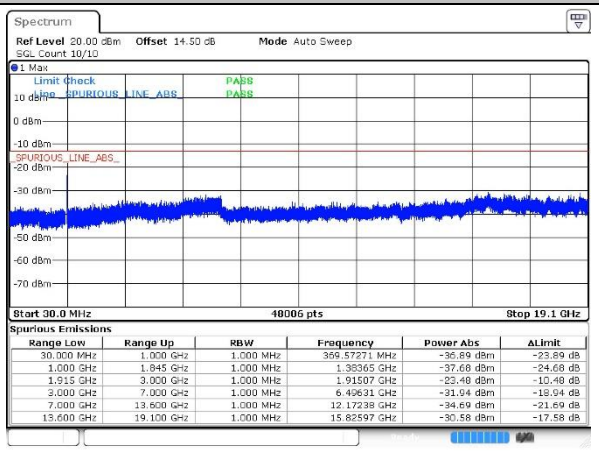
Highest Channel



Spurious Emissions

Range Low	Range Up	RBW	Frequency	Power Abs	ΔLimit
30.000 MHz	1.000 GHz	1.000 MHz	359.57271 MHz	-36.89 dBm	-23.89 dB
1.000 GHz	1.845 GHz	1.000 MHz	1.38365 GHz	-37.68 dBm	-24.68 dB
1.915 GHz	3.000 GHz	1.000 MHz	1.91507 GHz	-23.48 dBm	-10.48 dB
3.000 GHz	7.000 GHz	1.000 MHz	6.49631 GHz	-31.94 dBm	-18.94 dB
7.000 GHz	13.600 GHz	1.000 MHz	12.17238 GHz	-34.69 dBm	-21.69 dB
13.600 GHz	19.100 GHz	1.000 MHz	15.82597 GHz	-30.58 dBm	-17.58 dB

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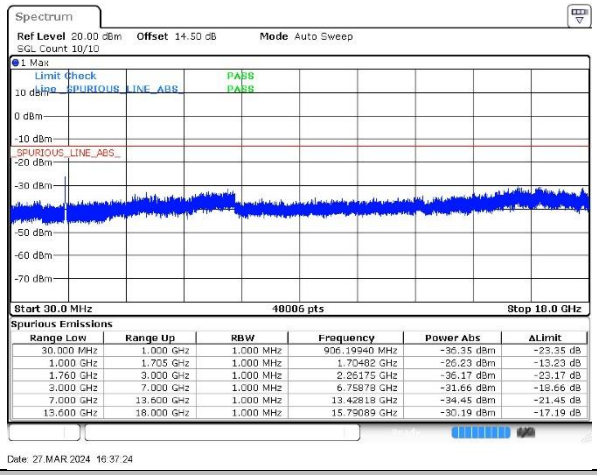
WCDMA Band IV (RMC 12.2Kbps)

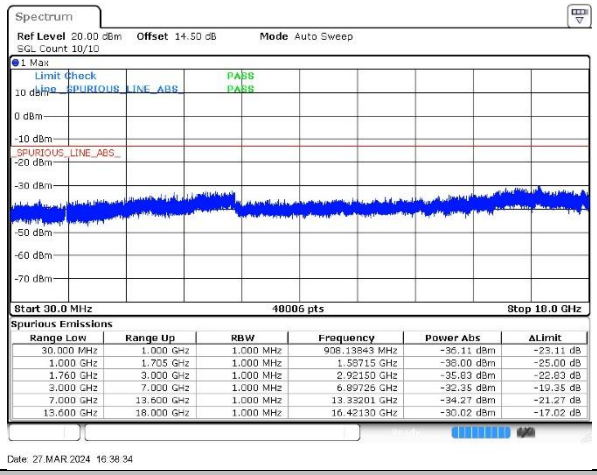
Lowest Channel



Spurious Emissions

Range Low	Range Up	RBW	Frequency	Power Abs	ΔLimit
30.000 MHz	1.000 GHz	1.000 MHz	906.19940 MHz	-36.35 dBm	-23.35 dB
1.000 GHz	1.705 GHz	1.000 MHz	1.70482 GHz	-26.23 dBm	-13.23 dB
1.760 GHz	3.000 GHz	1.000 MHz	2.26175 GHz	-36.17 dBm	-23.17 dB
3.000 GHz	7.000 GHz	1.000 MHz	6.75878 GHz	-31.66 dBm	-18.66 dB
7.000 GHz	13.600 GHz	1.000 MHz	13.42818 GHz	-34.45 dBm	-21.45 dB
13.600 GHz	18.000 GHz	1.000 MHz	15.79089 GHz	-30.19 dBm	-17.19 dB

