TCT 通测检测 TESTING CENTRE TECHNOLOGY

TEST REPORT

FCC ID. ..... :	2A5ZX-SSB8T323
Test Report No..... :	TCT220921E020
Date of issue..... :	Sep. 29, 2022
Testing laboratory ..... :	SHENZHEN TONGCE TESTING LAB
Testing location/ address:	2101 & 2201, Zhenchang Factory Renshan Industrial Zone, Fuhai Subdistrict, Bao'an District, Shenzhen, Guangdong, 518103, People's Republic of China
Applicant's name..... :	Zhejiang Lianyong mobile terminal equipment manufacturing Co., Ltd.
Address..... :	No.1, First Street, Eastern New Area, Wenling, Taizhou, Zhejiang, China
Manufacturer's name ... :	Zhejiang Lianyong mobile terminal equipment manufacturing Co., Ltd.
Address..... :	No.1, First Street, Eastern New Area, Wenling, Taizhou, Zhejiang, China
Standard(s) ..... :	FCC CFR Title 47 Part 2 FCC CFR Title 47 Part22 FCC CFR Title 47 Part24 FCC CFR Title 47 Part27
Product Name..... :	Tablet PC
Trade Mark ..... :	Maze Speed, SOHO STYLE, LUSH MINT, TRUE SLIM
Model/Type reference..... :	SSB8T323, SS8T323, LM8T323, TS8T323
Rating(s)..... :	DC 5V
Date of receipt of test item ..... :	Sep. 21, 2022
Date (s) of performance of test..... :	Aug. 26, 2022 ~ Sep. 29, 2022
Tested by (+signature) ... :	Brews XU
Check by (+signature).... :	Beryl ZHAO
Approved by (+signature):	Tomsin

General disclaimer:

This report shall not be reproduced except in full, without the written approval of SHENZHEN TONGCE TESTING LAB. This document may be altered or revised by SHENZHEN TONGCE TESTING LAB personnel only, and shall be noted in the revision section of the document. The test results in the report only apply to the tested sample.

Table of Contents

Hotline: 400-6611-140 Tel: 86-755-27673339 Fax: 86-755-27673332 http://www.tct-lab.com

1. General Product Information

1.1. EUT description

Product Name.....:	Tablet PC
Model/Type reference.....:	SSB8T323
Sample Number.....:	TCT220921E019-0101
Tx Frequency.....:	FDD LTE Band 2: 1850.7 MHz ~ 1909.3 MHz FDD LTE Band 4: 1710.7 MHz ~ 1754.3 MHz FDD LTE Band 5: 824.7 MHz ~ 848.3 MHz FDD LTE Band 12: 699.7 MHz ~ 715.3 MHz FDD LTE Band 17: 706.5 MHz ~ 713.5 MHz FDD LTE Band 66: 1710.7 MHz ~ 1779.3 MHz
Rx Frequency .....:	FDD LTE Band 2: 1930.7 MHz ~ 1989.3 MHz FDD LTE Band 4: 2110.7 MHz ~ 2154.3 MHz FDD LTE Band 5: 869.7 MHz ~ 893.3 MHz FDD LTE Band 12: 729.7 MHz ~ 745.3 MHz FDD LTE Band 17: 736.5 MHz ~ 743.5 MHz FDD LTE Band 66: 2110.7MHz ~ 2199.3 MHz
Bandwidth.....:	LTE Band 2: 1.4MHz /3MHz /5MHz /10MHz /15MHz /20MHz LTE Band 4: 1.4MHz /3MHz /5MHz /10MHz /15MHz /20MHz LTE Band 5: 1.4MHz /3MHz /5MHz /10MHz LTE Band 12: 1.4MHz /3MHz /5MHz /10MHz LTE Band 17: 5MHz /10MHz LTE Band 66: 1.4MHz /3MHz /5MHz /10MHz /15MHz /20MHz
Maximum Output Power to Antenna.....:	FDD LTE Band 2: 23.07 dBm FDD LTE Band 4: 24.56 dBm FDD LTE Band 5: 18.39 dBm FDD LTE Band 12: 19.03 dBm FDD LTE Band 17: 18.99 dBm FDD LTE Band 66: 24.35 dBm
99% Occupied Bandwidth.....:	FDD LTE Band 2: 18M2W7D FDD LTE Band 4: 18M2W7D FDD LTE Band 5: 9M10G7D FDD LTE Band 12: 9M07G7D FDD LTE Band 17: 9M07G7D FDD LTE Band 66: 18M2W7D
Type of Modulation.....:	QPSK/16QAM
Antenna Type.....:	FPC Antenna
Antenna Gain.....:	FDD LTE Band 2: 0.74dBi FDD LTE Band 4: 0.98dBi FDD LTE Band 5: -2.13dBi FDD LTE Band 12: -2.63dBi FDD LTE Band 17: -2.58dBi FDD LTE Band 66: 0.82dBi
Rating(s).....:	DC 5V

Note: The antenna gain listed in this report is provided by applicant, and the test laboratory is not responsible for this parameter.

1.2. Model(s) list

No.	Model No.	Tested with
1	SSB8T323	☒
Other models	SS8T323, LM8T323, TS8T323	☐

Note: SSB8T323 is tested model, other models are derivative models. The models are identical in circuit and PCB layout, only different on the model names and trade mark. So the test data of SSB8T323 can represent the remaining models.

Hotline: 400-6611-140 Tel: 86-755-27673339 Fax: 86-755-27673332 http://www.tct-lab.com

1.3. Emission Designator

Please refer to Test Data for Appendix For LTE Band 2, LTE Band 4,LTE Band 5, LTE Band 12, LTE Band 13, LTE Band 25, LTE Band 26, LTE Band 38, Band 41

1.4. Test Frequency

Band 2

Test Frequency ID	Bandwidth [MHz]	N_{UL}	Frequency of Uplink [MHz]	N_{DL}	Frequency of Downlink [MHz]
Low Range	1.4	18607	1850.7	607	1930.7
	3	18615	1851.5	615	1931.5
	5	18625	1852.5	625	1932.5
	10	18650	1855	650	1935
	15 [1]	18675	1857.5	675	1937.5
	20 [1]	18700	1860	700	1940
Mid Range	1.4/3/5/10 15 [1]/20 [1]	18900	1880	900	1960
High Range	1.4	19193	1909.3	1193	1989.3
	3	19185	1908.5	1185	1988.5
	5	19175	1907.5	1175	1987.5
	10	19150	1905	1150	1985
	15 [1]	19125	1902.5	1125	1982.5
	20 [1]	19100	1900	1100	1980
NOTE 1: Bandwidth for which a relaxation of the specified UE receiver sensitivity requirement (TS 36.101 [27] Clause 7.3) is allowed.					

Band 4

Test Frequency ID	Bandwidth [MHz]	N_{UL}	Frequency of Uplink [MHz]	N_{DL}	Frequency of Downlink [MHz]
Low Range	1.4	19957	1710.7	1957	2110.7
	3	19965	1711.5	1965	2111.5
	5	19975	1712.5	1975	2112.5
	10	20000	1715	2000	2115
	15	20025	1717.5	2025	2117.5
	20	20050	1720	2050	2120
Mid Range	1.4/3/5/10/15/20	20175	1732.5	2175	2132.5
High Range	1.4	20393	1754.3	2393	2154.3
	3	20385	1753.5	2385	2153.5
	5	20375	1752.5	2375	2152.5
	10	20350	1750	2350	2150
	15	20325	1747.5	2325	2147.5
	20	20300	1745	2300	2145

Band 5

Test Frequency ID	Bandwidth [MHz]	N_{UL}	Frequency of Uplink [MHz]	N_{DL}	Frequency of Downlink [MHz]
Low Range	1.4	20407	824.7	2407	869.7
	3	20415	825.5	2415	870.5
	5	20425	826.5	2425	871.5
	10 [1]	20450	829	2450	874
Mid Range	1.4/3/5 10 [1]	20525	836.5	2525	881.5
High Range	1.4	20643	848.3	2643	893.3
	3	20635	847.5	2635	892.5
	5	20625	846.5	2625	891.5
	10 [1]	20600	844	2600	889
NOTE 1: Bandwidth for which a relaxation of the specified UE receiver sensitivity requirement (TS 36.101 [27] Clause 7.3) is allowed.					

