



SGS-CSTC Standards Technical Services (Suzhou) Co., Ltd.

Report No.: SUCR250300015106

Rev.: 01

Page: 1 of 50

TEST REPORT

Application No.: SUCR2503000151AT
Applicant: Shanghai Sunmi Technology Co.,Ltd.
Address of Applicant: Room 505, No.388 Song Hu Road, Yang Pu District, Shanghai, China
Manufacturer: Shanghai Sunmi Technology Co.,Ltd.
Address of Manufacturer: Room 505, No.388 Song Hu Road, Yang Pu District, Shanghai, China
EUT Description: Smart POS System
Model No.: T670A
Trade Mark: SUNMI
FCC ID: 2AH25T670A
Standards: 47 CFR Part 2
47 CFR Part 22
47 CFR Part 24
47 CFR Part 27
47 CFR Part 90
Date of Receipt: 2024-06-04 (Reference report SZCR240600210101)
2025-04-18
Date of Test: 2024-06-04 to 2024-08-09 (Reference report SZCR240600210101)
2025-04-18 to 2025-04-23
Date of Issue: 2025-04-28

Test Result :	PASS *
----------------------	---------------

* In the configuration tested, the EUT detailed in this report complied with the standards specified above.

This document is issued by the Company subject to its General Conditions of Service printed overleaf, available on request or accessible at <http://www.sgs.com/en/Terms-and-Conditions> and, for electronic format documents, subject to Terms and Conditions for Electronic Documents at <http://www.sgs.com/en/Terms-and-Conditions/Terms-e-Document>. Attention is drawn to the limitation of liability, indemnification and jurisdiction issues defined therein. Any holder of this document is advised that information contained hereon reflects the Company's findings at the time of its intervention only and within the limits of Client's instructions, if any. The Company's sole responsibility is to its Client and this document does not exonerate parties to a transaction from exercising all their rights and obligations under the transaction documents. This document cannot be reproduced except in full, without prior written approval of the Company. Any unauthorized alteration, forgery or falsification of the content or appearance of this document is unlawful and offenders may be prosecuted to the fullest extent of the law.

Unless otherwise stated the results shown in this test report refer only to the sample(s) tested and such sample(s) are retained for 30 days only.

Attention: To check the authenticity of testing / inspection report & certificate, please contact us at telephone:(86-755) 8307 1443, or email: CN.Doccheck@sgs.com

SGS-CSTC Standards Technical Services (Suzhou) Co., Ltd.
Wireless Laboratory

South of No. 6 Plant, No. 1, RunSheng Road, Suzhou Industrial Park,
Suzhou Area, China (Jiangsu) Pilot Free Trade Zone 215000

t (86-512) 6229 2980
www.sgsgroup.com.cn



SGS-CSTC Standards Technical Services (Suzhou) Co., Ltd.

Report No.: SUCR250300015106
Rev.: 01
Page: 2 of 50

Revision Record			
Version	Description	Date	Remark
00	Original	2025-04-28	/

Authorized for issue by:				
Tested By				
		Hayley Zhang / Project Manager		
Approved By				
		Cloud Peng/Technical Manager		



SGS-CSTC Standards Technical Services (Suzhou) Co., Ltd.

Report No.: SUCR250300015106

Rev.: 01

Page: 3 of 50

Contents

1	Test Summary	4
1.1	GSM850/UMTS Band 5/LTE Band 5/26(824~849 MHz)	4
1.2	GSM 1900/UMTS Band 2 /LTE Band 2 /25.....	5
1.3	UMTS Band 4 /LTE Band 4 /66.....	6
1.4	LTE Band 7/38/41	7
1.5	LTE Band 12/17	8
1.6	LTE Band 13.....	9
1.7	LTE Band 14.....	10
1.8	LTE Band 26(814~824 MHz)	12
1.9	LTE Band 30/40	13
1.10	LTE Band 71	15
2	General Information	16
2.1	Test Location	16
2.2	Test Facility.....	16
2.3	General Description of EUT	17
2.4	Test Mode.....	18
2.5	Test Environment.....	18
2.6	Description of Support Units	18
2.7	Technical Specification	19
2.8	Test Frequencies	21
3	Main Test Instruments	31
4	Measurement Uncertainty	33
5	Description of Tests.....	34
5.1	Conducted Output Power.....	34
5.2	Effective (Isotropic) Radiated Power of Transmitter.....	35
5.3	EIRP Power Density	36
5.4	Occupied Bandwidth	37
5.5	Band Edge at Antenna Terminals	38
5.6	Spurious And Harmonic Emissions at Antenna Terminal.....	39
5.7	Peak-Average Ratio.....	40
5.8	Field Strength of Spurious Radiation	41
5.9	Frequency Stability / Temperature Variation	45
5.10	Test Setups.....	46
5.11	Test Conditions.....	48
6	Appendixes.....	50



SGS-CSTC Standards Technical Services (Suzhou) Co., Ltd.

Report No.: SUCR250300015106

Rev.: 01

Page: 4 of 50

1 Test Summary

1.1 GSM850/UMTS Band 5/LTE Band 5/26(824~849 MHz)

Test Item	FCC Rule No.	Requirements	Test Result	Verdict
Effective (Isotropic) Radiated Power Output Data	§2.1046, §22.913(a)(5)	ERP \leq 7 W	Appendix B.1	Pass
Peak-Average Ratio	§22.913(d)	Limits \leq 13 dB	Reference report SZCR240600210101	Pass
Bandwidth	§2.1049	OBW: No limit. EBW: No limit.		Pass
Band Edges Compliance	§2.1051, §22.917(a)	\leq -13 dBm/1%*EBW, in 1 MHz bands immediately outside and adjacent to the frequency block.		Pass
Spurious Emission at Antenna Terminals	§2.1051, §22.917(a)	FCC: \leq -13 dBm/100 kHz, from 9 kHz to 10th harmonics but outside authorized operating frequency ranges.		Pass
Field Strength of Spurious Radiation	§2.1053, §22.917(a)	FCC: \leq -13 dBm/100 kHz.	Section 5.8	Pass
Frequency Stability	§2.1055(a)(1)(b) §2.1055(d)(2) §22.355	\pm 2.5ppm.	Reference report SZCR240600210101	Pass



SGS-CSTC Standards Technical Services (Suzhou) Co., Ltd.

Report No.: SUCR250300015106

Rev.: 01

Page: 5 of 50

1.2 GSM 1900/UMTS Band 2 /LTE Band 2 /25

Test Item	FCC Rule No.	Requirements	Test Result	Verdict
Effective (Isotropic) Radiated Power Output Data	§2.1046, §24.232(c)	$EIRP \leq 2\text{ W}$	Appendix B.1	Pass
Peak-Average Ratio	§24.232(d)	Limit $\leq 13\text{ dB}$	Reference report SZCR240600210101	Pass
Bandwidth	§2.1049	OBW: No limit. EBW: No limit.		Pass
Band Edges Compliance	§2.1051, §24.238(a)	$\leq -13\text{ dBm}/1\% \cdot \text{EBW}$, in 1 MHz bands immediately outside and adjacent to the frequency block.		Pass
Spurious Emission at Antenna Terminals	§2.1051, §24.238(a)	$\leq -13\text{ dBm}/1\text{ MHz}$, from 9 kHz to 10 th harmonics but outside authorized operating frequency ranges.		Pass
Field Strength of Spurious Radiation	§2.1053, §24.238(a)	$\leq -13\text{ dBm}/1\text{ MHz}$.	Section 5.8	Pass
Frequency Stability	§2.1055(a)(1)(b) §2.1055(d) (2) §24.235	Within authorized bands of operation/frequency block.	Reference report SZCR240600210101	Pass



SGS-CSTC Standards Technical Services (Suzhou) Co., Ltd.

Report No.: SUCR250300015106

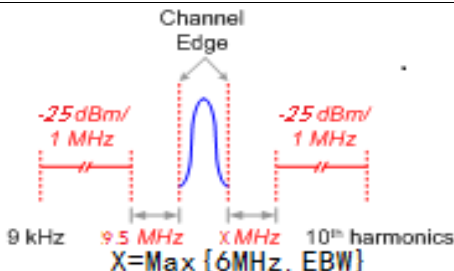
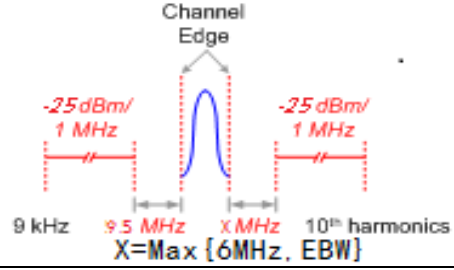
Rev.: 01

Page: 6 of 50

1.3 UMTS Band 4 /LTE Band 4 /66

Test Item	FCC Rule No.	Requirements	Test Result	Verdict
Effective (Isotropic) Radiated Power Output Data	§2.1046, §27.50(d)(4)	EIRP \leq 1 W	Appendix B.1	Pass
Peak-Average Ratio	§27.50(d)(5)	Limit \leq 13 dB	Reference report SZCR240600210101	Pass
Bandwidth	§2.1049	OBW: No limit. EBW: No limit.		Pass
Band Edges Compliance	§2.1051, §27.53(h)	\leq -13 dBm/1%*EBW, in 1 MHz bands immediately outside and adjacent to the frequency block.		Pass
Spurious Emission at Antenna Terminals	§2.1051, §27.53(h)	\leq -13 dBm/1 MHz, from 9 kHz to 10 th harmonics but outside authorized operating frequency ranges.		Pass
Field Strength of Spurious Radiation	§2.1053, §27.53(h)	\leq -13 dBm/1 MHz.	Section 5.8	Pass
Frequency Stability	§2.1055(a)(1)(b) §2.1055(d) (2) §27.54	Within authorized bands of operation/frequency block.	Reference report SZCR240600210101	Pass

1.4 LTE Band 7/38/41

Test Item	FCC Rule No.	Requirements	Test Result	Verdict
Effective (Isotropic) Radiated Power Output Data	§2.1046, §27.50(h)(2)	EIRP $\leq 2W$	Appendix B.1	Pass
Peak-Average Ratio	---	≤ 13 dB	Reference report SZCR240600210101	Pass
Bandwidth	§2.1049	OBW: No limit. EBW: No limit.		Pass
Band Edges Compliance	§2.1051, §27.53(m)(4)	For mobile digital stations, the attenuation factor shall be not less than 40 + 10 log (P) dB on all frequencies between the channel edge and 5 megahertz from the channel edge, 43 + 10 log (P) dB on all frequencies between 5 megahertz and X megahertz from the channel edge, and 55 + 10 log (P) dB on all frequencies more than X megahertz from the channel edge, where X is the greater of 6 megahertz or the actual emission bandwidth as defined in paragraph (m)(6) of this section. In addition, the attenuation factor shall not be less that 43 + 10 log (P) dB on all frequencies between 2490.5 MHz and 2496 MHz and 55 + 10 log (P) dB at or below 2490.5 MHz.		Pass
Spurious Emission at Antenna Terminals	§2.1051, §27.53(m)			Pass
Field Strength of Spurious Radiation	§2.1053, §27.53(m)		Section 5.8	Pass
Frequency Stability	§2.1055(a)(1)(b) §2.1055(d) (2) §27.54	Within authorized bands of operation/frequency block.	Reference report SZCR240600210101	Pass



SGS-CSTC Standards Technical Services (Suzhou) Co., Ltd.

Report No.: SUCR250300015106

Rev.: 01

Page: 8 of 50

1.5 LTE Band 12/17

Test Item	FCC Rule No.	Requirements	Test Result	Verdict
Effective (Isotropic) Radiated Power Output Data	§2.1046 §27.50(c)(10)	ERP ≤ 3 W.	Appendix B.1	Pass
Peak-Average Ratio	---	Limit≤13 dB	Reference report SZCR240600210101	Pass
Bandwidth	§2.1049	OBW: No limit. EBW: No limit.		Pass
Band Edges Compliance	§2.1051, §27.53(g)	≤ 43+10log10(P[Watts])		Pass
Spurious Emission at Antenna Terminals	§2.1051, §27.53(g)	≤ 43+10log10(P[Watts])		Pass
Field Strength of Spurious Radiation	§2.1053, §27.53(g)	FCC: ≤ -13 dBm/100 kHz.	Section 5.8	Pass
Frequency Stability	§2.1055(a)(1)(b) §2.1055(d) (2) §27.54	Within authorized bands of operation/frequency block.	Reference report SZCR240600210101	Pass



SGS-CSTC Standards Technical Services (Suzhou) Co., Ltd.