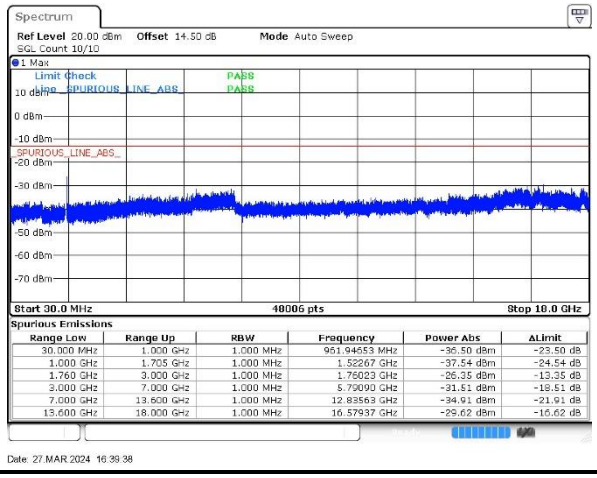
Middle Channel



Spurious Emissions

Range Low	Range Up	RBW	Frequency	Power Abs	ΔLimit
30.000 MHz	1.000 GHz	1.000 MHz	908.13843 MHz	-36.11 dBm	-23.11 dB
1.000 GHz	1.705 GHz	1.000 MHz	1.58715 GHz	-38.00 dBm	-25.00 dB
1.760 GHz	3.000 GHz	1.000 MHz	2.92150 GHz	-35.83 dBm	-22.83 dB
3.000 GHz	7.000 GHz	1.000 MHz	6.89726 GHz	-32.35 dBm	-19.35 dB
7.000 GHz	13.600 GHz	1.000 MHz	13.33201 GHz	-34.27 dBm	-21.27 dB
13.600 GHz	18.000 GHz	1.000 MHz	16.42130 GHz	-30.02 dBm	-17.02 dB

Highest Channel



Spurious Emissions

Range Low	Range Up	RBW	Frequency	Power Abs	ΔLimit
30.000 MHz	1.000 GHz	1.000 MHz	951.94653 MHz	-36.50 dBm	-23.50 dB
1.000 GHz	1.705 GHz	1.000 MHz	1.52267 GHz	-37.54 dBm	-24.54 dB
1.760 GHz	3.000 GHz	1.000 MHz	1.76023 GHz	-26.35 dBm	-13.35 dB
3.000 GHz	7.000 GHz	1.000 MHz	5.79090 GHz	-31.51 dBm	-18.51 dB
7.000 GHz	13.600 GHz	1.000 MHz	12.83563 GHz	-34.91 dBm	-21.91 dB
13.600 GHz	18.000 GHz	1.000 MHz	16.57937 GHz	-29.62 dBm	-16.62 dB

Frequency Stability

Test Conditions	Middle Channel	WCDMA Band V (RMC 12.2Kbps)	Limit 2.5ppm
Temperature (°C)	Voltage (Volt)	Deviation (ppm)	Result
50	Normal Voltage	0.0014	PASS
40	Normal Voltage	0.0007	
30	Normal Voltage	0.0024	
20(Ref.)	Normal Voltage	0.0000	
10	Normal Voltage	0.0006	
0	Normal Voltage	0.0010	
-10	Normal Voltage	0.0018	
-20	Normal Voltage	0.0020	
-30	Normal Voltage	0.0022	
20	Maximum Voltage	0.0012	
20	Normal Voltage	0.0000	
20	Minimum Voltage	0.0005	

Test Conditions	Middle Channel	WCDMA Band II (RMC 12.2Kbps)	Limit Note 2.
Temperature (°C)	Voltage (Volt)	Deviation (ppm)	Result
50	Normal Voltage	0.0006	PASS
40	Normal Voltage	0.0003	
30	Normal Voltage	0.0011	
20(Ref.)	Normal Voltage	0.0000	
10	Normal Voltage	0.0003	
0	Normal Voltage	0.0004	
-10	Normal Voltage	0.0008	
-20	Normal Voltage	0.0009	
-30	Normal Voltage	0.0010	
20	Maximum Voltage	0.0005	
20	Normal Voltage	0.0000	
20	Minimum Voltage	0.0002	

Note:

1. Normal Voltage = 3.3V. ; Minimum Voltage = 3.14 V. ; Maximum Voltage =4.4 V
2. The frequency fundamental emissions stay within the authorized frequency block based on the frequency deviation measured is small.