Band 12

Table 4.3.1.1.12-1: Test frequencies for E-UTRA channel bandwidth for operating band 12

Test Frequency ID	Bandwidth [MHz]	N_{UL}	Frequency of Uplink [MHz]	N_{DL}	Frequency of Downlink [MHz]
Low Range	1.4	23017	699.7	5017	729.7
	3	23025	700.5	5025	730.5
	5 [1]	23035	701.5	5035	731.5
	10 [1]	23060	704	5060	734
Mid Range	1.4/3 5 [1]/10 [1]	23095	707.5	5095	737.5
High Range	1.4	23173	715.3	5173	745.3
	3	23165	714.5	5165	744.5
	5 [1]	23155	713.5	5155	743.5
	10 [1]	23130	711	5130	741
NOTE 1: Bandwidth for which a relaxation of the specified UE receiver sensitivity requirement (TS 36.101 [27] Clause 7.3) is allowed.					

Band 17

Test Frequency ID	Bandwidth [MHz]	N_{UL}	Frequency of Uplink [MHz]	N_{DL}	Frequency of Downlink [MHz]
Low Range	5 [1]	23755	706.5	5755	736.5
	10 [1]	23780	709	5780	739
Mid Range	5 [1]/10 [1]	23790	710	5790	740
High Range	5 [1]	23825	713.5	5825	743.5
	10 [1]	23800	711	5800	741

NOTE 1: Bandwidth for which a relaxation of the specified UE receiver sensitivity requirement (TS 36.101 [27] Clause 7.3) is allowed.

Band 66

Table 4.3.1.1.66-1: Test frequencies for E-UTRA channel bandwidth for operating band 66

Test Frequency ID	Bandwidth [MHz]	N_{UL}	Frequency of Uplink [MHz]	N_{DL}	Frequency of Downlink [MHz]
Low Range	1.4	131979	1710.7	66443	2110.7
	3	131987	1711.5	66451	2111.5
	5	131997	1712.5	66461	2112.5
	10	132022	1715	66486	2115
	15	132047	1717.5	66511	2117.5
	20	132072	1720	66536	2120
Mid Range Tx[1]	1.4/3/5/10/15/20	132322	1745	66786	2145
Mid Range	1.4/3/5/10/15/20	132422	1755	66886	2155
Paired High Range[2]	1.4	132665	1779.3	67129	2179.3
	3	132657	1778.5	67121	2178.5
	5	132647	1777.5	67111	2177.5
	10	132622	1775	67086	2175
	15	132597	1772.5	67061	2172.5
	20	132572	1770	67036	2170
High Range[3]	1.4	NA	NA	67329	2199.3
	3	NA	NA	67321	2198.5
	5	NA	NA	67311	2197.5
	10	NA	NA	67286	2195
	15	NA	NA	67261	2192.5
	20	NA	NA	67236	2190

2. Test Result Summary

Requirement	CFR 47 Section	Result
Conducted Output Power	§2.1046; §22.913; §24.232(c); §27.50(d); §27.50(c); §27.50(b);	PASS
Peak-to-Average Ratio	§2.1046; §24.232(d) §27.50(d); §27.50(c); §27.50(b);	PASS
Effective Radiated Power	§2.1046; §22.913; §24.232(c); §27.50(d); §27.50(c); §27.50(b);	PASS
Equivalent Isotropic Radiated Power	§2.1046; §22.913; §24.232(c); §27.50(d); §27.50(c); §27.50(b);	PASS
Occupied Bandwidth	§2.1049; §24.238(b); §27.53;	PASS
Band Edge	§2.1051; §22.917(a); §27.53(h); §27.53(c); §27.53(g); §24.238(a);	PASS
Conducted Spurious Emission	§2.1051; §22.917(a); §27.53(h); §27.53(g); §27.53(c); §24.238(a);	PASS
Field Strength of Spurious Radiation	§2.1053; §22.917(a); §27.53(g) ; §27.53(c); §27.53(h); §24.238(a);	PASS
Frequency Stability for Temperature & Voltage	§2.1055;§22.355; §27.54; §24.235;	PASS

Note:

1. PASS: Test item meets the requirement.

2. Fail: Test item does not meet the requirement.

3. N/A: Test case does not apply to the test object.

4. The test result judgment is decided by the limit of test standard.

Hotline: 400-6611-140 Tel: 86-755-27673339 Fax: 86-755-27673332 http://www.tct-lab.com

3. General Information

3.1. Test environment and mode

Operating Environment:	
Temperature:	25.0 °C
Humidity:	56 % RH
Atmospheric Pressure:	1010 mbar
Remark: This product has a built-in rechargeable battery, so in an independent test, the EUT battery was fully-charged.	

Antenna port conducted and radiated test items were performed according to KDB 971168 D01 Power Meas License Digital Systems v03 with maximum output power. Radiated measurements were performed with rotating EUT in different three orthogonal test planes to find the maximum emission.The sample was placed 0.8m/1.5m above the ground plane of 3m chamber. Measurements in both horizontal and vertical polarities were performed. During the test, each emission was maximized by: having the EUT continuously working, investigated all operating modes, rotated about all 3 axis (X, Y & Z) and considered typical configuration to obtain worst position, manipulating interconnecting cables, rotating the turntable, varying antenna height from 1m to 4m in both horizontal and vertical polarization. The emissions worst-case are shown in Test Results of the following pages.

Hotline: 400-6611-140 Tel: 86-755-27673339 Fax: 86-755-27673332 http://www.tct-lab.com

Test Items	Band	Bandwidth (MHz)						Modulation		RB #			Test Channel		
		1.4	3	5	10	15	20	QPSK	16QAM	1	Half	Full	L	M	H
Max. Output Power	2	v	v	v	v	v	v	v	v	v	v	v	v	v	v
	4	v	v	v	v	v	v	v	v	v	v	v	v	v	v
	5	v	v	v	v	-	-	v	v	v	v	v	v	v	v
	12	v	v	v	v	-	-	v	v	v	v	v	v	v	v
	17	-	-	v	v	-	-	v	v	v	v	v	v	v	v
	66	v	v	v	v	v	v	v	v	v	v	v	v	v	v
Peak-to-Average Ratio	2	v	v	v	v	v	v	v	v	v	v	v	v	v	v
	4	v	v	v	v	v	v	v	v	v	v	v	v	v	v
	5	v	v	v	v	-	-	v	v	v	v	v	v	v	v
	12	v	v	v	v	-	-	v	v	v	v	v	v	v	v
	17	-	-	v	v	-	-	v	v	v	v	v	v	v	v
	66	v	v	v	v	v	v	v	v	v	v	v	v	v	v
26dB and 99% Bandwidth	2	v	v	v	v	v	v	v	v	v	v	v	v	v	v
	4	v	v	v	v	v	v	v	v	v	v	v	v	v	v
	5	v	v	v	v	-	-	v	v	v	v	v	v	v	v
	12	v	v	v	v	-	-	v	v	v	v	v	v	v	v
	17	-	-	v	v	-	-	v	v	v	v	v	v	v	v
	66	v	v	v	v	v	v	v	v	v	v	v	v	v	v
Conducted Band Edge	2	v	v	v	v	v	v	v	v	v	v	v	v	-	v
	4	v	v	v	v	v	v	v	v	v	v	v	v	-	v
	5	v	v	v	v	-	-	v	v	v	v	v	v	-	v
	12	v	v	v	v	-	-	v	v	v	v	v	v	-	v
	17	-	-	v	v	-	-	v	v	v	v	v	v	-	v
	66	v	v	v	v	v	v	v	v	v	v	v	v	-	v
Conducted Spurious Emission	2	v	v	v	v	v	v	v	v	v	-	-	v	v	v
	4	v	v	v	v	v	v	v	v	v	-	-	v	v	v
	5	v	v	v	v	-	-	v	v	v	-	-	v	v	v
	12	v	v	v	v	-	-	v	v	v	-	-	v	v	v
	17	-	-	v	v	-	-	v	v	v	-	-	v	v	v
	66	v	v	v	v	v	v	v	v	v	-	-	v	v	v