Report No.: SUCR250300015106

Rev.: 01

Page: 9 of 50

1.6 LTE Band 13

Test Item	FCC Rule No.	Requirements	Test Result	Verdict
Effective (Isotropic) Radiated Power Output Data	§2.1046, §27.50(b)(10)	ERP ≤ 3 W.	Appendix B.1	Pass
Peak-Average Ratio	---	Limit≤13 dB	Reference report SZCR240600210101	Pass
Bandwidth	§2.1049,	OBW: No limit. EBW: No limit.		Pass
Band Edges Compliance	§2.1051, §27.53(c)	≤ 43+10log10(P[Watts])		Pass
Spurious Emission at Antenna Terminals	§2.1051, §27.53(c) §27.53(f)	≤ -13 dBm/100 kHz, from 9 kHz to 10 th harmonics but outside authorized operating frequency ranges. On all frequencies between 763–775 MHz and 793–805 MHz, by a factor not less than 65 + 10 log (P) dB in a 6.25 kHz band segment, for mobile and portable stations. For operations in the 746-758 MHz, 775-788 MHz, and 805-806 MHz bands, emissions in the band 1559-1610 MHz shall be limited to -70 dBW/MHz equivalent isotropically radiated power (EIRP) for wideband signals, and -80 dBW EIRP for discrete emissions of less than 700 Hz bandwidth.		Pass
Field Strength of Spurious Radiation	§2.1053, §27.53(c) §27.53(f)	FCC: ≤ -13 dBm/100 kHz. For operations in the 746-758 MHz, 775-788 MHz, and 805-806 MHz bands, emissions in the band 1559-1610 MHz shall be limited to -70 dBW/MHz equivalent isotropically radiated power (EIRP) for wideband signals, and -80 dBW EIRP for discrete emissions of less than 700 Hz bandwidth.	Section 5.8	Pass
Frequency Stability	§2.1055(a)(1)(b) §2.1055(d) (2) §27.54	Within authorized bands of operation/frequency block.	Reference report SZCR240600210101	Pass



SGS-CSTC Standards Technical Services (Suzhou) Co., Ltd.

Report No.: SUCR250300015106

Rev.: 01

Page: 10 of 50

1.7 LTE Band 14

Test Item	FCC Rule No.	Requirements	Test Result	Verdict
Effective (Isotropic) Radiated Power Output Data	§2.1046 §90.542(a)	ERP ≤ 3 W.	Appendix B.1	Pass
Peak-Average Ratio	---	Limit ≤ 13 dB	Reference report SZCR240600210101	Pass
Bandwidth	§2.1049	OBW: No limit. EBW: No limit.		Pass
Emission Mask	§2.1051 §90.210(b)	Transmitters designed for operation under this part on frequencies other than listed in this section must meet the emission mask requirements of Emission Mask B. Equipment operating under this part on frequencies allocated to but shared with the Federal Government, must meet the applicable Federal Government technical standards (b) Emission Mask B. For transmitters that are equipped with an audio low-pass filter, the power of any emission must be attenuated below the unmodulated carrier power (P) as follows: (1) On any frequency removed from the assigned frequency by more than 50 percent, but not more than 100 percent of the authorized bandwidth: At least 25 dB.(2) On any frequency removed from the assigned frequency by more than 100 percent, but not more than 250 percent of the authorized bandwidth: At least 35 dB..(3) On any frequency removed from the assigned frequency by more than 250 percent of the authorized bandwidth: At least 43 + 10 log (P) dB.		Pass
Band Edges Compliance	§2.1051 §90.543(e)(2)(3)	(1) On all frequencies between 769-775 MHz and 799-805 MHz, by a factor not less than 76 + 10 log (P) dB in a 6.25 kHz band segment, for base and fixed stations.(2) On all frequencies between 769-775 MHz and 799-805 MHz, by a factor not less than 65 + 10 log (P) dB in a 6.25 kHz band segment, for mobile and portable stations.(3) On any frequency between 775-788 MHz, above 805 MHz, and below 758		Pass



SGS-CSTC Standards Technical Services (Suzhou) Co., Ltd.

Report No.: SUCR250300015106

Rev.: 01

Page: 11 of 50

		MHz, by at least $43 + 10 \log (P)$ dB.		
Spurious Emission at Antenna Terminals	§2.1051, §90.543(c) §90.543(f)	FCC: ≤ -13 dBm/100 kHz, from 9 kHz to 10th harmonics but outside authorized operating frequency ranges. For operations in the 758–775 MHz and 788–805 MHz bands, all emissions including harmonics in the band 1559–1610 MHz shall be limited to -70 dBW/ MHz equivalent isotropically radiated power (EIRP) for wideband signals, and -80 dBW EIRP for discrete emissions of less than 700 Hz bandwidth.		Pass
Field Strength of Spurious Radiation	§2.1053, §90.543(c) §90.543(f)	FCC: ≤ -13 dBm/100 kHz. For operations in the 758–775 MHz and 788–805 MHz bands, all emissions including harmonics in the band 1559–1610 MHz shall be limited to -70 dBW/ MHz equivalent isotropically radiated power (EIRP) for wideband signals, and -80 dBW EIRP for discrete emissions of less than 700 Hz bandwidth.	Section 5.8	Pass
Frequency Stability	§2.1055(a)(1)(b) §2.1055(d)(1) §90.213	Within authorized bands of operation/frequency block.	Reference report SZCR240600210101	Pass



SGS-CSTC Standards Technical Services (Suzhou) Co., Ltd.

Report No.: SUCR250300015106

Rev.: 01

Page: 12 of 50

1.8 LTE Band 26(814~824 MHz)

Test Item	FCC Rule No.	Requirements	Test Result	Verdict
Transmitter Conducted Power Output	§2.1046, §90.635(b)	< 100 W.	Appendix B.1	Pass
Peak-Average Ratio	---	Limits≤13 dB	Reference report SZCR240600210101	Pass
Bandwidth	§2.1049	OBW: No limit. EBW: No limit.		Pass
Emission Mask	§2.1051 § 90.691(a)	For any frequency removed from the EA licensee's frequency block by up to and including 37.5 kHz, the power of any emission shall be attenuated below the transmitter power (P) in watts by at least $116 \log_{10}(f/6.1)$ decibels or $50+10\log_{10}(P)$ decibels or 80 decibels, whichever is the lesser attenuation, where f is the frequency removed from the center of the outer channel in the block in kilohertz and where f is greater than 12.5 kHz.		Pass
Spurious Emission at Antenna Terminals	§2.1051, §90.691	< $43 + 10\log_{10}(P[\text{Watts}])$ for all out-of-band emissions		Pass
Field Strength of Spurious Radiation	§2.1053, §90.691	< $43 + 10\log_{10}(P[\text{Watts}])$ for all out-of-band emissions	Section 5.8	Pass
Frequency Stability	§2.1055(a)(1)(b) §2.1055(d) (2) §90.213	Within authorized bands of operation/frequency block.	Reference report SZCR240600210101	Pass



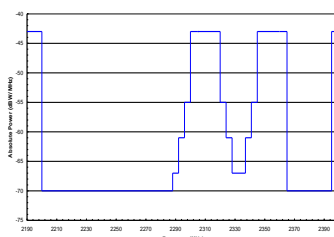
SGS-CSTC Standards Technical Services (Suzhou) Co., Ltd.

Report No.: SUCR250300015106

Rev.: 01

Page: 13 of 50

1.9 LTE Band 30/40

Test Item	FCC Rule No.	Requirements	Test Result	Verdict
Effective (Isotropic) Radiated Power Output Data	§2.1046, §27.50(a)(3)	EIRP \leq 50mW/1MHz EIRP \leq 250mW/5MHz	Appendix B.1	Pass
Peak-Average Ratio	---	FCC: Limit \leq 13 dB		Pass
Bandwidth	§2.1049,	OBW: No limit. EBW: No limit.		Pass
Band Edges Compliance	§2.1051, §27.53(a)(4)	≤ -13 dBm/1%*EBW, in 1 MHz bands immediately outside and adjacent to the frequency block.		Pass
Spurious Emission at Antenna Terminals	§2.1051, §27.53(a)(4)	<p>Figure 1: Unwanted Emissions for Mobile, Portable, and Low Power Fixed Subscriber Equipment</p>  <p>For mobile and portable stations operating in the 2305-2315 MHz and 2350-2360 MHz bands:</p> <p>(i) By a factor of not less than: $43 + 10 \log (P)$ dB on all frequencies between 2305 and 2320 MHz and on all frequencies between 2345 and 2360 MHz that are outside the licensed band(s) of operation, not less than $55 + 10 \log (P)$ dB on all frequencies between 2320 and 2324 MHz and on all frequencies between 2341 and 2345 MHz, not less than $61 + 10 \log (P)$ dB on all frequencies between 2324 and 2328 MHz and on all frequencies between 2337 and 2341 MHz, and not less than $67 + 10 \log (P)$ dB on all frequencies between 2328 and 2337 MHz;</p> <p>(ii) By a factor of not less than $43 + 10 \log (P)$ dB on all frequencies between 2300 and 2305 MHz, $55 + 10 \log (P)$ dB on all frequencies between 2296 and 2300 MHz, $61 + 10 \log (P)$ dB on all frequencies between 2292 and 2296 MHz,</p>	Reference report SZCR240600210101	Pass



SGS-CSTC Standards Technical Services (Suzhou) Co., Ltd.

Report No.: SUCR250300015106

Rev.: 01

Page: 14 of 50

		67 + 10 log (P) dB on all frequencies between 2288 and 2292 MHz, and 70 + 10 log (P) dB below 2288 MHz;(iii) By a factor of not less than 43 + 10 log (P) dB on all frequencies between 2360 and 2365 MHz, and not less than 70 + 10 log (P) dB above 2365 MHz.		
Field Strength of Spurious Radiation	§2.1053, §27.53(a)(4)	≤ -40dBm/MHz.	Section 5.8	Pass
Frequency Stability	§2.1055(a)(1)(b) §2.1055(d) (2) §27.54	within the range of the operating frequency blocks	Reference report SZCR240600210101	Pass



SGS-CSTC Standards Technical Services (Suzhou) Co., Ltd.

Report No.: SUCR250300015106

Rev.: 01

Page: 15 of 50

1.10 LTE Band 71

Test Item	FCC Rule No.	Requirements	Test Result	Verdict
Effective (Isotropic) Radiated Power Output Data	§2.1046 §27.50(c)(10)	$ERP \leq 3\text{ W}$	Appendix B.1	Pass
Peak-Average Ratio	---	Limit $\leq 13\text{ dB}$	Reference report SZCR240600210101	Pass
Bandwidth	§2.1049	OBW: No limit. EBW: No limit.		Pass
Band Edges Compliance	§2.1051, §27.53(g)	$\leq 43 + 10\log_{10}(P[\text{Watts}])$		Pass
Spurious Emission at Antenna Terminals	§2.1051, §27.53(g)	$\leq 43 + 10\log_{10}(P[\text{Watts}])$		Pass
Field Strength of Spurious Radiation	§2.1053, §27.53(g)	$\leq -13\text{ dBm/1 MHz.}$	Section 5.8	Pass
Frequency Stability	§2.1055(a)(1)(b) §2.1055(d) (2) §27.54	within the authorized bands of operation.	Reference report SZCR240600210101	Pass

Remark:

This test report (Report No.: SUCR250300015106 issue on 2025/04/28) is base on the original test report (Report No.: SZCR240600210101 issue on 2024/08/09) .