Test Conditions	Middle Channel	WCDMA Band IV (RMC 12.2Kbps)	Limit Note 2.
Temperature (°C)	Voltage (Volt)	Deviation (ppm)	Result
50	Normal Voltage	0.0007	PASS
40	Normal Voltage	0.0003	
30	Normal Voltage	0.0012	
20(Ref.)	Normal Voltage	0.0000	
10	Normal Voltage	0.0003	
0	Normal Voltage	0.0005	
-10	Normal Voltage	0.0009	
-20	Normal Voltage	0.0010	
-30	Normal Voltage	0.0010	
20	Maximum Voltage	0.0006	
20	Normal Voltage	0.0000	
20	Minimum Voltage	0.0002	

Note:

1. Normal Voltage = 3.3V. ; Minimum Voltage = 3.14 V. ; Maximum Voltage =4.4 V
2. The frequency fundamental emissions stay within the authorized frequency block based on the frequency deviation measured is small.

Appendix B. Test Results of Radiated Test

Radiated Spurious Emission

Test Engineer :	Jia Kuang	**Temperature :**	22~25℃
		Relative Humidity :	48~52%

WCDMA Band V(RMC 12.2Kbps) / Sample 1 & Monopole Antenna									
Channel	**Frequency (MHz)**	**ERP (dBm)**	**Limit (dBm)**	**Over Limit (dB)**	**SPA Reading (dBm)**	**S.G. Power (dBm)**	**TX Cable loss (dB)**	**TX Antenna Gain (dBi)**	**Polarization (H/V)**
Lowest	1652.8	-68.20	-13	-55.20	-74.48	-71.43	3.98	9.36	H
	2479.2	-65.41	-13	-52.41	-75.74	-68.96	4.85	10.55	H
	3305.6	-64.82	-13	-51.82	-77.17	-69.75	5.50	12.58	H
	1652.8	-68.07	-13	-55.07	-74.22	-71.30	3.98	9.36	V
	2479.2	-64.97	-13	-51.97	-75.65	-68.52	4.85	10.55	V
	3305.6	-64.12	-13	-51.12	-76.92	-69.05	5.50	12.58	V
Middle	1672.8	-68.00	-13	-55.00	-74.22	-71.25	4.00	9.40	H
	2509.2	-65.44	-13	-52.44	-75.69	-69.01	4.88	10.60	H
	3345.6	-65.27	-13	-52.27	-77.30	-70.20	5.52	12.60	H
	1672.8	-68.66	-13	-55.66	-74.60	-71.91	4.00	9.40	V
	2509.2	-64.98	-13	-51.98	-75.56	-68.55	4.88	10.60	V
	3345.6	-64.66	-13	-51.66	-77.07	-69.59	5.52	12.60	V
Highest	1693.2	-68.08	-13	-55.08	-74.41	-71.25	4.10	9.42	H
	2539.8	-65.40	-13	-52.40	-75.69	-68.98	4.90	10.63	H
	3386.4	-65.58	-13	-52.58	-77.59	-70.50	5.55	12.62	H
	1693.2	-68.28	-13	-55.28	-74.38	-71.45	4.10	9.42	V
	2539.8	-65.25	-13	-52.25	-75.88	-68.83	4.90	10.63	V
	3386.4	-65.00	-13	-52.00	-77.53	-69.92	5.55	12.62	V

Remark: Spurious emissions within 30-1000MHz were found more than 20dB below limit line.