Test Items	Band	Bandwidth (MHz)						Modulation		RB #			Test Channel		
		1.4	3	5	10	15	20	QPSK	16QAM	1	Half	Full	L	M	H
Frequency Stability	2	v	v	v	v	v	v	v	v	v	-	-	v	v	v
	4	v	v	v	v	v	v	v	v	v	-	-	v	v	v
	5	v	v	v	v	-	-	v	v	v	-	-	v	v	v
	12	v	v	v	v	-	-	v	v	v	-	-	v	v	v
	17	-	-	v	v	-	-	v	v	v	-	-	v	v	v
	66	v	v	v	v	v	v	v	v	v	-	-	v	v	v
E.R.P./ E.I.R.P.	2	v	v	v	v	v	v	v	v	v	v	v	v	v	v
	4	v	v	v	v	v	v	v	v	v	v	v	v	v	v
	5	v	v	v	v	-	-	v	v	v	v	v	v	v	v
	12	v	v	v	v	-	-	v	v	v	v	v	v	v	v
	17	-	-	v	v	-	-	v	v	v	v	v	v	v	v
	66	v	v	v	v	v	v	v	v	v	v	v	v	v	v
Radiated Spurious Emission	2	v	v	v	v	v	v	v	v	v	-	-	v	v	v
	4	v	v	v	v	v	v	v	v	v	-	-	v	v	v
	5	v	v	v	v	-	-	v	v	v	-	-	v	v	v
	12	v	v	v	v	-	-	v	v	v	-	-	v	v	v
	17	-	-	v	v	-	-	v	v	v	-	-	v	v	v
	66	v	v	v	v	v	v	v	v	v	-	-	v	v	v
Note	1. The mark "v" means that this configuration is chosen for testing 2. The mark "-" means that this bandwidth is not supported.														

3.2. Description of Support Units

The EUT has been tested as an independent unit together with other necessary accessories or support units. The following support units or accessories were used to form a representative test configuration during the tests.

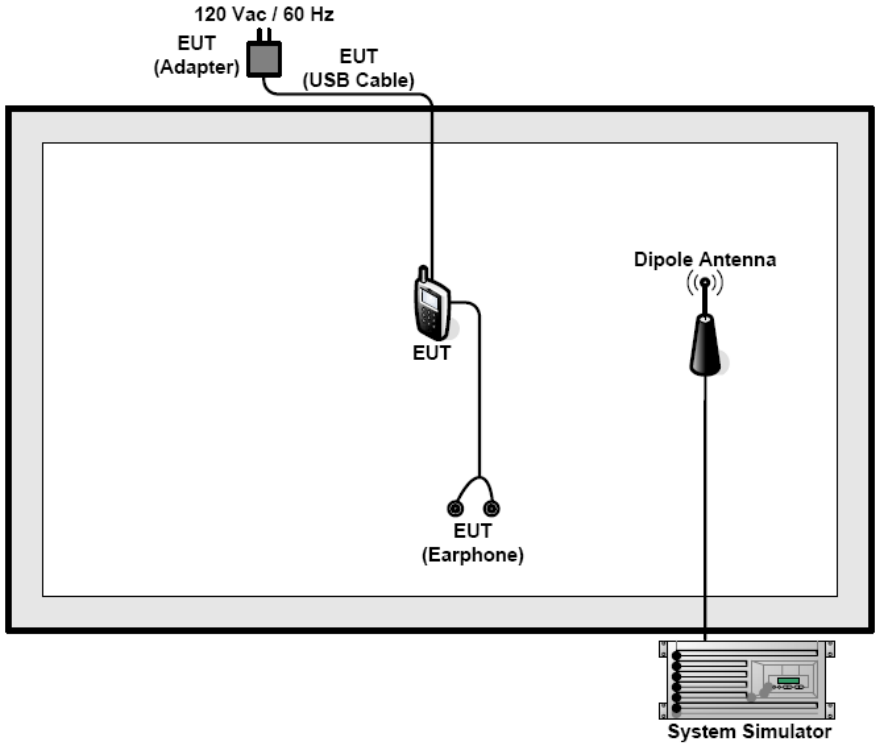
Equipment	Model No.	Serial No.	FCC ID	Trade Name
/	/	/	/	/

Note:

1. All the equipment/cables were placed in the worst-case configuration to maximize the emission during the test.

2. Grounding was established in accordance with the manufacturer's requirements and conditions for the intended use.

3.3. Configuration of Tested System



3.4. 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.

Hotline: 400-6611-140 Tel: 86-755-27673339 Fax: 86-755-27673332 http://www.tct-lab.com

4. Facilities and Accreditations

4.1. Facilities

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

- FCC - Registration No.: 645098

  SHENZHEN TONGCE TESTING LAB

  Designation Number: CN1205

  The testing lab has been registered and fully described in a report with the (FCC) Federal Communications Commission. The acceptance letter from the FCC is maintained in our files.

- IC - Registration No.: 10668A-1

  SHENZHEN TONGCE TESTING LAB

  CAB identifier: CN0031

  The testing lab has been registered by Certification and Engineering Bureau of Industry Canada for radio equipment testing.

4.2. Location

SHENZHEN TONGCE TESTING LAB

Address: 2101 & 2201, Zhenchang Factory Renshan Industrial Zone, Fuhai Subdistrict, Bao'an District, Shenzhen, Guangdong, 518103, People's Republic of China

TEL: +86-755-27673339

4.3. Measurement Uncertainty

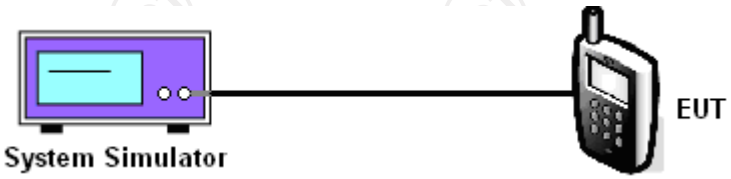
The reported uncertainty of measurement y ± U, where expended uncertainty U is based on a standard uncertainty multiplied by a coverage factor of k=2, providing a level of confidence of approximately 95 %.

No.	Item	MU
1	Conducted Emission	± 3.10 dB
2	RF power, conducted	± 0.12 dB
3	Spurious emissions, conducted	± 0.11 dB
4	All emissions, radiated(<1 GHz)	± 4.56 dB
5	All emissions, radiated(1 GHz - 18 GHz)	± 4.22 dB
6	All emissions, radiated(18 GHz- 40 GHz)	± 4.36 dB

5. Test Results and Measurement Data

5.1. Effective Radiated Power and Effective Isotropic Radiated Power Measurement

Test Specification

Test Requirement:	FCC part 27.50(c), FCC part 27.50(d) and FCC part 27.50(h), FCC part 24.232(c), FCC part 22.913;
Test Method:	FCC part 2.1046
Limit:	LTE Band 2: 2W LTE Band 4: 1W LTE Band 5: 7W LTE Band 12: 3W LTE Band 17: 3W LTE Band 66: 1W
Test Setup:	
Test Procedure:	1. The transmitter output port was connected to the system simulator. 2. Set EUT at maximum power through system simulator. 3. Select lowest, middle, highest channels for each band and different modulation. 4. Measure and record the power level from the system simulator. 5. Calculate the ERP and EIRP The relevant equation for determining the ERP or EIRP from the conducted RF output power measured using the guidance provided above is: ERP or EIRP = $P_{Meas} + G_T - L_C$ where: ERP or EIRP = effective radiated power or equivalent isotropically radiated power, respectively (expressed in the same units as P Meas , typically dBW or dBm); P_{Meas} = measured transmitter output power or PSD, in dBm or dBW; G_T = gain of the transmitting antenna, in dBd (ERP) or dBi (EIRP);