Review this report and original report, this report just changing the parts according to the declaration letter from client.

Considering to the difference, pre-scan were performed on the sample in this report to find the items which can be influential to the result in the original test report for fully retest, and only the worst mode data will be reflected in the report

Therefore in this report only test Field Strength of Spurious Radiation and update EIPR, other data is referenced from the original report (SZCR240600210101 issue on 2024/08/09).



SGS-CSTC Standards Technical Services (Suzhou) Co., Ltd.

Report No.: SUCR250300015106

Rev.: 01

Page: 16 of 50

2 General Information

2.1 Test Location

Company:	SGS-CSTC Standards Technical Services (Suzhou) Co., Ltd.
Address:	South of No. 6 Plant, No. 1, Runsheng Road, Suzhou Industrial Park, Suzhou Area, China (Jiangsu) Pilot Free Trade Zone
Post code:	215000
Test engineer:	Levi Li, Tizzy Song

2.2 Test Facility

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

- **A2LA (Certificate No. 6336.01)**

SGS-CSTC STANDARDS TECHNICAL SERVICES (SUZHOU) CO., LTD. is accredited by the American Association for Laboratory Accreditation(A2LA). Certificate No. 6336.01.

- **Innovation, Science and Economic Development Canada**

SGS-CSTC STANDARDS TECHNICAL SERVICES (SUZHOU) CO., LTD. has been recognized by ISED as an accredited testing laboratory.

CAB identifier: CN0120.

IC#: 27594.

- **FCC –Designation Number: CN1312**

SGS-CSTC STANDARDS TECHNICAL SERVICES (SUZHOU) CO., LTD. has been recognized as an accredited testing laboratory.

Designation Number: CN1312.

Test Firm Registration Number: 717327



SGS-CSTC Standards Technical Services (Suzhou) Co., Ltd.

Report No.: SUCR250300015106

Rev.: 01

Page: 17 of 50

2.3 General Description of EUT

EUT Description:	Smart POS System			
Model No.:	T670A			
Trade Mark:	SUNMI			
Hardware Version:	V1.1			
Software Version:	4.1.0			
Power Supply:	DC 3.87V			
Antenna Type:	<input type="checkbox"/> External, <input checked="" type="checkbox"/> Internal			
Antenna Gain:	GSM850:	0.84dBi	GSM1900:	1.43dBi
	WCDMA Band II:	1.43dBi	WCDMA Band IV:	-0.64dBi
	WCDMA Band V:	0.84dBi		
	LTE Band 2:	1.43dBi	LTE Band 4:	-0.64dBi
	LTE Band 5:	0.84dB	LTE Band 7:	1.50dBi
	LTE Band 12:	-5.49dBi	LTE Band 13:	-4.76dBi
	LTE Band 14:	-4.23dBi	LTE Band 17:	-5.49dBi
	LTE Band 25:	1.43dBi	LTE Band 26:	0.84dBi
	LTE Band 30:	1.50dBi	LTE Band 38:	1.78dBi
	LTE Band 41:	1.78dBi	LTE Band 66:	-0.46dBi
	LTE Band 71:	-5.48dBi	LTE Band 40:	1.90dBi
	Note: The antenna gain are derived from the gain information report provided by the manufacturer.			
RF Cable:	9kHz ~ 30MHz (0.3dB)	30MHz ~ 1000MHz (0.6dB)	1000MHz ~ 2000MHz (0.8dB)	
	2000MHz ~ 4000MHz (1.1dB)	4000MHz ~ 6000MHz (1.8dB)	6000MHz ~ 12750MHz (2.6dB)	
	Above 12750MHz (3.5dB)			
Remark: As above information is provided and confirmed by the applicant. SGS is not liable to the accuracy, suitability, reliability or/and integrity of the information.				



SGS-CSTC Standards Technical Services (Suzhou) Co., Ltd.

Report No.: SUCR250300015106

Rev.: 01

Page: 18 of 50

2.4 Test Mode

Test Mode	Test Modes Description
GSM/TM1	GSM system, GSM/GPRS, GMSK modulation
GSM/TM2	GSM system, EGPRS, 8PSK modulation
UMTS/TM1	UMTS system, WCDMA, QPSK modulation
LTE/TM1	LTE system, QPSK modulation
LTE/TM2	LTE system, 16QAM modulation
Remark: The test mode(s) are selected according to relevant radio technology specifications.	

2.5 Test Environment

Environment Parameter	101 kPa Selected Values During Tests	
Relative Humidity	44-46 % RH Ambient	
Value	Temperature(°C)	Voltage(V)
NTNV	22~23	3.87
LTLV	-10	3.55
LTHV	-10	4.42
HTLV	55	3.55
HTHV	55	4.42
Remark:		
NV: Normal Voltage	LV: Low Extreme Test Voltage	HV: High Extreme Test Voltage
NT: Normal Temperature	LT: Low Extreme Test Temperature	HT: High Extreme Test Temperature

2.6 Description of Support Units

The EUT has been tested as an independent unit.



SGS-CSTC Standards Technical Services (Suzhou) Co., Ltd.

Report No.: SUCR250300015106

Rev.: 01

Page: 19 of 50

2.7 Technical Specification

Characteristics	Description			
Radio System Type	<input checked="" type="checkbox"/> GSM	<input checked="" type="checkbox"/> UMTS	<input checked="" type="checkbox"/> LTE	
Supported Frequency Range	Band	TX		RX
	GSM850	824 to 849 MHz		869 to 894 MHz
	GSM1900	1850 to 1910 MHz		1930 to 1990 MHz
	UMTS Band II	1850 to 1910 MHz		1930 to 1990 MHz
	UMTS Band IV	1710 to 1755 MHz		2110 to 2155 MHz
	UMTS Band V	824 to 849 MHz		869 to 894 MHz
	LTE Band 2	1850 to 1910 MHz		1930 to 1990 MHz
	LTE Band 4	1710 to 1755 MHz		2110 to 2155 MHz
	LTE Band 5	824 to 849 MHz		869 to 894 MHz
	LTE Band 7	2500 to 2570 MHz		2620 to 2690 MHz
	LTE Band 12	699 to 716 MHz		729 to 746 MHz
	LTE Band 13	777 to 787 MHz		746 to 756 MHz
	LTE Band 14	788 to 798 MHz		758 to 768 MHz
	LTE Band 17	704 to 716 MHz		734 to 746 MHz
	LTE Band 25	1850 to 1915MHz		1930 to 1995 MHz
	LTE Band 26 (814 to 824 MHz)	814 to 824MHz		859 to 869 MHz
	LTE Band 26 (824 to 849 MHz)	824 to 849 MHz		869 to 894 MHz
	LTE Band 30	2305 to 2315 MHz		2350 to 2360 MHz
	LTE Band 38	2570 to 2620 MHz		2570 to 2620 MHz
	LTE Band 40 (2305 to 2315 MHz)	2305 to 2315 MHz		2305 to 2315 MHz
	LTE Band 40 (2350 to 2360 MHz)	2350 to 2360 MHz		2350 to 2360 MHz
	LTE Band 41	2496 to 2690MHz		2496 to 2690MHz
	LTE Band 66	1710 to 1780 MHz		2110 to 2200 MHz
	LTE Band 71	663 to 698 MHz		617 to 652 MHz
Supported Channel Bandwidth	GSM system:	<input checked="" type="checkbox"/> 0.2 MHz		
	UMTS system:	<input checked="" type="checkbox"/> 5 MHz		
	LTE Band 2	<input checked="" type="checkbox"/> 1.4 MHz <input checked="" type="checkbox"/> 3 MHz <input checked="" type="checkbox"/> 5 MHz <input checked="" type="checkbox"/> 10 MHz <input checked="" type="checkbox"/> 15 MHz <input checked="" type="checkbox"/> 20 MHz		
	LTE Band 4	<input checked="" type="checkbox"/> 1.4 MHz <input checked="" type="checkbox"/> 3 MHz <input checked="" type="checkbox"/> 5 MHz <input checked="" type="checkbox"/> 10 MHz <input checked="" type="checkbox"/> 15 MHz <input checked="" type="checkbox"/> 20 MHz		



SGS-CSTC Standards Technical Services (Suzhou) Co., Ltd.

Report No.: SUCR250300015106

Rev.: 01

Page: 20 of 50

	LTE Band 5	<input checked="" type="checkbox"/> 1.4 MHz	<input checked="" type="checkbox"/> 3 MHz	<input checked="" type="checkbox"/> 5 MHz	<input checked="" type="checkbox"/> 10 MHz
	LTE Band 7	<input checked="" type="checkbox"/> 5 MHz	<input checked="" type="checkbox"/> 10 MHz	<input checked="" type="checkbox"/> 15 MHz	<input checked="" type="checkbox"/> 20 MHz
	LTE Band 12	<input checked="" type="checkbox"/> 1.4 MHz	<input checked="" type="checkbox"/> 3 MHz	<input checked="" type="checkbox"/> 5 MHz	<input checked="" type="checkbox"/> 10 MHz
	LTE Band 13	<input checked="" type="checkbox"/> 5 MHz	<input checked="" type="checkbox"/> 10 MHz		
	LTE Band 14	<input checked="" type="checkbox"/> 5 MHz	<input checked="" type="checkbox"/> 10 MHz		
	LTE Band 17	<input checked="" type="checkbox"/> 5 MHz	<input checked="" type="checkbox"/> 10 MHz		
	LTE Band 25	<input checked="" type="checkbox"/> 1.4 MHz	<input checked="" type="checkbox"/> 3 MHz	<input checked="" type="checkbox"/> 5 MHz	<input checked="" type="checkbox"/> 10 MHz
		<input checked="" type="checkbox"/> 15 MHz	<input checked="" type="checkbox"/> 20 MHz		
	LTE Band 26(814-824)	<input checked="" type="checkbox"/> 1.4 MHz	<input checked="" type="checkbox"/> 3 MHz	<input checked="" type="checkbox"/> 5 MHz	<input checked="" type="checkbox"/> 10 MHz
	LTE Band 26(824-849)	<input checked="" type="checkbox"/> 1.4 MHz	<input checked="" type="checkbox"/> 3 MHz	<input checked="" type="checkbox"/> 5 MHz	<input checked="" type="checkbox"/> 10 MHz
		<input checked="" type="checkbox"/> 15 MHz			
	LTE Band 30	<input checked="" type="checkbox"/> 5 MHz	<input checked="" type="checkbox"/> 10 MHz		
	LTE Band 38	<input checked="" type="checkbox"/> 5 MHz	<input checked="" type="checkbox"/> 10 MHz	<input checked="" type="checkbox"/> 15 MHz	<input checked="" type="checkbox"/> 20 MHz
	LTE Band 40	<input checked="" type="checkbox"/> 5 MHz	<input checked="" type="checkbox"/> 10 MHz		
	LTE Band 41	<input checked="" type="checkbox"/> 5 MHz	<input checked="" type="checkbox"/> 10 MHz	<input checked="" type="checkbox"/> 15 MHz	<input checked="" type="checkbox"/> 20 MHz
	LTE Band 66	<input checked="" type="checkbox"/> 1.4 MHz	<input checked="" type="checkbox"/> 3 MHz	<input checked="" type="checkbox"/> 5 MHz	<input checked="" type="checkbox"/> 10 MHz
		<input checked="" type="checkbox"/> 15MHz	<input checked="" type="checkbox"/> 20MHz		
	LTE Band 71	<input checked="" type="checkbox"/> 5MHz	<input checked="" type="checkbox"/> 10MHz	<input checked="" type="checkbox"/> 15MHz	<input checked="" type="checkbox"/> 20MHz
	Note: 1. WCDMA supports HSUPA, HSDPA, DC-HSDPA, HSPA+, but only the worst case was tested and the data displayed in this report. 2.The 2305-2315MHz and 2350-2360MHz duty cycles are 30%.				



SGS-CSTC Standards Technical Services (Suzhou) Co., Ltd.