WCDMA Band II(RMC 12.2Kbps) / Sample 1 & Monopole Antenna									
Channel	Frequency (MHz)	ERP (dBm)	Limit (dBm)	Over Limit (dB)	SPA Reading (dBm)	S.G. Power (dBm)	TX Cable loss (dB)	TX Antenna Gain (dBi)	Polarization (H/V)
Lowest	3704.8	-57.31	-13	-44.31	-80.49	-64.07	5.82	12.58	H
	5557.2	-57.23	-13	-44.23	-81.98	-62.95	7.28	13.00	H
	7409.6	-54.27	-13	-41.27	-81.65	-57.43	8.32	11.48	H
	3704.8	-55.42	-13	-42.42	-80.29	-62.18	5.82	12.58	V
	5557.2	-56.41	-13	-43.41	-81.59	-62.13	7.28	13.00	V
	7409.6	-54.21	-13	-41.21	-81.56	-57.37	8.32	11.48	V
Middle	3760	-58.22	-13	-45.22	-80.71	-64.97	5.85	12.60	H
	5640	-56.66	-13	-43.66	-81.06	-62.46	7.30	13.10	H
	7520	-54.33	-13	-41.33	-81.21	-57.48	8.35	11.50	H
	3760	-55.39	-13	-42.39	-81.04	-62.14	5.85	12.60	V
	5640	-56.04	-13	-43.04	-80.59	-61.84	7.30	13.10	V
	7520	-54.86	-13	-41.86	-81.72	-58.01	8.35	11.50	V
Highest	3815.2	-58.09	-13	-45.09	-80.99	-64.83	5.88	12.62	H
	5722.8	-57.14	-13	-44.14	-81.98	-62.95	7.32	13.13	H
	7630.4	-54.94	-13	-41.94	-81.48	-58.10	8.38	11.54	H
	3815.2	-56.20	-13	-43.20	-80.7	-62.94	5.88	12.62	V
	5722.8	-56.02	-13	-43.02	-81.34	-61.83	7.32	13.13	V
	7630.4	-54.20	-13	-41.20	-81.42	-57.36	8.38	11.54	V

Remark: Spurious emissions within 30-1000MHz were found more than 20dB below limit line.

WCDMA Band IV(RMC 12.2Kbps) / Sample 1 & Monopole Antenna									
Channel	Frequency (MHz)	ERP (dBm)	Limit (dBm)	Over Limit (dB)	SPA Reading (dBm)	S.G. Power (dBm)	TX Cable loss (dB)	TX Antenna Gain (dBi)	Polarization (H/V)
Lowest	3424.8	-59.16	-13	-46.16	-80.82	-66.04	5.60	12.48	H
	5137.2	-56.68	-13	-43.68	-81.14	-62.36	7.10	12.78	H
	6849.6	-55.22	-13	-42.22	-81.28	-58.61	8.38	11.77	H
	3424.8	-57.78	-13	-44.78	-80.51	-64.66	5.60	12.48	V
	5137.2	-56.04	-13	-43.04	-81.24	-61.72	7.10	12.78	V
	6849.6	-53.25	-13	-40.25	-81.14	-56.64	8.38	11.77	V
Middle	3465.2	-58.55	-13	-45.55	-80.80	-65.40	5.65	12.50	H
	5197.8	-56.91	-13	-43.91	-81.76	-62.58	7.13	12.80	H
	6930.4	-54.88	-13	-41.88	-81.17	-58.28	8.40	11.80	H
	3465.2	-57.75	-13	-44.75	-79.8	-64.60	5.65	12.50	V
	5197.8	-56.28	-13	-43.28	-81.4	-61.95	7.13	12.80	V
	6930.4	-54.55	-13	-41.55	-81.76	-57.95	8.40	11.80	V
Highest	3505.2	-58.00	-13	-45.00	-79.83	-64.84	5.68	12.52	H
	5257.8	-56.79	-13	-43.79	-81.75	-62.46	7.15	12.82	H
	7010.4	-54.88	-13	-41.88	-81.40	-58.31	8.42	11.85	H
	3505.2	-57.56	-13	-44.56	-80.93	-64.40	5.68	12.52	V
	5257.8	-56.60	-13	-43.60	-81.53	-62.27	7.15	12.82	V
	7010.4	-55.03	-13	-42.03	-81.9	-58.46	8.42	11.85	V

Remark: Spurious emissions within 30-1000MHz were found more than 20dB below limit line.

WCDMA Band IV(RMC 12.2Kbps) / Sample 2 & Monopole Antenna									
Channel	Frequency (MHz)	ERP (dBm)	Limit (dBm)	Over Limit (dB)	SPA Reading (dBm)	S.G. Power (dBm)	TX Cable loss (dB)	TX Antenna Gain (dBi)	Polarization (H/V)
Lowest	3424.8	-59.44	-13	-46.44	-81.10	-66.32	5.60	12.48	H
	5137.2	-56.62	-13	-43.62	-81.08	-62.30	7.10	12.78	H
	6849.6	-54.86	-13	-41.86	-80.92	-58.25	8.38	11.77	H
	3424.8	-58.20	-13	-45.20	-80.93	-65.08	5.60	12.48	V
	5137.2	-55.73	-13	-42.73	-80.93	-61.41	7.10	12.78	V
	6849.6	-53.36	-13	-40.36	-81.25	-56.75	8.38	11.77	V