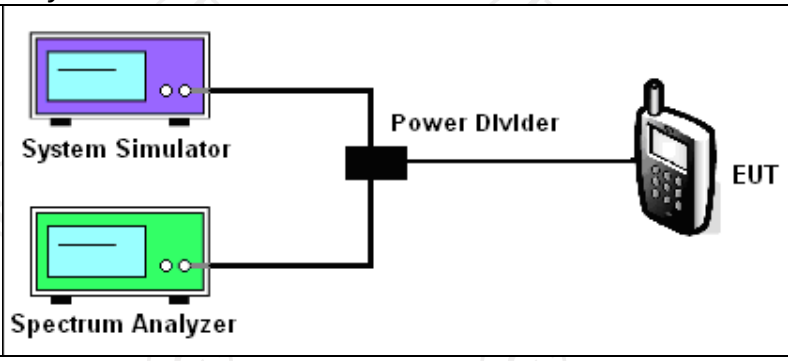
	L_C = signal attenuation in the connecting cable between the transmitter and antenna, in dB. *Note: For personal/portable radios utilizing an integral antenna, the factor L C is typically negligible. However, in a fixed station transmit system that utilizes a long cable run between the transmitter and the transmitting antenna, this factor can be significant.*
Test Result:	PASS

Test Instruments

Equipment	Manufacturer	Model	Serial Number	Calibration Due
Wideband Radio Communication Tester	R&S	CMW500	114220	Jul. 03, 2023
Combiner Box	Ascentest	AT890-RFB	/	/

5.2. Peak to Average Ratio

Test Specification

Test Requirement:	FCC part 2.1046; 22.913; 24.232; 27.50(d); 27.50(c); 27.50(b)
Test Method:	FCC KDB 971168 D01v03
Limit:	The peak-to-average ratio (PAR) of the transmission may not exceed 13 dB.
Test Setup:	
Test Procedure:	1. The testing follows FCC KDB 971168 D01v03 Section 5.7.1. 2. The EUT was connected to spectrum analyzer and system simulator via a power divider. 3. Set EUT to transmit at maximum output power. 4. Set the CCDF (Complementary Cumulative Distribution Function) option of the spectrum analyzer. Record the maximum PAPR level associated with a probability of 0.1%.
Test Result:	PASS

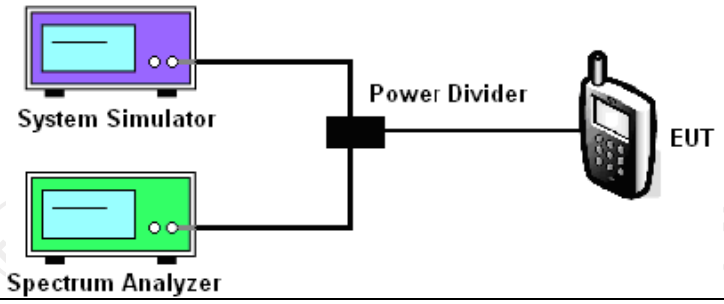
Test Instruments

Equipment	Manufacturer	Model	Serial Number	Calibration Due
Wideband Radio Communication Tester	R&S	CMW500	114220	Jul. 03, 2023
Spectrum Analyzer	R&S	FSU	200054	Jul. 04, 2023
Combiner Box	Ascentest	AT890-RFB	/	/

Hotline: 400-6611-140 Tel: 86-755-27673339 Fax: 86-755-27673332 http://www.tct-lab.com

5.3. 99% Occupied Bandwidth and 26dB Bandwidth Measurement

Test Specification

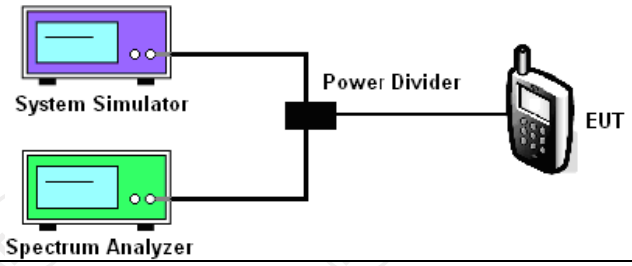
Test Requirement:	FCC part 27.53(h)(3) and FCC part 27.53(m)(6), FCC part 24.238(b)
Test Method:	FCC part 2.1049
Limit:	N/A
Test Setup:	
Test Procedure:	1. The testing follows FCC KDB 971168 D01v03 Section 4.2. 2. The EUT was connected to the spectrum analyzer and system simulator via a power divider. 3. The RF output of the EUT was connected to the spectrum analyzer by RF cable and attenuator. The path loss was compensated to the results for each measurement. 4. The 99% occupied bandwidth were measured, set RBW= 1% of OBW, VBW= 3*RBW, sample detector, trace maximum hold. 5. The 26dB bandwidth were measured, set RBW= 1% of EBW, VBW= 3*RBW, peak detector, trace maximum hold.
Test Result:	PASS

Test Instruments

Equipment	Manufacturer	Model	Serial Number	Calibration Due
Wideband Radio Communication Tester	R&S	CMW500	114220	Jul. 03, 2023
Spectrum Analyzer	R&S	FSU	200054	Jul. 04, 2023
Combiner Box	Ascentest	AT890-RFB	/	/

5.4. Band Edge and Conducted Spurious Emission Measurement

Test Specification

Test Requirement:	FCC part 27.53(h), FCC part 27.53(g) , FCC part 27.53(m)(4), FCC part 24.238(a), 22.917(a)
Test Method:	FCC part2.1051
Limit:	-13dBm
Test Setup:	
Test Procedure:	1. The testing follows FCC KDB 971168 D01v03 Section 6.0. 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 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) = P(W) - [43 + 10log(P)] (dB) = [30 + 10log(P)] (dBm) - [43 + 10log(P)] (dB) = -13dBm. For Band 17, he limit line is derived from 55 + 10log(P) dB below the transmitter power
Test Result:	PASS

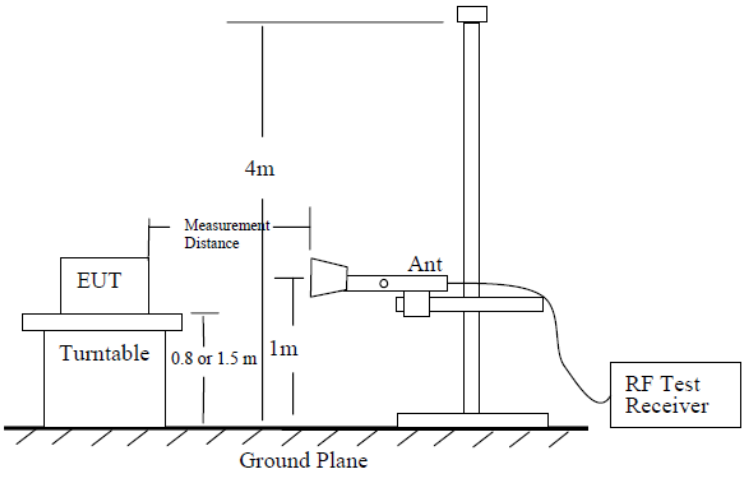
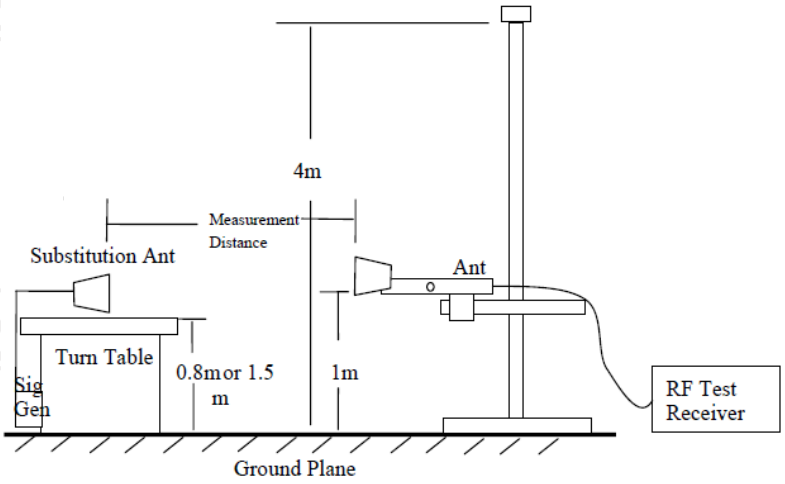
Test Instruments