Report No.: SUCR250300015106

Rev.: 01

Page: 21 of 50

2.8 Test Frequencies

Test Mode	TX / RX	RF Channel		
		Low (L)	Middle (M)	High (H)
GSM850	TX	Channel 128	Channel 190	Channel 251
		824.2MHz	836.6 MHz	848.8 MHz
	RX	Channel 128	Channel 190	Channel 251
		869.2 MHz	881.6 MHz	893.8 MHz

Test Mode	TX / RX	RF Channel		
		Low (L)	Middle (M)	High (H)
GSM1900	TX	Channel 512	Channel 661	Channel 810
		1850.2MHz	1880.0 MHz	1909.8 MHz
	RX	Channel 512	Channel 661	Channel 810
		1930.2 MHz	1960.0 MHz	1989.8 MHz

Test Mode	TX / RX	RF Channel		
		Low (L)	Middle (M)	High (H)
WCDMA Band II	TX	Channel 9262	Channel 9400	Channel 9538
		1852.4 MHz	1880.0 MHz	1907.6 MHz
	RX	Channel 9662	Channel 9800	Channel 9938
		1932.4 MHz	1960.0 MHz	1987.6 MHz

Test Mode	TX / RX	RF Channel		
		Low (L)	Middle (M)	High (H)
WCDMA Band IV	TX	Channel 1312	Channel 1413	Channel 1513
		1712.4MHz	1732.6 MHz	1752.6 MHz
	RX	Channel 1537	Channel 1638	Channel 1738
		2112.4 MHz	2132.6 MHz	2152.6 MHz

Test Mode	TX / RX	RF Channel		
		Low (L)	Middle (M)	High (H)
WCDMA Band V	TX	Channel 4132	Channel 4182	Channel 4233
		826.4MHz	836.4 MHz	846.6 MHz
	RX	Channel 4357	Channel 4407	Channel 4458
		871.4 MHz	881.4 MHz	891.6 MHz



SGS-CSTC Standards Technical Services (Suzhou) Co., Ltd.

Report No.: SUCR250300015106

Rev.: 01

Page: 22 of 50

Test Mode	Bandwidth	TX / RX	RF Channel		
			Low (L)	Middle (M)	High (H)
LTE Band 2	1.4MHz	TX	Channel 18607	Channel 18900	Channel 19193
			1850.7 MHz	1880 MHz	1909.3 MHz
		RX	Channel 607	Channel 900	Channel 1193
			1930.7 MHz	1960 MHz	1989.3 MHz
	3MHz	TX	Channel 18615	Channel 18900	Channel 19185
			1851.5 MHz	1880 MHz	1908.5 MHz
		RX	Channel 615	Channel 900	Channel 1185
			1931.5 MHz	1960 MHz	1988.5 MHz
	5MHz	TX	Channel 18625	Channel 18900	Channel 19175
			1852.5 MHz	1880 MHz	1907.5 MHz
		RX	Channel 625	Channel 900	Channel 1175
			1932.5 MHz	1960 MHz	1987.5 MHz
	10MHz	TX	Channel 18650	Channel 18900	Channel 19150
			1855 MHz	1880 MHz	1905 MHz
		RX	Channel 650	Channel 900	Channel 1150
			1935 MHz	1960 MHz	1985 MHz
	15MHz	TX	Channel 18675	Channel 18900	Channel 19125
			1857.5 MHz	1880 MHz	1902.5 MHz
		RX	Channel 675	Channel 900	Channel 1125
			1937.5 MHz	1960 MHz	1982.5 MHz
	20MHz	TX	Channel 18700	Channel 18900	Channel 19100
			1860 MHz	1880 MHz	1900 MHz
		RX	Channel 700	Channel 900	Channel 1100
			1940 MHz	1960 MHz	1980 MHz



SGS-CSTC Standards Technical Services (Suzhou) Co., Ltd.

Report No.: SUCR250300015106

Rev.: 01

Page: 23 of 50

Test Mode	Bandwidth	TX / RX	RF Channel		
			Low (L)	Middle (M)	High (H)
LTE Band 4	1.4MHz	TX	Channel 19957 1710.7 MHz	Channel 20175 1732.5 MHz	Channel 20393 1754.3 MHz
		RX	Channel 1957 2110.7 MHz	Channel 2175 2132.5MHz	Channel 2393 2154.3 MHz
	3MHz	TX	Channel 19965 1711.5 MHz	Channel 20175 1732.5 MHz	Channel 20385 1753.5 MHz
		RX	Channel 1965 2111.5 MHz	Channel 2175 2132.5MHz	Channel 2385 2153.5 MHz
	5MHz	TX	Channel 19975 1712.5 MHz	Channel 20175 1732.5 MHz	Channel 20375 1752.5 MHz
		RX	Channel 1975 2112.5 MHz	Channel 2175 2132.5MHz	Channel 2425 2157.5 MHz
	10MHz	TX	Channel 20000 1715 MHz	Channel 20175 1732.5 MHz	Channel 20350 1750 MHz
		RX	Channel 2000 2115 MHz	Channel 2175 2132.5MHz	Channel 2350 2150 MHz
	15MHz	TX	Channel 20025 1717.5 MHz	Channel 20175 1732.5 MHz	Channel 20325 1747.5 MHz
		RX	Channel 2025 2117.5 MHz	Channel 2175 2132.5MHz	Channel 2325 2147.5 MHz
	20MHz	TX	Channel 20050 1720 MHz	Channel 20175 1732.5 MHz	Channel 20300 1745 MHz
		RX	Channel 2050 2120 MHz	Channel 2175 2132.5MHz	Channel 2300 2145 MHz

Test Mode	Bandwidth	TX / RX	RF Channel		
			Low (L)	Middle (M)	High (H)
LTE Band 5	1.4MHz	TX	Channel 20407 824.7 MHz	Channel 20525 836.5 MHz	Channel 20643 848.3 MHz
		RX	Channel 2407 869.7 MHz	Channel 2525 881.5 MHz	Channel 2643 893.3 MHz
	3MHz	TX	Channel 20415 825.5 MHz	Channel 20525 836.5 MHz	Channel 20635 847.5 MHz
		RX	Channel 2415 870.5 MHz	Channel 2525 881.5 MHz	Channel 2635 892.5 MHz
	5MHz	TX	Channel 20425 826.5 MHz	Channel 20525 836.5 MHz	Channel 20625 846.5 MHz
		RX	Channel 2425 871.5 MHz	Channel 2525 881.5 MHz	Channel 2625 891.5 MHz
	10MHz	TX	Channel 20450 829 MHz	Channel 20525 836.5 MHz	Channel 20600 844 MHz
		RX	Channel 2450 874 MHz	Channel 2525 881.5 MHz	Channel 2600 889 MHz



SGS-CSTC Standards Technical Services (Suzhou) Co., Ltd.

Report No.: SUCR250300015106

Rev.: 01

Page: 24 of 50

Test Mode	Bandwidth	TX / RX	RF Channel		
			Low (L)	Middle (M)	High (H)
LTE Band 7	5MHz	TX	Channel 20775	Channel 21100	Channel 21425
			2502.5 MHz	2535 MHz	2567.5 MHz
		RX	Channel 2775	Channel 3100	Channel 5825
			2622.5 MHz	2655 MHz	2687.5 MHz
	10MHz	TX	Channel 20800	Channel 21100	Channel 21400
			2505 MHz	2535 MHz	2565 MHz
		RX	Channel 2800	Channel 3100	Channel 3400
			2625 MHz	2655 MHz	2685 MHz
	15MHz	TX	Channel 20825	Channel 21100	Channel 21375
			2507.5 MHz	2535 MHz	2562.5 MHz
		RX	Channel 2825	Channel 3100	Channel 3375
			2627.5 MHz	2655 MHz	2682.5 MHz
	20MHz	TX	Channel 20850	Channel 21100	Channel 21350
			2510 MHz	2535 MHz	2560 MHz
		RX	Channel 2850	Channel 3100	Channel 3350
			2630 MHz	2655 MHz	2680 MHz

Test Mode	Bandwidth	TX / RX	RF Channel		
			Low (L)	Middle (M)	High (H)
LTE Band 12	1.4MHz	TX	Channel 23017	Channel 23095	Channel 23173
			699.7 MHz	707.5 MHz	715.3 MHz
		RX	Channel 5017	Channel 5095	Channel 5173
			729.7 MHz	737.5 MHz	745.3 MHz
	3MHz	TX	Channel 23025	Channel 23095	Channel 23165
			700.5 MHz	707.5 MHz	714.5 MHz
		RX	Channel 5025	Channel 5095	Channel 5165
			730.5 MHz	737.5 MHz	744.5 MHz
	5MHz	TX	Channel 23035	Channel 23095	Channel 23155
			701.5 MHz	707.5 MHz	713.5 MHz
		RX	Channel 5035	Channel 5095	Channel 5155
			731.5 MHz	737.5 MHz	743.5 MHz
	10MHz	TX	Channel 23060	Channel 23095	Channel 23130
			704 MHz	707.5 MHz	711 MHz
		RX	Channel 5060	Channel 5095	Channel 5130
			734 MHz	737.5 MHz	741 MHz



SGS-CSTC Standards Technical Services (Suzhou) Co., Ltd.

Report No.: SUCR250300015106

Rev.: 01

Page: 25 of 50

Test Mode	Bandwidth	TX / RX	RF Channel		
			Low (L)	Middle (M)	High (H)
LTE Band 13	5MHz	TX	Channel 23205	Channel 23230	Channel 23255
			779.5 MHz	782 MHz	784.5 MHz
		RX	Channel 5205	Channel 5230	Channel 5255
			748.5 MHz	751 MHz	753.5 MHz
	10MHz	TX	Channel 23230	Channel 23230	Channel 23230
			782 MHz	782 MHz	782 MHz
		RX	Channel 5230	Channel 5230	Channel 5230
			751 MHz	751 MHz	751 MHz

Test Mode	Bandwidth	TX / RX	RF Channel		
			Low (L)	Middle (M)	High (H)
LTE Band 14	5MHz	TX	Channel 23305	Channel 23330	Channel 23355
			790.5 MHz	793 MHz	795.5 MHz
		RX	Channel 5305	Channel 5330	Channel 5355
			760.5 MHz	763 MHz	765.5 MHz
	10MHz	TX	Channel 23330	Channel 23330	Channel 23330
			793MHz	793 MHz	793 MHz
		RX	Channel 5330	Channel 5330	Channel 5330
			763MHz	763 MHz	763 MHz

Test Mode	Bandwidth	TX / RX	RF Channel		
			Low (L)	Middle (M)	High (H)
LTE Band 17	5MHz	TX	Channel 23755	Channel 23790	Channel 23825
			706.5 MHz	710 MHz	713.5 MHz
		RX	Channel 5755	Channel 5790	Channel 5825
			736.5 MHz	740 MHz	743.5 MHz
	10MHz	TX	Channel 23780	Channel 23790	Channel 23800
			709 MHz	710 MHz	711 MHz
		RX	Channel 5780	Channel 5790	Channel 5800
			739 MHz	740 MHz	741 MHz



SGS-CSTC Standards Technical Services (Suzhou) Co., Ltd.

Report No.: SUCR250300015106

Rev.: 01

Page: 26 of 50

Test Mode	Bandwidth	TX / RX	RF Channel		
			Low (L)	Middle (M)	High (H)
LTE Band 25	1.4MHz	TX	Channel 26047 1850.7 MHz	Channel 26365 1882.5 MHz	Channel 26683 1914.3 MHz
		RX	Channel 8047 1930.7 MHz	Channel 8365 1962.5 MHz	Channel 8683 1994.3 MHz
	3MHz	TX	Channel 26055 1851.5 MHz	Channel 26365 1882.5 MHz	Channel 26675 1913.5 MHz
		RX	Channel 8055 1931.5 MHz	Channel 8365 1962.5 MHz	Channel 8675 1993.5 MHz
	5MHz	TX	Channel 26065 1852.5 MHz	Channel 26365 1882.5 MHz	Channel 26665 1912.5 MHz
		RX	Channel 8065 1932.5 MHz	Channel 8365 1962.5 MHz	Channel 8665 1992.5 MHz
	10MHz	TX	Channel 26090 1855 MHz	Channel 26365 1882.5 MHz	Channel 26640 1910 MHz
		RX	Channel 8090 1935 MHz	Channel 8365 1962.5 MHz	Channel 8640 1990 MHz
	15MHz	TX	Channel 26115 1857.5 MHz	Channel 26365 1882.5 MHz	Channel 26615 1907.5 MHz
		RX	Channel 8115 1937.5 MHz	Channel 8365 1962.5 MHz	Channel 8615 1987.5 MHz
	20MHz	TX	Channel 26140 1860 MHz	Channel 26365 1882.5 MHz	Channel 26590 1905 MHz
		RX	Channel 8140 1940 MHz	Channel 8365 1962.5 MHz	Channel 8590 1985 MHz



SGS-CSTC Standards Technical Services (Suzhou) Co., Ltd.