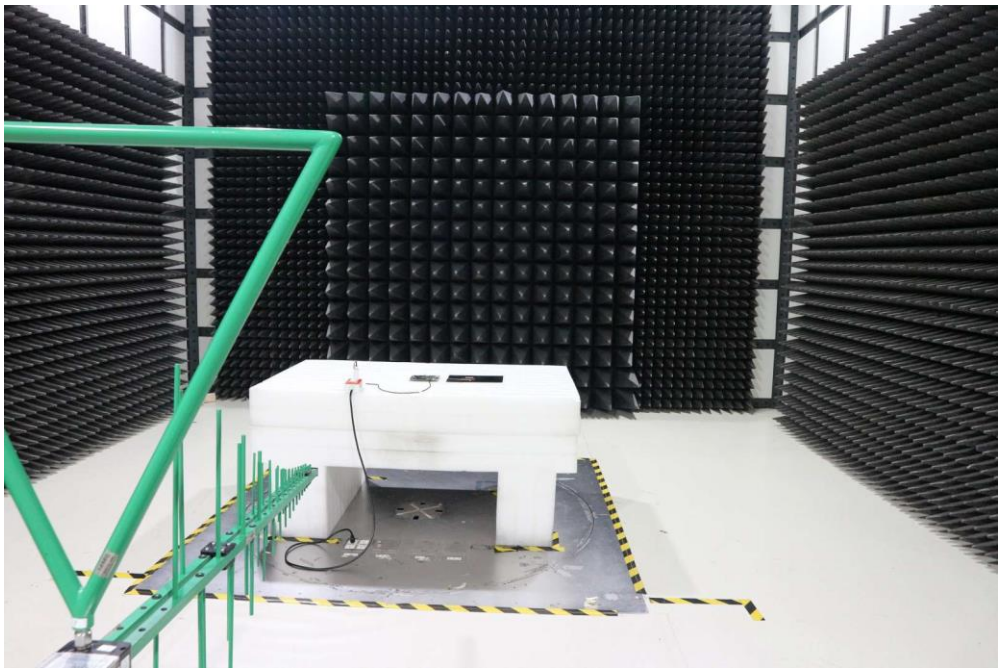
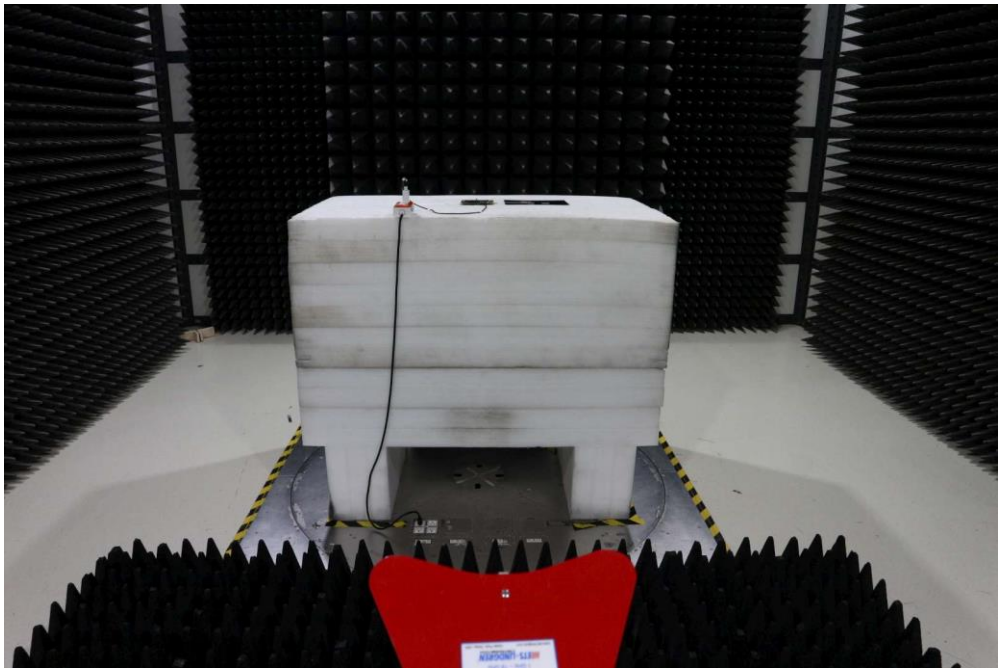
Remark: Spurious emissions within 30-1000MHz were found more than 20dB below limit line.

Appendix C. Setup Photographs

<Radiated Emission>

X Plane

LF



HF