Equipment	Manufacturer	Model	Serial Number	Calibration Due
Wideband Radio Communication Tester	R&S	CMW500	114220	Jul. 03, 2023
Spectrum Analyzer	R&S	FSU	200054	Jul. 04, 2023
Combiner Box	Ascentest	AT890-RFB	/	/

Hotline: 400-6611-140 Tel: 86-755-27673339 Fax: 86-755-27673332 http://www.tct-lab.com

5.5. Field Strength of Spurious Radiation Measurement

Test Specification

Test Requirement:	FCC part 27.53(g) ,FCC part 27.53(h), FCC part 27.53(m)(4), FCC part 22.917(a), 24.238(b)
Test Method:	FCC part 2.1053
Limit:	30MHz~20GHz -13dBm
Test setup:	 
Test Procedure:	1. The testing follows FCC KDB 971168 D01v03 Section 5.8 and ANSI / TIA-603-D-2010Section 2.2.12. 2. The EUT was placed on a rotatable wooden table 0.8 meters 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) = P(W) - [43 + 10log(P)] (dB) = [30 + 10log(P)] (dBm) - [43 + 10log(P)] (dB) = -13dBm.
Test results:	PASS
Remark:	All modulations have been tested, but only the worst modulation show in this test item.

Test Instruments

Radiated Emission Test Site (966)				
Name of Equipment	**Manufacturer**	**Model**	**Serial Number**	**Calibration Due**
Universal Radio Communication Tester	R&S	CMU200	110188	Jul. 04, 2023
Spectrum Analyzer	R&S	FSQ40	200061	Jul. 03, 2023
Signal Generator	HP	83623B	3614A00396	Feb. 24, 2023
Broadband Antenna	Schwarzbeck	VULB9163	340	Jul. 05, 2024
Horn Antenna	Schwarzbeck	BBHA 9120D	631	Jul. 05, 2024
Broadband Antenna	Schwarzbeck	VULB9163	412	Jul. 05, 2024
Horn Antenna	Schwarzbeck	BBHA 9120D	1201	Jul. 05, 2024
Horn Antenna	Schwarzbeck	BBHA 9170	00956	Apr. 10, 2023
Coaxial cable	SKET	RC-18G-N-M	/	Feb. 24, 2024
Coaxial cable	SKET	RC_40G-K-M	/	Feb. 24, 2024
Antenna Mast	Keleto	RE-AM	/	/
EMI Test Software	Shurple Technology	EZ-EMC	/	/

Hotline: 400-6611-140 Tel: 86-755-27673339 Fax: 86-755-27673332 http://www.tct-lab.com

Test Data

Frequency Range (9 kHz-30MHz)

Frequency (MHz)	Level@3m (dBμV/m)	Limit@3m (dBμV/m)
--	--	--
--	--	--
--	--	--
--	--	--

Note: *1. Emission Level=Reading+ Cable loss+Antenna factor-Amp factor*

2. The emission levels are 20 dB below the limit value, which are not reported. It is deemed to comply with the requirement

Hotline: 400-6611-140 Tel: 86-755-27673339 Fax: 86-755-27673332 http://www.tct-lab.com

Band	Band 2(QPSK, 20MHz)	Test channel:	Lowest
Test mode:		Temperature :	25°C
		Relative Humidity:	56%

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

Channel:	LTE Band 2 CH-L	Polarization:	Horizontal

No.	Frequency (MHz)	Reading (dBm)	Factor (dB)	Level (dBm)	Limit (dBm)	Margin (dB)	Detector	P/F
1	3720.000	-25.27	-21.43	-46.70	-13.00	-33.70	peak	P
2	5580.000	-22.78	-22.79	-45.57	-13.00	-32.57	peak	P
3	7440.000	-20.39	-23.33	-43.72	-13.00	-30.72	peak	P
4 *	9300.000	-17.60	-23.22	-40.82	-13.00	-27.82	peak	P

Channel:	LTE Band 2 CH-L	Polarization:	Vertical

No.	Frequency (MHz)	Reading (dBm)	Factor (dB)	Level (dBm)	Limit (dBm)	Margin (dB)	Detector	P/F
1	3720.000	-14.77	-31.43	-46.20	-13.00	-33.20	peak	P
2	5580.000	-12.28	-32.79	-45.07	-13.00	-32.07	peak	P
3	7440.000	-9.39	-33.33	-42.72	-13.00	-29.72	peak	P
4 *	9300.000	-7.10	-33.22	-40.32	-13.00	-27.32	peak	P

Band	Band 2(QPSK, 20MHz)	Test channel:	Middle
Test mode:		Temperature :	25°C
		Relative Humidity:	56%

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

Channel:	LTE Band 2 CH-M	Polarization:	Horizontal

No.	Frequency (MHz)	Reading (dBm)	Factor (dB)	Level (dBm)	Limit (dBm)	Margin (dB)	Detector	P/F
1	3760.000	-25.75	-21.46	-47.21	-13.00	-34.21	peak	P
2	5640.000	-23.34	-22.64	-45.98	-13.00	-32.98	peak	P
3	7520.000	-20.30	-23.40	-43.70	-13.00	-30.70	peak	P
4 *	9400.000	-17.83	-23.05	-40.88	-13.00	-27.88	peak	P

Channel:	LTE Band 2 CH-M	Polarization:	Vertical

No.	Frequency (MHz)	Reading (dBm)	Factor (dB)	Level (dBm)	Limit (dBm)	Margin (dB)	Detector	P/F
1	3760.000	-15.75	-31.46	-47.21	-13.00	-34.21	peak	P
2	5640.000	-14.84	-32.64	-47.48	-13.00	-34.48	peak	P
3	7520.000	-10.30	-33.40	-43.70	-13.00	-30.70	peak	P
4 *	9400.000	-8.33	-33.05	-41.38	-13.00	-28.38	peak	P

Band	Band 2(QPSK, 20MHz)	Test channel:	Highest
Test mode:		Temperature :	25°C
		Relative Humidity:	56%

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

Channel:	LTE Band 2 CH-H	Polarization:	Horizontal

No.	Frequency (MHz)	Reading (dBm)	Factor (dB)	Level (dBm)	Limit (dBm)	Margin (dB)	Detector	P/F
1	3800.000	-15.44	-31.48	-46.92	-13.00	-33.92	peak	P
2	5700.000	-12.51	-32.48	-44.99	-13.00	-31.99	peak	P
3	7600.000	-8.49	-33.56	-42.05	-13.00	-29.05	peak	P
4 *	9500.000	-7.75	-32.87	-40.62	-13.00	-27.62	peak	P

Channel:	LTE Band 2 CH-H	Polarization:	Vertical

No.	Frequency (MHz)	Reading (dBm)	Factor (dB)	Level (dBm)	Limit (dBm)	Margin (dB)	Detector	P/F
1	3800.000	-15.44	-31.48	-46.92	-13.00	-33.92	peak	P
2	5700.000	-12.01	-32.48	-44.49	-13.00	-31.49	peak	P
3	7600.000	-7.49	-33.56	-41.05	-13.00	-28.05	peak	P
4 *	9500.000	-7.75	-32.87	-40.62	-13.00	-27.62	peak	P

Band	Band 4(16QAM, 20MHz)	Test channel:	Lowest
Test mode:		Temperature :	25°C
		Relative Humidity:	56%

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

Channel:	LTE Band 4 CH-L	Polarization:	Horizontal

No.	Frequency (MHz)	Reading (dBm)	Factor (dB)	Level (dBm)	Limit (dBm)	Margin (dB)	Detector	P/F
1	3440.000	-26.19	-21.25	-47.44	-13.00	-34.44	peak	P
2	5160.000	-22.51	-22.05	-44.56	-13.00	-31.56	peak	P
3	6880.000	-20.53	-22.89	-43.42	-13.00	-30.42	peak	P
4 *	8600.000	-17.97	-24.39	-42.36	-13.00	-29.36	peak	P