Report No.: SUCR250300015106

Rev.: 01

Page: 27 of 50

Test Mode	Bandwidth	TX / RX	RF Channel		
			Low (L)	Middle (M)	High (H)
LTE Band 26 (814-824)	1.4MHz	TX	Channel 26697 814.7 MHz	Channel 26740 819 MHz	Channel 26783 823.3 MHz
		RX	Channel 8697 859.7 MHz	Channel 8740 864MHz	Channel 8783 868.3 MHz
	3MHz	TX	Channel 26705 815.5 MHz	Channel 26740 819 MHz	Channel 26775 822.5 MHz
		RX	Channel 8705 860.5 MHz	Channel 8740 864MHz	Channel 8775 867.5 MHz
	5MHz	TX	Channel 26715 816.5 MHz	Channel 26740 819 MHz	Channel 26765 821.5 MHz
		RX	Channel 8715 861.5 MHz	Channel 8740 864MHz	Channel 8765 866.5 MHz
	10MHz	TX	Channel 26740 819 MHz	Channel 26740 819 MHz	Channel 26740 819 MHz
		RX	Channel 8740 864MHz	Channel 8740 864MHz	Channel 8740 864MHz

Test Mode	Bandwidth	TX / RX	RF Channel		
			Low (L)	Middle (M)	High (H)
LTE Band26 (824-849)	1.4MHz	TX	Channel 26797 824.7 MHz	Channel 26915 836.5 MHz	Channel 27033 848.3 MHz
		RX	Channel 8797 869.7 MHz	Channel 8915 881.5 MHz	Channel 9033 893.3 MHz
	3MHz	TX	Channel 26805 825.5 MHz	Channel 26915 836.5 MHz	Channel 27025 847.5 MHz
		RX	Channel 8805 860.5 MHz	Channel 8915 881.5 MHz	Channel 9025 892.5 MHz
	5MHz	TX	Channel 26815 826.5 MHz	Channel 26915 836.5 MHz	Channel 27015 846.5 MHz
		RX	Channel 8815 871.5 MHz	Channel 8915 881.5 MHz	Channel 9015 891.5 MHz
	10MHz	TX	Channel 26840 829 MHz	Channel 26915 836.5 MHz	Channel 26990 844 MHz
		RX	Channel 8840 874 MHz	Channel 8915 881.5 MHz	Channel 8990 889 MHz
	15MHz	TX	Channel 26865 831.5 MHz	Channel 26915 836.5 MHz	Channel 26965 841.5 MHz
		RX	Channel 8865 876.5 MHz	Channel 8915 881.5 MHz	Channel 8965 886.5 MHz



SGS-CSTC Standards Technical Services (Suzhou) Co., Ltd.

Report No.: SUCR250300015106

Rev.: 01

Page: 28 of 50

Test Mode	Bandwidth	TX / RX	RF Channel		
			Low (L)	Middle (M)	High (H)
LTE Band 30	5MHz	TX	Channel 27685 2307.5 MHz	Channel27710 2310MHz	Channel 27735 2312.5 MHz
		RX	Channel 9795 2352.5MHz	Channel 9820 2355 MHz	Channel 9845 2357.5MHz
	10MHz	TX	Channel 27710 2310 MHz	Channel27710 2310MHz	Channel27710 2310MHz
		RX	Channel 9820 2355 MHz	Channel 9820 2355 MHz	Channel 9820 2355 MHz

Test Mode	Bandwidth	TX / RX	RF Channel		
			Low (L)	Middle (M)	High (H)
LTE Band 38	5MHz	TX/RX	Channel 37775 2572.5 MHz	Channel38000 2595 MHz	Channel 38225 2617.5 MHz
			Channel 37800 2575 MHz	Channel38000 2595 MHz	Channel 38200 2615 MHz
	10MHz	TX/RX	Channel 37825 2577.5 MHz	Channel38000 2595 MHz	Channel 38175 2612.5 MHz
			Channel 37850 2580 MHz	Channel38000 2595 MHz	Channel 38150 2610 MHz

Test Mode	Bandwidth	TX / RX	RF Channel		
			Low (L)	Middle (M)	High (H)
LTE Band 40 (2305-2315)	5MHz	TX/RX	2307.5 MHz	2310.0 MHz	2312.5 MHz
	10MHz	TX/RX	/	2310.0 MHz	/

Test Mode	Bandwidth	TX / RX	RF Channel		
			Low (L)	Middle (M)	High (H)
LTE Band 40 (2350-2360)	5MHz	TX/RX	2352.5 MHz	2355.0 MHz	2357.5 MHz
	10MHz	TX/RX	/	2355.0 MHz	/



SGS-CSTC Standards Technical Services (Suzhou) Co., Ltd.

Report No.: SUCR250300015106

Rev.: 01

Page: 29 of 50

Test Mode	Bandwidth	TX / RX	RF Channel		
			Low (L)	Middle (M)	High (H)
LTE Band 41 (2496-2690)	5MHz	TX / RX	Channel 39675	Channel40620	Channel 41565
			2498.5 MHz	2593 MHz	2687.5 MHz
	10MHz	TX / RX	Channel 39700	Channel40620	Channel 41540
			2501 MHz	2593 MHz	2685 MHz
	15MHz	TX / RX	Channel 39725	Channel40620	Channel 41515
			2503.5 MHz	2593 MHz	2682.5 MHz
	20MHz	TX / RX	Channel 39750	Channel40620	Channel 41490
			2506 MHz	2593 MHz	2680 MHz

Test Mode	Bandwidth	TX / RX	RF Channel		
			Low (L)	Middle (M)	High (H)
LTE Band 66	1.4MHz	TX	Channel 131979	Channel 132322	Channel 132665
			1710.7 MHz	1745 MHz	1779.3 MHz
		RX	Channel 66443	Channel 66786	Channel 67329
			2110.7 MHz	2145MHz	2199.3 MHz
	3MHz	TX	Channel 131987	Channel 132322	Channel 132657
			1711.5 MHz	1745 MHz	1778.5MHz
		RX	Channel 66451	Channel 66786	Channel 67321
			2111.5 MHz	2145MHz	2198.5MHz
	5MHz	TX	Channel 131997	Channel 132322	Channel 132647
			1712.5 MHz	1745 MHz	1777.5 MHz
		RX	Channel 66461	Channel 66786	Channel 67311
			2112.5 MHz	2145MHz	2197.5 MHz
	10MHz	TX	Channel 132022	Channel 132322	Channel 132622
			1715 MHz	1745 MHz	1775 MHz
		RX	Channel 66486	Channel 66786	Channel 67286
			2115 MHz	2145MHz	2195 MHz
	15MHz	TX	Channel 132047	Channel 132322	Channel 132597
			1717.5 MHz	1745 MHz	1772.5 MHz
		RX	Channel 66511	Channel 66786	Channel 67261
			2117.5 MHz	2145MHz	2192.5 MHz
	20MHz	TX	Channel 132072	Channel 132322	Channel 132572
			1720 MHz	1745 MHz	1770 MHz
		RX	Channel 66536	Channel 66786	Channel 67236
			2120 MHz	2145MHz	2190 MHz



SGS-CSTC Standards Technical Services (Suzhou) Co., Ltd.

Report No.: SUCR250300015106

Rev.: 01

Page: 30 of 50

Test Mode	Bandwidth	TX / RX	RF Channel		
			Low (L)	Middle (M)	High (H)
LTE Band 71	5MHz	TX	Channel 133147	Channel 133297	Channel 133447
			665.5 MHz	680.5 MHz	695.5 MHz
		RX	Channel 68611	Channel 68761	Channel 68911
			619.5 MHz	634.5 MHz	649.5 MHz
	10MHz	TX	Channel 133172	Channel 133297	Channel 133422
			668 MHz	680.5 MHz	693 MHz
		RX	Channel 68636	Channel 68761	Channel 68886
			622 MHz	634.5 MHz	647 MHz
	15MHz	TX	Channel 133197	Channel 133297	Channel 133397
			670.5 MHz	680.5 MHz	690.5 MHz
		RX	Channel 68661	Channel 68761	Channel 68861
			624.5 MHz	634.5 MHz	644.5 MHz
	20MHz	TX	Channel 133222	Channel 133297	Channel 133372
			673 MHz	680.5 MHz	688 MHz
		RX	Channel 68686	Channel 68761	Channel 68836
			627 MHz	634.5 MHz	642 MHz



SGS-CSTC Standards Technical Services (Suzhou) Co., Ltd.

Report No.: SUCR250300015106

Rev.: 01

Page: 31 of 50

3 Main Test Instruments

RF Test Equipment					
Test Equipment	Manufacturer	Model No.	Inventory No.	Cal. date (yyyy/mm/dd)	Cal.Due date (yyyy/mm/dd)
Shielding Room	Brilliant-emc	N/A	SUWI-04-01-06	2022/11/09	2025/11/08
Temperature and humidity meter	MingGao	TH101B	SUWI-01-01-07	2025/02/13	2026/02/12
Signal Analyzer	ROHDE& SCHWARZ	FSV3030	SUWI-01-02-02	2024/05/08	2025/05/07
Measurement Software	TST	TST-271-2.0	SUWI-03-55-01	NCR	NCR
Measurement Software	Tonscend	J1120 RFAuto Test System	SUWI-02-03-01	NCR	NCR
Wideband Radio Communication Tester	Anritsu	MT8821C	SUWI-01-26-03	2024/11/19	2025/11/18
Wideband Radio Communication Tester	ROHDE& SCHWARZ	CMW500	SUWI-01-16-05	2024/05/06	2025/05/05
Signal Analyzer	ROHDE& SCHWARZ	FSW43	SUWI-01-02-04	2024/11/19	2025/11/18
Wideband Radio Communication Test Sttion	Anritsu	MT8000A	SUWI-01-34-02	2024/11/19	2025/11/18



SGS-CSTC Standards Technical Services (Suzhou) Co., Ltd.

Report No.: SUCR250300015106

Rev.: 01

Page: 32 of 50

9*6*6 Test Equipment					
Test Equipment	Manufacturer	Model No.	Inventory No.	Cal. date (yyyy/mm/dd)	Cal.Due date (yyyy/mm/dd)
Semi-Anechoic Chamber	Brilliant-emc	N/A	SUWI-04-02-02	2024/11/25	2027/11/24
Temperature and humidity meter	MingGao	TH101B	SUWI-01-01-13	2025/02/13	2026/02/12
Signal Analyzer	ROHDE&SCHWARZ	FSW43	SUWI-01-02-04	2024/05/08	2025/05/07
Signal Analyzer	KEYSIGHT	N9020A	SUWI-01-02-06	2024/11/21	2025/11/20
Test receiver	ROHDE&SCHWARZ	ESR7	SUWI-01-10-01	2025/01/15	2026/01/14
Receiving antenna	SCHWRZBECK MESS-ELEKTRONIK	VULB 9168	SUWI-01-11-04	2024/08/22	2025/08/21
Receiving antenna	SCHWRZBECK MESS-ELEKTRONIK	BBHA 9120D	SUWI-01-11-05	2023/11/25	2025/11/24
Receiving antenna	SCHWRZBECK MESS-ELEKTRONIK	BBHA 9170	SUWI-01-11-03	2023/05/12	2025/05/11
Active Loop Antenna	SCHWRZBECK MESS-ELEKTRONIK	FMZB 1519B	SUWI-01-21-01	2023/05/13	2025/05/12
Amplifier	Tonscend	TAP9K3G32	SUWI-01-14-06	2024/11/19	2025/11/18
Amplifier	Tonscend	TAP01018050	SUWI-01-14-04	2024/11/19	2025/11/18
Amplifier	Tonscend	TAP30M7G30	SUWI-01-14-05	2024/11/19	2025/11/18
Wideband Radio Communication Tester	Anritsu	MT8820C	SUWI-01-16-08	2025/01/20	2026/01/19
Wideband Radio Communication Tester	Anritsu	MT8821C	SUWI-01-26-03	2024/11/19	2025/11/18
Measurement Software	Tonscend	JS32-RE V4.0.0.0	SUWI-02-09-04	NCR	NCR
Measurement Software	Tonscend	JS32-RSE 4.0.0.1	SUWI-02-09-06	NCR	NCR

Remark: NCR=No Calibration Requirement.



SGS-CSTC Standards Technical Services (Suzhou) Co., Ltd.

Report No.: SUCR250300015106

Rev.: 01

Page: 33 of 50

4 Measurement Uncertainty

For a 95% confidence level ($k = 2$), the measurement expanded uncertainties for defined systems, in accordance with the recommendations of ISO 17025 as following:

No.	Item	Measurement Uncertainty
1	Total RF power, conducted	$\pm 0.54\text{dB}$
2	RF power density, conducted	$\pm 1.03\text{dB}$
3	Spurious emissions, conducted	$\pm 0.54\text{dB}$
4	Radio Frequency	1%
5	Duty Cycle	$\pm 0.37\%$
6	Occupied Bandwidth	1%
7	Radiated Emission	$\pm 3.13\text{dB}$ (9k -30MHz)
		$\pm 4.88\text{dB}$ (30M -1GHz)
		$\pm 4.75\text{dB}$ (1GHz to 18GHz)
		$\pm 4.77\text{dB}$ (Above 18GHz)

Remark:

The U_{lab} (lab Uncertainty) is less than $U_{\text{CISPR/ETSI}}$ (CISPR/ETSI Uncertainty), so the test results

- compliance is deemed to occur if no measured disturbance level exceeds the disturbance limit;
- non-compliance is deemed to occur if any measured disturbance level exceeds the disturbance limit.



SGS-CSTC Standards Technical Services (Suzhou) Co., Ltd.

Report No.: SUCR250300015106

Rev.: 01

Page: 34 of 50

5 Description of Tests

5.1 Conducted Output Power

Measurement Procedure: FCC KDB 971168 D01 V03r01 Section 5.2.1

The transmitter output was connected to a calibrated coaxial cable, attenuator and power meter, the other end of which was connected to a Base Station Simulator. The Base Station Simulator was set to force the EUT to its maximum power setting. The power output at the transmitter antenna port was determined by adding the value of the cable insertion loss to the power reading. The tests were performed at three frequencies (low channel, middle channel and high channel) and on the highest power levels, which can be setup on the transmitters.

Remark: Reference test setup 1



SGS-CSTC Standards Technical Services (Suzhou) Co., Ltd.

Report No.: SUCR250300015106

Rev.: 01

Page: 35 of 50

5.2 Effective (Isotropic) Radiated Power of Transmitter

Measurement Procedure: FCC KDB 971168 D01 V03r01 Section 5.8.4

Calculate power in dBm by the following formula:

$ERP\ (dBm) = \text{Conducted Power (dBm)} + \text{antenna gain (dBd)}$

$EIRP(dBm) = \text{Conducted Power (dBm)} + \text{antenna gain (dBi)}$

$EIRP=ERP+2.15dB$



SGS-CSTC Standards Technical Services (Suzhou) Co., Ltd.

Report No.: SUCR250300015106

Rev.: 01

Page: 36 of 50

5.3 EIRP Power Density

Measurement Procedure: FCC KDB 971168 D01 V03r01 Section 5.3

Test Settings

1. Set instrument center frequency to OBW center frequency.
2. Set span to at least 1.5 times the OBW.
3. Set the RBW to the specified reference bandwidth (often 1 MHz).
4. Set $VBW \geq 3 \times RBW$.
5. Detector = RMS (power averaging).
6. Ensure that the number of measurement points in the sweep $\geq 2 \times \text{span}/RBW$.
7. Sweep time = auto couple.
8. Employ trace averaging (RMS) mode over a minimum of 100 traces.
9. Use the peak marker function to determine the maximum amplitude level within the reference bandwidth (PSD).



SGS-CSTC Standards Technical Services (Suzhou) Co., Ltd.

Report No.: SUCR250300015106

Rev.: 01

Page: 37 of 50

5.4 Occupied Bandwidth

Measurement Procedure: FCC KDB 971168 D01 V03r01 Section 4.2 & 4.3

The occupied bandwidth, that is the frequency bandwidth such that, below its lower and above its upper frequency limits, the mean powers radiated are each equal to 0.5 percent of the total mean power radiated by a given emission shall be measured. The transmitter output was connected to a calibrated coaxial cable, attenuator and Spectrum analyser, the other end of which was connected to a Base Station Simulator. The Base Station Simulator was set to force the EUT to its maximum power setting. The tests were performed at three frequencies (low channel, middle channel and high channel). The span of the analyzer shall be set to capture all products of the modulation process, including the emission skirts. The resolution bandwidth shall be set to as close to 1 percent of the selected span as is possible without being below 1 percent. The video bandwidth shall be set to 3 times the resolution bandwidth. Video averaging is not permitted. Where practical, a sampling detector shall be used since a peak or, peak hold, may produce a wider bandwidth than actual. The trace data points are recovered and are directly summed in linear terms. The recovered amplitude data points, beginning at the lowest frequency, are placed in a running sum until 0.5 percent of the total is reached and that frequency recorded. The process is repeated for the highest frequency data points. This frequency is recorded. The span between the two recorded frequencies is the occupied bandwidth.

Remark: Reference test setup 1

Test Settings

1. The signal analyzer's automatic bandwidth measurement capability was used to perform the 99% occupied bandwidth and the 26dB bandwidth. The bandwidth measurement was not influenced by any intermediate power nulls in the fundamental emission.
2. $RBW = 1 - 5\%$ of the expected OBW
3. $VBW \geq 3 \times RBW$
4. Detector = Peak
5. Trace mode = max hold
6. Sweep = auto couple
7. The trace was allowed to stabilize
8. If necessary, steps 2 – 7 were repeated after changing the RBW such that it would be within $1 - 5\%$ of the 99% occupied bandwidth observed in Step 7



SGS-CSTC Standards Technical Services (Suzhou) Co., Ltd.

Report No.: SUCR250300015106

Rev.: 01

Page: 38 of 50

5.5 Band Edge at Antenna Terminals

Measurement Procedure: FCC KDB 971168 D01 V03r01 Section 6.0

The transmitter output was connected to a calibrated coaxial cable, attenuator and Spectrum analyser, the other end of which was connected to a Base Station Simulator. The Base Station Simulator was set to force the EUT to its maximum power setting. The tests were performed at two frequencies (low channel and high channel).in the 1MHz bands immediately outside and adjacent to the frequency block a resolution bandwidth of 100kHz or 1% of the emission bandwidth of the fundamental emission of the transmitter may be employed. The EUT emission bandwidth is measured as the width of the signal between two points, outside of which all emission are attenuated at least 26dB below the transmitter power. The video bandwidth of the spectrum analyzer was set at thrice the resolution bandwidth. Detector Mode was set to rms.

Remark: Reference test setup 1

Test Settings

1. Start and stop frequency were set such that the band edge would be placed in the center of the plot
2. Span was set large enough so as to capture all out of band emissions near the band edge
3. $RBW \geq 1\%$ of the emission bandwidth
4. $VBW \geq 3 \times RBW$
5. Detector = RMS
6. Number of sweep points $\geq 2 \times \text{Span}/RBW$
7. Trace mode = trace average for continuous emissions, max hold for pulse emissions
8. Sweep time = auto couple
9. The trace was allowed to stabilize



SGS-CSTC Standards Technical Services (Suzhou) Co., Ltd.

Report No.: SUCR250300015106

Rev.: 01

Page: 39 of 50

5.6 Spurious And Harmonic Emissions at Antenna Terminal

Measurement Procedure: FCC KDB 971168 D01 V03r01 Section 6.0

The transmitter output was connected to a calibrated coaxial cable, attenuator and Spectrum analyzer, the other end of which was connected to a Base Station Simulator. The Base Station Simulator was set to force the EUT to its maximum power setting. The tests were performed at three frequencies (low channel and high channel). The level of the carrier and the various conducted spurious and harmonic frequencies is measured by means of a calibrated spectrum analyzer. The spectrum is scanned from the lowest frequency generated in the equipment up to a frequency including its 10th harmonic. On any frequency outside a licensee's frequency block, the power of any emission shall be attenuated below the transmitter power (P) by at least $43 + 10 \log(P)$ dB. Compliance with these provisions is based on the use of measurement instrumentation employing a resolution bandwidth of 1 MHz or greater. However, in the 1 MHz bands immediately outside and adjacent to the frequency block a resolution bandwidth of at least one percent of the emission bandwidth of the fundamental emission of the transmitter may be employed. The emission bandwidth is defined as the width of the signal between two points, one below the carrier center frequency and one above the carrier center frequency, outside of which all emission are attenuated at least 26 dB below the transmitter power.

Remark: Reference test setup 1

Test Settings

1. Start frequency was set to 9kHz and stop frequency was set to at least 10* the fundamental frequency (Separated into at least two plots per channel)
2. Detector = RMS
3. Trace mode = trace average for continuous emissions, max hold for pulse emissions
4. Sweep time = auto couple
5. The trace was allowed to stabilize
6. Please see test notes below for RBW and VBW settings



SGS-CSTC Standards Technical Services (Suzhou) Co., Ltd.

Report No.: SUCR250300015106

Rev.: 01

Page: 40 of 50

5.7 Peak-Average Ratio

Measurement Procedure: FCC KDB 971168 D01 V03r01 Section 5.7.2

A peak to average ratio measurement is performed at the conducted port of the EUT. For WCDMA signals, the spectrum analyzers Complementary Cumulative Distribution Function (CCDF) measurement profile is used to determine the largest deviation between the average and the peak power of the EUT in a given bandwidth. The CCDF curve shows how much time the peak waveform spends at or above a given average power level. The percent of time the signal spends at or above the level defines the probability for that particular power level. For GSM signals, an average and a peak trace are used on a spectrum analyzer to determine the largest deviation between the average and the peak power of the EUT in a bandwidth greater than the emission bandwidth. The traces are generated with the spectrum analyzer set to zero span mode.

Remark: Reference test setup 1

Test Settings

1. The signal analyzer's CCDF measurement profile is enabled
2. Frequency = carrier center frequency
3. Measurement BW > Emission bandwidth of signal
4. The signal analyzer was set to collect one million samples to generate the CCDF curve
5. The measurement interval was set depending on the type of signal analyzed. For continuous signals (>98% duty cycle), the measurement interval was set to 1ms. For burst transmissions, the spectrum analyzer is set to use an internal "RF Burst" trigger that is synced with an incoming pulse and the measurement interval is set to less than the duration of the "on time" of one burst to ensure that energy is only captured during a time in which the transmitter is operating at maximum power



SGS-CSTC Standards Technical Services (Suzhou) Co., Ltd.