Channel:	LTE Band 4 CH-L	Polarization:	Vertical

No.	Frequency (MHz)	Reading (dBm)	Factor (dB)	Level (dBm)	Limit (dBm)	Margin (dB)	Detector	P/F
1	3440.000	-15.69	-31.25	-46.94	-13.00	-33.94	peak	P
2	5160.000	-14.51	-32.05	-46.56	-13.00	-33.56	peak	P
3	6880.000	-11.53	-32.89	-44.42	-13.00	-31.42	peak	P
4 *	8600.000	-7.97	-34.39	-42.36	-13.00	-29.36	peak	P

Band	Band 4(16QAM, 20MHz)	Test channel:	Middle
Test mode:		Temperature :	25°C
		Relative Humidity:	56%

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

Channel:	LTE Band 4 CH-M	Polarization:	Horizontal

No.	Frequency (MHz)	Reading (dBm)	Factor (dB)	Level (dBm)	Limit (dBm)	Margin (dB)	Detector	P/F
1	3465.000	-24.71	-21.27	-45.98	-13.00	-32.98	peak	P
2	5197.500	-20.63	-22.15	-42.78	-13.00	-29.78	peak	P
3	6930.000	-20.83	-23.02	-43.85	-13.00	-30.85	peak	P
4 *	8662.500	-17.25	-24.29	-41.54	-13.00	-28.54	peak	P

Channel:	LTE Band 4 CH-M	Polarization:	Vertical

No.	Frequency (MHz)	Reading (dBm)	Factor (dB)	Level (dBm)	Limit (dBm)	Margin (dB)	Detector	P/F
1	3465.000	-14.71	-31.27	-45.98	-13.00	-32.98	peak	P
2	5197.500	-11.63	-32.15	-43.78	-13.00	-30.78	peak	P
3	6930.000	-11.83	-33.02	-44.85	-13.00	-31.85	peak	P
4 *	8662.500	-8.75	-34.29	-43.04	-13.00	-30.04	peak	P

Band	Band 4(16QAM, 20MHz)	Test channel:	Highest
Test mode:		Temperature :	25°C
		Relative Humidity:	56%

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

Channel:	LTE Band 4 CH-H	Polarization:	Horizontal

No.	Frequency (MHz)	Reading (dBm)	Factor (dB)	Level (dBm)	Limit (dBm)	Margin (dB)	Detector	P/F
1	3490.000	-25.77	-21.29	-47.06	-13.00	-34.06	peak	P
2	5235.000	-21.66	-22.26	-43.92	-13.00	-30.92	peak	P
3	6980.000	-20.59	-23.15	-43.74	-13.00	-30.74	peak	P
4 *	8725.000	-18.48	-24.19	-42.67	-13.00	-29.67	peak	P

Channel:	LTE Band 4 CH-H	Polarization:	Vertical

No.	Frequency (MHz)	Reading (dBm)	Factor (dB)	Level (dBm)	Limit (dBm)	Margin (dB)	Detector	P/F
1	3490.000	-14.27	-31.29	-45.56	-13.00	-32.56	peak	P
2	5235.000	-10.16	-32.26	-42.42	-13.00	-29.42	peak	P
3	6980.000	-9.59	-33.15	-42.74	-13.00	-29.74	peak	P
4 *	8725.000	-7.48	-34.19	-41.67	-13.00	-28.67	peak	P

Band	Band 5(QPSK, 10MHz)	Test channel:	Lowest
Test mode:		Temperature :	25°C
		Relative Humidity:	56%

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

Channel:	LTE Band 5 CH-L	Polarization:	Horizontal

No.	Frequency (MHz)	Reading (dBm)	Factor (dB)	Level (dBm)	Limit (dBm)	Margin (dB)	Detector	P/F
1	1658.000	-33.74	-20.31	-54.05	-13.00	-41.05	peak	P
2	2487.000	-29.86	-21.41	-51.27	-13.00	-38.27	peak	P
3 *	3316.000	-26.44	-21.16	-47.60	-13.00	-34.60	peak	P
4	4145.000	-26.09	-21.63	-47.72	-13.00	-34.72	peak	P

Channel:	LTE Band 5 CH-L	Polarization:	Vertical

No.	Frequency (MHz)	Reading (dBm)	Factor (dB)	Level (dBm)	Limit (dBm)	Margin (dB)	Detector	P/F
1	1673.000	-23.36	-30.30	-53.66	-13.00	-40.66	peak	P
2	2509.500	-18.45	-31.39	-49.84	-13.00	-36.84	peak	P
3 *	3346.000	-16.14	-31.18	-47.32	-13.00	-34.32	peak	P
4	4182.500	-16.33	-31.64	-47.97	-13.00	-34.97	peak	P

Band	Band 5(QPSK, 10MHz)	Test channel:	Middle
Test mode:		Temperature :	25°C
		Relative Humidity:	56%

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

Channel:	LTE Band 5 CH-M	Polarization:	Horizontal

No.	Frequency (MHz)	Reading (dBm)	Factor (dB)	Level (dBm)	Limit (dBm)	Margin (dB)	Detector	P/F
1	1673.000	-34.86	-20.30	-55.16	-13.00	-42.16	peak	P
2	2509.500	-29.95	-21.39	-51.34	-13.00	-38.34	peak	P
3 *	3346.000	-26.14	-21.18	-47.32	-13.00	-34.32	peak	P
4	4182.500	-26.33	-21.64	-47.97	-13.00	-34.97	peak	P

Channel:	LTE Band 5 CH-M	Polarization:	Vertical

No.	Frequency (MHz)	Reading (dBm)	Factor (dB)	Level (dBm)	Limit (dBm)	Margin (dB)	Detector	P/F
1	1673.000	-24.86	-30.30	-55.16	-13.00	-42.16	peak	P
2	2509.500	-19.95	-31.39	-51.34	-13.00	-38.34	peak	P
3 *	3346.000	-16.14	-31.18	-47.32	-13.00	-34.32	peak	P
4	4182.500	-16.33	-31.64	-47.97	-13.00	-34.97	peak	P

Band	Band 5(QPSK, 10MHz)	Test channel:	Highest
Test mode:		Temperature :	25°C
		Relative Humidity:	56%

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

Channel:	LTE Band 5 CH-H	Polarization:	Horizontal

No.	Frequency (MHz)	Reading (dBm)	Factor (dB)	Level (dBm)	Limit (dBm)	Margin (dB)	Detector	P/F
1	1688.000	-34.94	-20.29	-55.23	-13.00	-42.23	peak	P
2	2532.000	-29.84	-21.37	-51.21	-13.00	-38.21	peak	P
3 *	3376.000	-26.10	-21.20	-47.30	-13.00	-34.30	peak	P
4	4220.000	-26.91	-21.64	-48.55	-13.00	-35.55	peak	P

Channel:	LTE Band 5 CH-H	Polarization:	Vertical

No.	Frequency (MHz)	Reading (dBm)	Factor (dB)	Level (dBm)	Limit (dBm)	Margin (dB)	Detector	P/F
1	1688.000	-24.44	-30.29	-54.73	-13.00	-41.73	peak	P
2	2532.000	-18.34	-31.37	-49.71	-13.00	-36.71	peak	P
3 *	3376.000	-15.60	-31.20	-46.80	-13.00	-33.80	peak	P
4	4220.000	-16.41	-31.64	-48.05	-13.00	-35.05	peak	P

Band	Band 12(16QAM, 10MHz)	Test channel:	Lowest
Test mode:		Temperature :	25°C
		Relative Humidity:	56%

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

Channel:	LTE Band 12 CH-L	Polarization:	Horizontal

No.	Frequency (MHz)	Reading (dBm)	Factor (dB)	Level (dBm)	Limit (dBm)	Margin (dB)	Detector	P/F
1	1408.000	-34.35	-20.09	-54.44	-13.00	-41.44	peak	P
2	2112.000	-31.94	-20.62	-52.56	-13.00	-39.56	peak	P
3	2816.000	-28.15	-21.08	-49.23	-13.00	-36.23	peak	P
4 *	3520.000	-25.14	-21.31	-46.45	-13.00	-33.45	peak	P