Report No.: SUCR250300015106

Rev.: 01

Page: 41 of 50

5.8 Field Strength of Spurious Radiation

Measurement Procedure: FCC KDB 971168 D01 V03r01 Section 5.8

Below 1GHz test procedure as below:

- 1). The EUT was powered ON and placed on a 80cm high table in the chamber. The antenna of the transmitter was extended to its maximum length.
- 2). The disturbance of the transmitter was maximized on the test receiver display by raising and lowering from 1m to 4m (for the test frequency of below 30MHz, the antenna was tuned to heights 1 meter) the receive antenna and by rotating through 360° the turntable. After the fundamental emission was maximized, a field strength measurement was made.
- 3). Steps 1) and 2) were performed with the EUT and the receive antenna in both vertical and horizontal polarization.
- 4). Test the EUT in the lowest channel, the middle channel ,the Highest channel.
- 5). The radiation measurements are performed in X, Y, Z axis positioning. And found the Z axis positioning which it is worse case, Only the test worst case mode is recorded in the report.
- 6). Repeat above procedures until all frequencies measured was complete.

$$E \text{ (dB}\mu\text{V/m)} = \text{Measured amplitude level (dB}\mu\text{V)} + (\text{Cable Loss (dB)} + \text{Antenna Factor (dB/m)} - \text{AMP(dB)})$$

$$\text{EIRP (dBm)} = E \text{ (dB}\mu\text{V/m)} + 20 \log D - 104.8; \text{ where D is the measurement distance in meters}$$

Above 1GHz test procedure as below:

- 1) Different between above is the test site, change from Semi- Anechoic Chamber to fully Anechoic Chamber
- 2) Calculate power in dBm by the following formula:
$$E \text{ (dB}\mu\text{V/m)} = \text{Measured amplitude level (dB}\mu\text{V)} + (\text{Cable Loss (dB)} + \text{Antenna Factor (dB/m)} - \text{AMP(dB)})$$
$$\text{EIRP (dBm)} = E \text{ (dB}\mu\text{V/m)} + 20 \log D - 104.8; \text{ where D is the measurement distance in meters}$$
- 3). Test the EUT in the lowest channel, the middle channel the Highest channel
- 4). The radiation measurements are performed in X, Y, Z axis positioning. And found the Z axis positioning which it is worse case, Only the test worst case mode is recorded in the report.
- 5). Repeat above procedures until all frequencies measured was complete

Remark1: Reference test setup 2

Remark2: The emission below 18G were measured at a 3m test distance, while emissions above 18GHz were measured at a 1m test distance. At a measurement distance of 1 meter the limit line was increased by $20 \cdot \text{LOG}(3/1) = 9.54 \text{ dB}$.

Remark: Reference test setup 2

Remark:

- 1) The field strength is calculated by adding the Antenna Factor, Cable Factor & AMP. The basic equation with a sample calculation is as follows:

$$\text{AF} = \text{Antenna Factor(dB/m)}$$

$$\text{Factor} = \text{Cable Factor(dB)} - \text{Preamplifier (dB)}$$

$$\text{Level} = \text{Reading Level} + \text{AF} + \text{Factor} - 95.26$$

$$\text{Margin} = \text{Limit} - \text{Level}$$

- 2) Scan from 9kHz to 40GHz, The disturbance between 9kHz to 30MHz and 18GHz to 40GHz was very low, and the harmonics were the highest point could be found when testing, so only the harmonics had been displayed. The amplitude of spurious emissions from the radiator which are attenuated more than 20dB below the limit need not be reported.

- 3) All modes have been tested, but only the worst case data displayed in this report.



SGS-CSTC Standards Technical Services (Suzhou) Co., Ltd.

Report No.: SUCR250300015106

Rev.: 01

Page: 42 of 50

Test Band = GSM 1900

Test Channel = High

Data List								
NO.	Frequency [MHz]	Reading [dBμV]	Factor [dB]	AF [dB/m]	Level [dBm]	Limit [dBm]	Margin [dB]	Polarity
1	3819.6	48.06	-48.20	29.01	-66.39	-13.00	53.39	Horizontal
2	5729.5	51.08	-47.54	32.69	-59.03	-13.00	46.03	Horizontal
3	7639.2	49.78	-44.82	36.37	-53.93	-13.00	40.93	Horizontal
4	9549	47.30	-42.31	38.17	-52.10	-13.00	39.10	Horizontal
5	11458.8	48.59	-40.07	39.45	-47.28	-13.00	34.28	Horizontal
6	13368.6	48.53	-39.15	39.35	-46.52	-13.00	33.52	Horizontal

Test Band = GSM 1900

Test Channel = High

Data List								
NO.	Frequency [MHz]	Reading [dBμV]	Factor [dB]	AF [dB/m]	Level [dBm]	Limit [dBm]	Margin [dB]	Polarity
1	3819.6	48.07	-48.20	29.01	-66.38	-13.00	53.38	Vertical
2	5729.5	50.80	-47.54	32.69	-59.31	-13.00	46.31	Vertical
3	7639.2	49.33	-44.82	36.37	-54.38	-13.00	41.38	Vertical
4	9549	47.09	-42.31	38.17	-52.31	-13.00	39.31	Vertical
5	11458.8	48.86	-40.07	39.45	-47.01	-13.00	34.01	Vertical
6	13368.6	48.50	-39.15	39.35	-46.55	-13.00	33.55	Vertical



SGS-CSTC Standards Technical Services (Suzhou) Co., Ltd.

Report No.: SUCR250300015106

Rev.: 01

Page: 43 of 50

Test Band = WCDMA Band IV

Test Channel = Low

Final Data List								
NO.	Frequency [MHz]	Reading [dBμV]	Factor [dB]	AF[dB/m]	Level [dBm]	Limit [dBm]	Margin [dB]	Polarity
1	3424.8	44.15	-48.38	28.44	-71.05	-13.00	58.05	Horizontal
2	5137.2	45.88	-47.85	31.59	-65.64	-13.00	52.64	Horizontal
3	6849.6	43.70	-46.81	35.26	-63.11	-13.00	50.11	Horizontal
4	8562	40.97	-44.09	36.92	-61.46	-13.00	48.46	Horizontal
5	10274.4	40.32	-41.40	38.99	-57.35	-13.00	44.35	Horizontal
6	11986.8	35.93	-39.49	39.40	-59.42	-13.00	46.42	Horizontal

Test Band = WCDMA Band IV

Test Channel = Low

Final Data List								
NO.	Frequency [MHz]	Reading [dBμV]	Factor [dB]	AF[dB/m]	Level [dBm]	Limit [dBm]	Margin [dB]	Polarity
1	3424.8	44.07	-48.38	28.44	-71.13	-13.00	58.13	Vertical
2	5137.2	45.32	-47.85	31.59	-66.20	-13.00	53.20	Vertical
3	6849.6	44.85	-46.81	35.26	-61.96	-13.00	48.96	Vertical
4	8562	40.55	-44.09	36.92	-61.88	-13.00	48.88	Vertical
5	10274.4	39.74	-41.40	38.99	-57.93	-13.00	44.93	Vertical
6	11986.8	36.46	-39.49	39.40	-58.89	-13.00	45.89	Vertical



SGS-CSTC Standards Technical Services (Suzhou) Co., Ltd.

Report No.: SUCR250300015106

Rev.: 01

Page: 44 of 50

Test Band = LTE Band 30 5M

Test Channel = High

Final Data List								
NO.	Frequency [MHz]	Reading [dBμV]	Factor [dB]	AF[dB/m]	Level [dBm]	Limit [dBm]	Margin [dB]	Polarity
1	4620.68	45.08	-47.99	30.37	-67.81	-40.00	27.81	Horizontal
2	6931.02	45.32	-46.69	35.39	-61.24	-40.00	21.24	Horizontal
3	9241.32	41.38	-43.27	37.74	-59.41	-40.00	19.41	Horizontal
4	11551.7	41.00	-39.91	39.44	-54.72	-40.00	14.72	Horizontal
5	13862.04	41.34	-38.84	40.09	-52.66	-40.00	12.66	Horizontal
6	16172.38	42.35	-37.85	38.47	-52.29	-40.00	12.29	Horizontal

Test Band = LTE Band 30 5M

Test Channel = High

Final Data List								
NO.	Frequency [MHz]	Reading [dBμV]	Factor [dB]	AF[dB/m]	Level [dBm]	Limit [dBm]	Margin [dB]	Polarity
1	4620.68	44.76	-47.99	30.37	-68.13	-40.00	28.13	Vertical
2	6931.02	44.58	-46.69	35.39	-61.98	-40.00	21.98	Vertical
3	9241.32	41.00	-43.27	37.74	-59.79	-40.00	19.79	Vertical
4	11551.7	41.05	-39.91	39.44	-54.67	-40.00	14.67	Vertical
5	13862.04	41.17	-38.84	40.09	-52.83	-40.00	12.83	Vertical
6	16172.38	42.37	-37.85	38.47	-52.27	-40.00	12.27	Vertical



SGS-CSTC Standards Technical Services (Suzhou) Co., Ltd.

Report No.: SUCR250300015106

Rev.: 01

Page: 45 of 50

5.9 Frequency Stability / Temperature Variation

Measurement Procedure:

Frequency stability testing is performed in accordance with the guidelines of FCC KDB 971168 D01 V03r01; Section 9

. The frequency stability of the transmitter is measured by:

- a.) **Temperature:** The temperature is varied from -30°C to +50°C in 10°C increments using an environmental chamber.
- b.) **Primary Supply Voltage:** The primary supply voltage is varied from 85% to 115% of the nominal value for non hand-carried battery and AC powered equipment. For hand-carried, battery-powered equipment, primary supply voltage is reduced to the battery operating end point which shall be specified by the manufacturer.

Specification – The frequency stability shall be sufficient to ensure that the fundamental emission stays within the authorized frequency block. The frequency stability of the transmitter shall be maintained within $\pm 0.00025\%$ (± 2.5 ppm) of the center frequency.

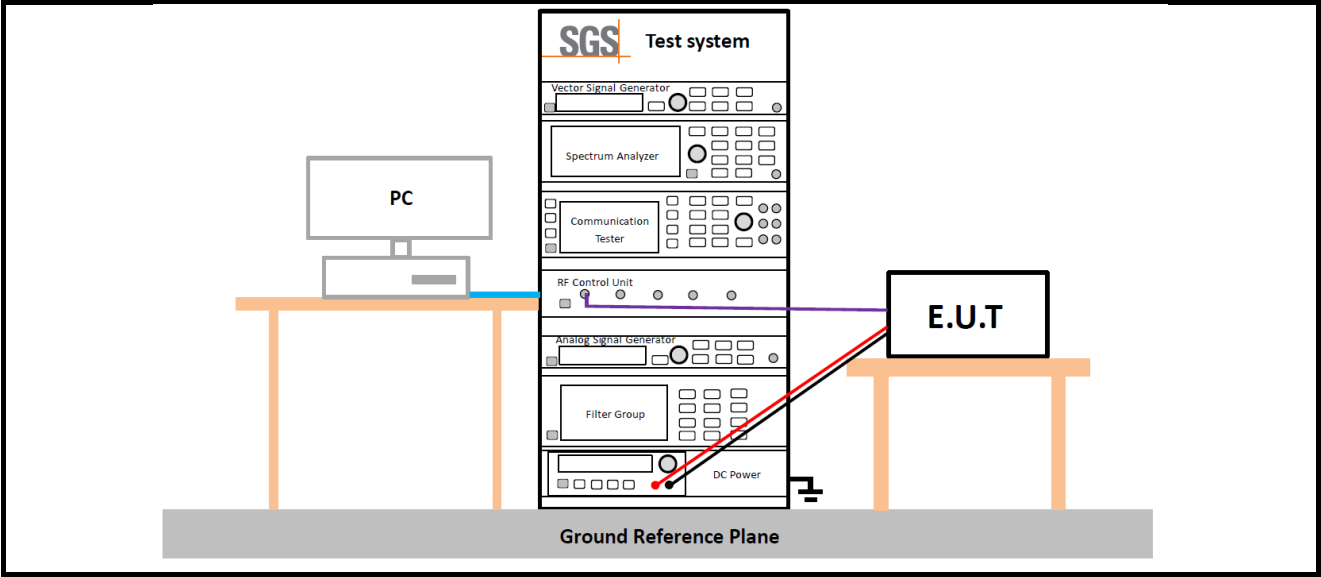
Time Period and Procedure:

1. The carrier frequency of the transmitter is measured at room temperature (20°C to provide a reference).
2. The equipment is turned on in a “standby” condition for fifteen minutes before applying power to the transmitter. Measurement of the carrier frequency of the transmitter is made within one minute after applying power to the transmitter.
3. Frequency measurements are made at 10°C intervals ranging from -30°C to +50°C. A period of at least one half-hour is provided to allow stabilization of the equipment at each temperature level.