Channel:	LTE Band 12 CH-L	Polarization:	Vertical

No.	Frequency (MHz)	Reading (dBm)	Factor (dB)	Level (dBm)	Limit (dBm)	Margin (dB)	Detector	P/F
1	1408.000	-23.35	-30.09	-53.44	-13.00	-40.44	peak	P
2	2112.000	-20.94	-30.62	-51.56	-13.00	-38.56	peak	P
3	2816.000	-17.65	-31.08	-48.73	-13.00	-35.73	peak	P
4 *	3520.000	-15.14	-31.31	-46.45	-13.00	-33.45	peak	P

Band	Band 12(16QAM, 10MHz)	Test channel:	Middle
Test mode:		Temperature :	25°C
		Relative Humidity:	56%

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

Channel:	LTE Band 12 CH-M	Polarization:	Horizontal

No.	Frequency (MHz)	Reading (dBm)	Factor (dB)	Level (dBm)	Limit (dBm)	Margin (dB)	Detector	P/F
1	1415.000	-35.26	-20.11	-55.37	-13.00	-42.37	peak	P
2	2122.500	-32.21	-20.66	-52.87	-13.00	-39.87	peak	P
3	2830.000	-27.60	-21.07	-48.67	-13.00	-35.67	peak	P
4 *	3537.500	-24.95	-21.32	-46.27	-13.00	-33.27	peak	P

Channel:	LTE Band 12 CH-M	Polarization:	Vertical

No.	Frequency (MHz)	Reading (dBm)	Factor (dB)	Level (dBm)	Limit (dBm)	Margin (dB)	Detector	P/F
1	1415.000	-23.76	-30.11	-53.87	-13.00	-40.87	peak	P
2	2122.500	-21.21	-30.66	-51.87	-13.00	-38.87	peak	P
3	2830.000	-16.60	-31.07	-47.67	-13.00	-34.67	peak	P
4 *	3537.500	-14.95	-31.32	-46.27	-13.00	-33.27	peak	P

Band	Band 12(16QAM, 10MHz)	Test channel:	Highest
Test mode:		Temperature :	25°C

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

Channel:	LTE Band 12 CH-H	Polarization:	Horizontal

No.	Frequency (MHz)	Reading (dBm)	Factor (dB)	Level (dBm)	Limit (dBm)	Margin (dB)	Detector	P/F
1	1422.000	-34.36	-20.13	-54.49	-13.00	-41.49	peak	P
2	2133.000	-31.59	-20.72	-52.31	-13.00	-39.31	peak	P
3	2844.000	-27.49	-21.06	-48.55	-13.00	-35.55	peak	P
4 *	3555.000	-25.81	-21.33	-47.14	-13.00	-34.14	peak	P

Channel:	LTE Band 12 CH-H	Polarization:	Vertical

No.	Frequency (MHz)	Reading (dBm)	Factor (dB)	Level (dBm)	Limit (dBm)	Margin (dB)	Detector	P/F
1	1422.000	-23.36	-30.13	-53.49	-13.00	-40.49	peak	P
2	2133.000	-20.59	-30.72	-51.31	-13.00	-38.31	peak	P
3	2844.000	-16.99	-31.06	-48.05	-13.00	-35.05	peak	P
4 *	3555.000	-14.81	-31.33	-46.14	-13.00	-33.14	peak	P

Band	Band 17(16QAM, 10MHz)	Test channel:	Lowest
Test mode:		Temperature :	25°C
		Relative Humidity:	56%

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

Channel:	LTE Band 17 CH-L	Polarization:	Horizontal

No.	Frequency (MHz)	Reading (dBm)	Factor (dB)	Level (dBm)	Limit (dBm)	Margin (dB)	Detector	P/F
1	1418.000	-34.30	-20.13	-54.43	-13.00	-41.43	peak	P
2	2127.000	-31.65	-20.68	-52.33	-13.00	-39.33	peak	P
3	2836.000	-28.15	-21.06	-49.21	-13.00	-36.21	peak	P
4 *	3545.000	-25.49	-21.33	-46.82	-13.00	-33.82	peak	P

Channel:	LTE Band 17 CH-L	Polarization:	Vertical

No.	Frequency (MHz)	Reading (dBm)	Factor (dB)	Level (dBm)	Limit (dBm)	Margin (dB)	Detector	P/F
1	1418.000	-21.80	-30.13	-51.93	-13.00	-38.93	peak	P
2	2127.000	-21.15	-30.68	-51.83	-13.00	-38.83	peak	P
3	2836.000	-18.65	-31.06	-49.71	-13.00	-36.71	peak	P
4 *	3545.000	-15.49	-31.33	-46.82	-13.00	-33.82	peak	P

Band	Band 17(16QAM, 10MHz)	Test channel:	Middle
Test mode:		Temperature :	25°C
		Relative Humidity:	56%

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

Channel:	LTE Band 17 CH-M	Polarization:	Horizontal

No.	Frequency (MHz)	Reading (dBm)	Factor (dB)	Level (dBm)	Limit (dBm)	Margin (dB)	Detector	P/F
1	1420.000	-35.04	-20.13	-55.17	-13.00	-42.17	peak	P
2	2130.000	-31.95	-20.70	-52.65	-13.00	-39.65	peak	P
3	2840.000	-28.15	-21.06	-49.21	-13.00	-36.21	peak	P
4 *	3550.000	-25.49	-21.33	-46.82	-13.00	-33.82	peak	P

Channel:	LTE Band 17 CH-M	Polarization:	Vertical

No.	Frequency (MHz)	Reading (dBm)	Factor (dB)	Level (dBm)	Limit (dBm)	Margin (dB)	Detector	P/F
1	1240.000	-24.34	-29.52	-53.86	-13.00	-40.86	peak	P
2	2130.000	-20.95	-30.70	-51.65	-13.00	-38.65	peak	P
3	2840.000	-17.15	-31.06	-48.21	-13.00	-35.21	peak	P
4 *	3550.000	-14.49	-31.33	-45.82	-13.00	-32.82	peak	P

Band	Band 17(16QAM, 10MHz)	Test channel:	Highest
Test mode:		Temperature :	25°C

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

Channel:	LTE Band 17 CH-H	Polarization:	Horizontal

No.	Frequency (MHz)	Reading (dBm)	Factor (dB)	Level (dBm)	Limit (dBm)	Margin (dB)	Detector	P/F
1	1422.000	-35.04	-20.13	-55.17	-13.00	-42.17	peak	P
2	2133.000	-31.93	-20.72	-52.65	-13.00	-39.65	peak	P
3	2844.000	-27.18	-21.06	-48.24	-13.00	-35.24	peak	P
4 *	3555.000	-25.50	-21.33	-46.83	-13.00	-33.83	peak	P

Channel:	LTE Band 17 CH-H	Polarization:	Vertical

No.	Frequency (MHz)	Reading (dBm)	Factor (dB)	Level (dBm)	Limit (dBm)	Margin (dB)	Detector	P/F
1	1422.000	-24.54	-30.13	-54.67	-13.00	-41.67	peak	P
2	2133.000	-20.93	-30.72	-51.65	-13.00	-38.65	peak	P
3	2844.000	-16.18	-31.06	-47.24	-13.00	-34.24	peak	P
4 *	3555.000	-14.00	-31.33	-45.33	-13.00	-32.33	peak	P

Band / Test mode:	Band 66(16QAM, 20MHz)	Test channel:	Lowest
		Temperature :	25°C
		Relative Humidity:	56%

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

Channel:	LTE Band 66 CH-M	Polarization:	Horizontal

No.	Frequency (MHz)	Reading (dBm)	Factor (dB)	Level (dBm)	Limit (dBm)	Margin (dB)	Detector	P/F
1	3440.000	-24.18	-21.25	-45.43	-13.00	-32.43	peak	P
2	5160.000	-22.31	-22.05	-44.36	-13.00	-31.36	peak	P
3	6880.000	-21.11	-22.89	-44.00	-13.00	-31.00	peak	P
4 *	8600.000	-18.20	-24.39	-42.59	-13.00	-29.59	peak	P

Channel:	LTE Band 66 CH-M	Polarization:	Vertical

No.	Frequency (MHz)	Reading (dBm)	Factor (dB)	Level (dBm)	Limit (dBm)	Margin (dB)	Detector	P/F
1	3440.000	-22.68	-21.25	-43.93	-13.00	-30.93	peak	P
2	5160.000	-20.31	-22.05	-42.36	-13.00	-29.36	peak	P
3	6880.000	-19.61	-22.89	-42.50	-13.00	-29.50	peak	P
4 *	8600.000	-17.20	-24.39	-41.59	-13.00	-28.59	peak	P

Band / Test mode:	Band66QAM, 20MHz)	Test channel:	Middle
		Temperature :	25°C
		Relative Humidity:	56%

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

Channel:	LTE Band 66 CH-M	Polarization:	Horizontal

No.	Frequency (MHz)	Reading (dBm)	Factor (dB)	Level (dBm)	Limit (dBm)	Margin (dB)	Detector	P/F
1	3510.000	-26.03	-21.31	-47.34	-13.00	-34.34	peak	P
2	5265.000	-22.40	-22.35	-44.75	-13.00	-31.75	peak	P
3	7020.000	-21.09	-23.21	-44.30	-13.00	-31.30	peak	P
4 *	8775.000	-18.23	-24.11	-42.34	-13.00	-29.34	peak	P

Channel:	LTE Band 66 CH-M	Polarization:	Vertical

No.	Frequency (MHz)	Reading (dBm)	Factor (dB)	Level (dBm)	Limit (dBm)	Margin (dB)	Detector	P/F
1	3510.000	-15.03	-31.31	-46.34	-13.00	-33.34	peak	P
2	5265.000	-10.90	-32.35	-43.25	-13.00	-30.25	peak	P
3	7020.000	-9.59	-33.21	-42.80	-13.00	-29.80	peak	P
4 *	8775.000	-7.23	-34.11	-41.34	-13.00	-28.34	peak	P

Band / Test mode:	Band 66(16QAM, 20MHz)	Test channel:	Highest
		Temperature :	25°C

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

Channel:	LTE Band 66 CH-H	Polarization:	Horizontal

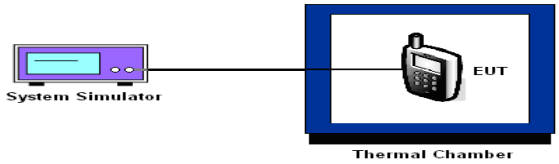
No.	Frequency (MHz)	Reading (dBm)	Factor (dB)	Level (dBm)	Limit (dBm)	Margin (dB)	Detector	P/F
1	3540.000	-25.90	-21.32	-47.22	-13.00	-34.22	peak	P
2	5310.000	-22.74	-22.47	-45.21	-13.00	-32.21	peak	P
3	7080.000	-20.88	-23.22	-44.10	-13.00	-31.10	peak	P
4 *	8850.000	-18.39	-23.99	-42.38	-13.00	-29.38	peak	P

Channel:	LTE Band 66 CH-H	Polarization:	Vertical

No.	Frequency (MHz)	Reading (dBm)	Factor (dB)	Level (dBm)	Limit (dBm)	Margin (dB)	Detector	P/F
1	3540.000	-14.90	-31.32	-46.22	-13.00	-33.22	peak	P
2	5310.000	-11.74	-32.47	-44.21	-13.00	-31.21	peak	P
3	7080.000	-9.38	-33.22	-42.60	-13.00	-29.60	peak	P
4 *	8850.000	-6.89	-33.99	-40.88	-13.00	-27.88	peak	P

5.6. Frequency Stability Measurement

Test Specification

Test Requirement:	FCC part 27.54, FCC part 22.355, 24.235
Test Method:	FCC Part 2.1055
Limit:	±2.5 ppm
Test Setup:	
Test Procedure:	**Test Procedures for Temperature Variation** 1. The testing follows FCC KDB 971168 D01v03 Section 9.0. 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 steps 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. **Test Procedures for Voltage Variation** 1. The testing follows FCC KDB 971168 D01v03 Section 9.0. 2. The EUT was placed in a temperature chamber at 25±5° C and connected with the system simulator. 3. The power supply voltage to the EUT was varied from BEP to 115% of the nominal value measured at the input to the EUT. 4. The variation in frequency was measured for the worst case. 5. The worst case(worst bandwidth) for frequency stability reported in the Test Data. The worst bandwidth is as follow: 1.4M is for LTE Band 2, 1.4M is for LTE Band 4, 1.4M is for LTE Band 5, 1.4M is for LTE Band 12, 5M is for LTE Band 17 1.4M is for LTE Band 66,
Test Result:	PASS

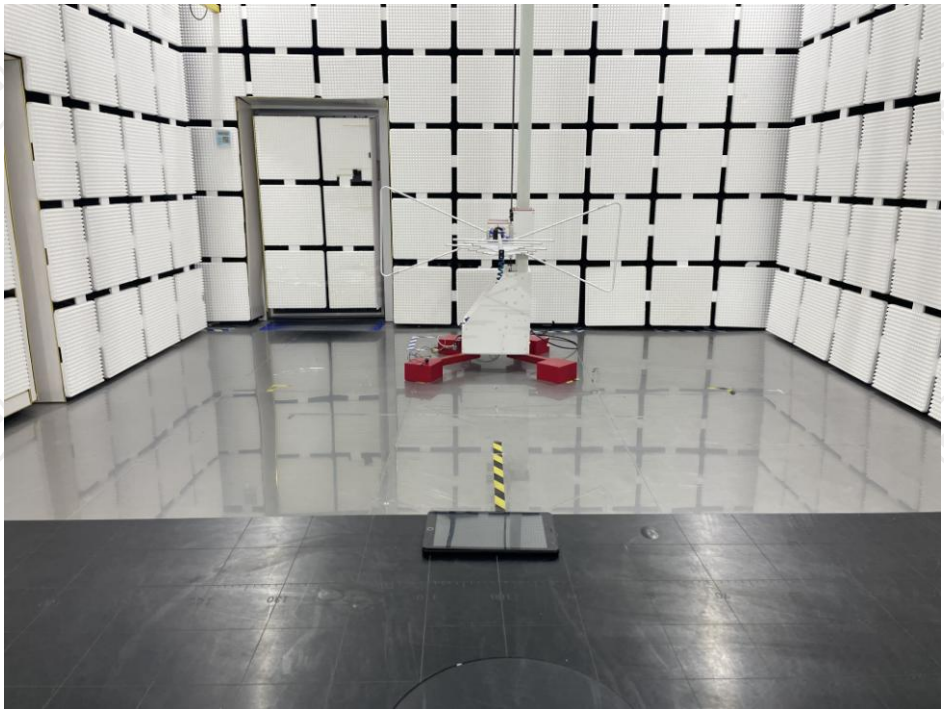
Hotline: 400-6611-140 Tel: 86-755-27673339 Fax: 86-755-27673332 http://www.tct-lab.com

Test Instruments

Equipment	Manufacturer	Model	Serial Number	Calibration Due
Wideband Radio Communication Tester	R&S	CMW500	114220	Jul. 03, 2023
Programable tempratuce and humidity chamber	JQ	JQ-2000	/	Jul. 04, 2023
DC power supply	Kingrang	KR3005K	/	Jul. 04, 2023
Combiner Box	AT890-RFB	Ascentest	/	/

Appendix A: Photographs of Test Setup

Radiated Emission



Hotline: 400-6611-140 Tel: 86-755-27673339 Fax: 86-755-27673332 http://www.tct-lab.com

Appendix B: Photographs of EUT

Refer to the test report No. TCT220921E019

Appendix of Test Data

For LTE Band 2, LTE Band 4,LTE Band 5, LTE Band 12, LTE Band 17, LTE Band 66,

********END OF REPORT********

Hotline: 400-6611-140 Tel: 86-755-27673339 Fax: 86-755-27673332 http://www.tct-lab.com