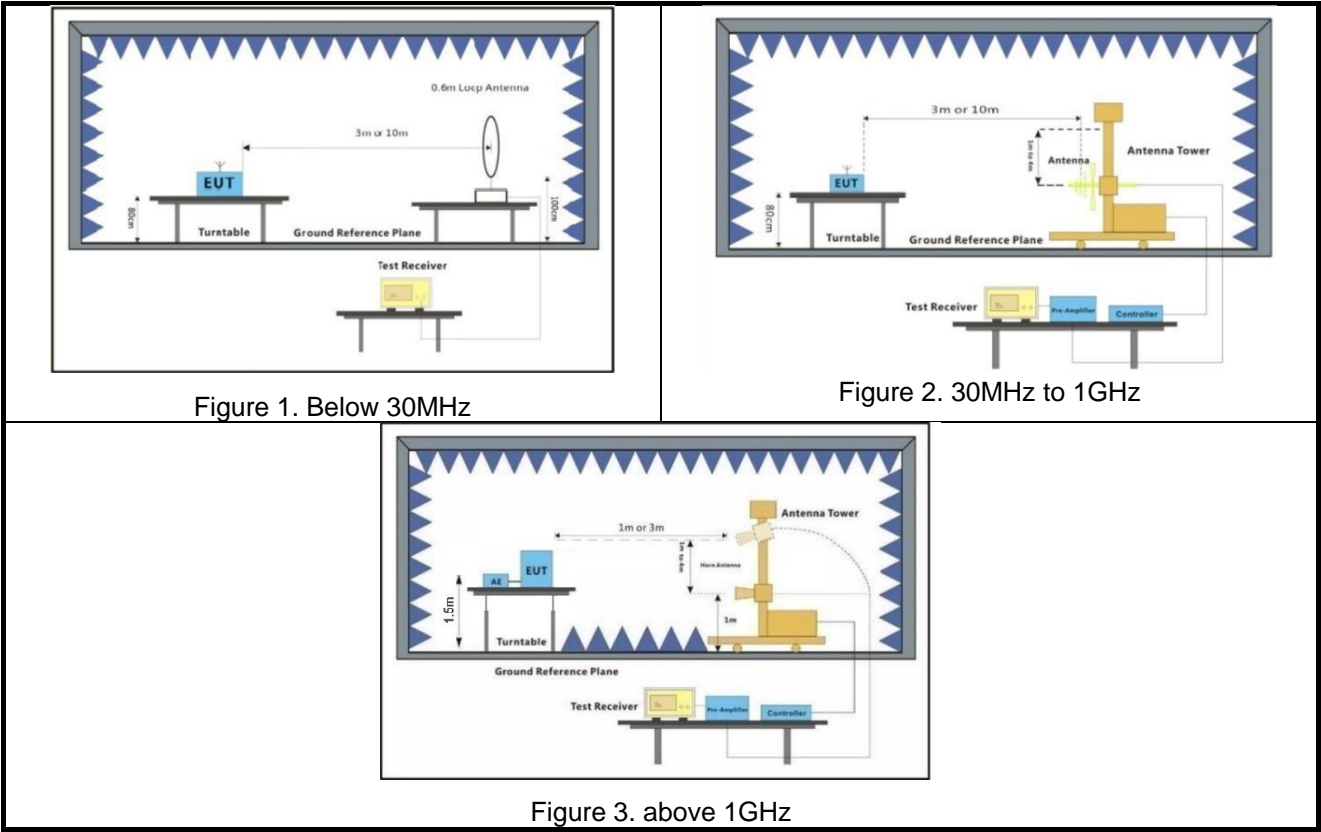
Remark: Reference test setup 3

5.10 Test Setups

5.10.1 Test Setup 1



5.10.2 Test Setup 2

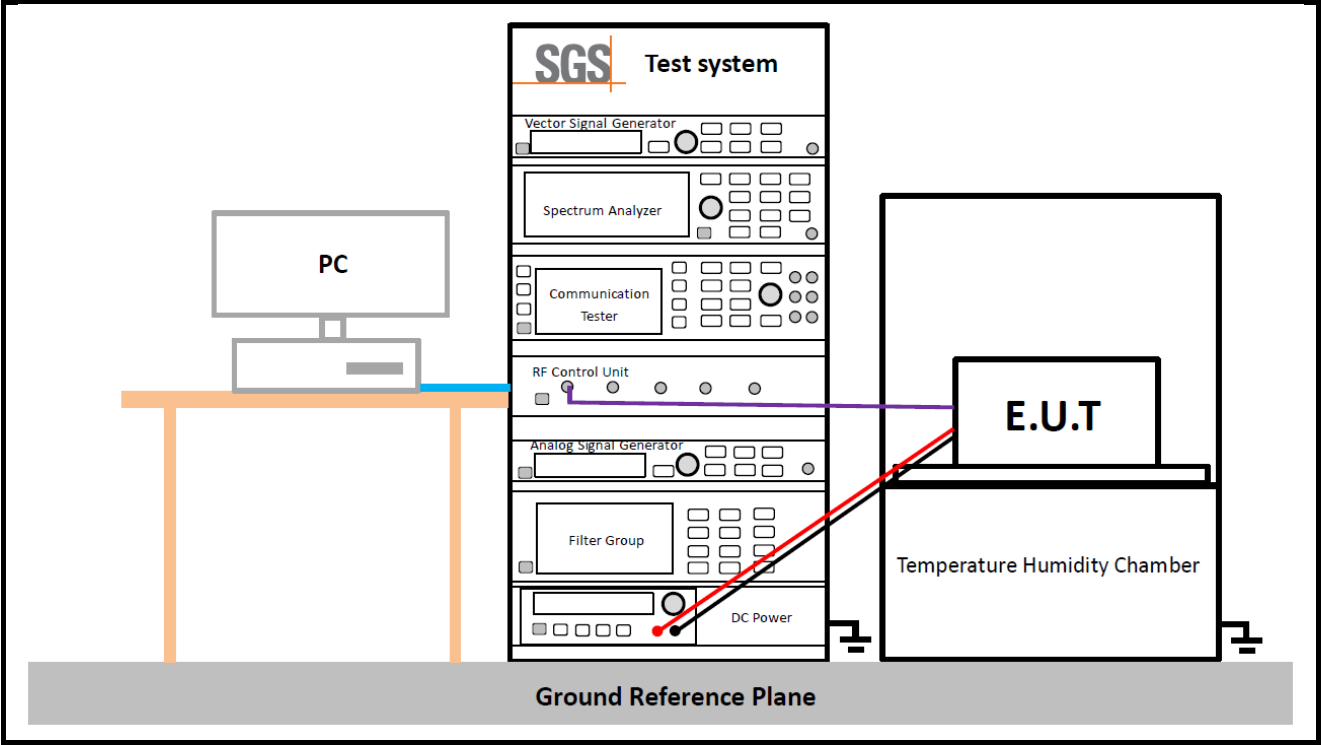




SGS-CSTC Standards Technical Services (Suzhou) Co., Ltd.

Report No.: SUCR250300015106
Rev.: 01
Page: 47 of 50

5.10.3 Test Setup 3





SGS-CSTC Standards Technical Services (Suzhou) Co., Ltd.

Report No.: SUCR250300015106

Rev.: 01

Page: 48 of 50

5.11 Test Conditions

Transmit Output Power Data - Average Power, Total	
Test Case	Test Conditions
Test Environment	Ambient Climate & Rated Voltage
Test Setup	Test Setup 1
RF Channels (TX)	L, M, H (L= low channel, M= middle channel, H= high channel)
Test Mode	GSM/TM1;GSM/TM2;UMTS/TM1; LTE/TM1;LTE/TM2; LTE/TM3
Peak-to-Average Ratio	
Test Case	Test Conditions
Test Environment	Ambient Climate & Rated Voltage
Test Setup	Test Setup 1
RF Channels (TX)	L, M, H (L= low channel, M= middle channel, H= high channel)
Test Mode	GSM/TM1;GSM/TM2;UMTS/TM1; LTE/TM1;LTE/TM2; LTE/TM3
Bandwidth - Occupied Bandwidth	
Test Case	Test Conditions
Test Environment	Ambient Climate & Rated Voltage
Test Setup	Test Setup 1
RF Channels (TX)	L, M, H (L= low channel, M= middle channel, H= high channel)
Test Mode	GSM/TM1;GSM/TM2;UMTS/TM1; LTE/TM1;LTE/TM2; LTE/TM3
Bandwidth - Emission Bandwidth	
Test Case	Test Conditions
Test Environment	Ambient Climate & Rated Voltage
Test Setup	Test Setup 1
RF Channels (TX)	L, M, H (L= low channel, M= middle channel, H= high channel)
Test Mode	GSM/TM1;GSM/TM2;UMTS/TM1; LTE/TM1;LTE/TM2; LTE/TM3
Band Edges Compliance	
Test Case	Test Conditions
Test Environment	Ambient Climate & Rated Voltage
Test Setup	Test Setup 1
RF Channels (TX)	L, H (L= low channel, H= high channel)
Test Mode	GSM/TM1;GSM/TM2;UMTS/TM1; LTE/TM1;
Spurious Emission at Antenna Terminals	
Test Case	Test Conditions
Test Environment	Ambient Climate & Rated Voltage



SGS-CSTC Standards Technical Services (Suzhou) Co., Ltd.

Report No.: SUCR250300015106

Rev.: 01

Page: 49 of 50

Test Setup	Test Setup 1
RF Channels (TX)	L, M, H (L= low channel, M= middle channel, H= high channel)
Test Mode	GSM/TM1;GSM/TM2;UMTS/TM1; LTE/TM1;
Field Strength of Spurious Radiation	
Test Case	Test Conditions
Test Environment	Ambient Climate & Rated Voltage
Test Setup	Test Setup 2
RF Channels (TX)	L, M, H (L= low channel, M= middle channel, H= high channel)
Test Mode	GSM/TM1;UMTS/TM1; LTE/TM1 Remark: All bandwidth and modulation of GSM/ UMTS/LTE have been pre tested, and only the worst results are reflected in the report.
Frequency Stability	
Test Case	Test Conditions
Test Environment	(1) -30 °C to +50 °C with step 10 °C at Rated Voltage (2) VL, VN and VH of Rated Voltage at Ambient Climate.
Test Setup	Test Setup 3
RF Channels (TX)	M (M= middle channel)
Test Mode	GSM/TM1;GSM/TM2;UMTS/TM1; LTE/TM1 The report only show the bandwidth with the worst case.



SGS-CSTC Standards Technical Services (Suzhou) Co., Ltd.

Report No.: SUCR250300015106

Rev.: 01

Page: 50 of 50

6 Appendixes

SUCR250300015106

Appendix B.1	WWAN
--------------	------

Reference report SZCR240600210101

Appendix B.1	GSM 850
Appendix B.2	GSM 1900
Appendix B.3	WCDMA Band II
Appendix B.4	WCDMA Band IV
Appendix B.5	WCDMA Band V
Appendix B.6	LTE Band 2
Appendix B.7	LTE Band 4
Appendix B.8	LTE Band 5
Appendix B.9	LTE Band 7
Appendix B.10	LTE Band 12
Appendix B.11	LTE Band 13
Appendix B.12	LTE Band 14
Appendix B.13	LTE Band 17
Appendix B.14	LTE Band 25
Appendix B.15	LTE Band 26(814-824)
Appendix B.16	LTE Band 26(824-849)
Appendix B.17	LTE Band 30
Appendix B.18	LTE Band 38
Appendix B.19	LTE Band 41
Appendix B.20	LTE Band 66
Appendix B.21	LTE Band 71
Appendix B.22	LTE Band 40(2305-2315)
Appendix B.23	LTE Band 40(2350-2360)

---End of Report---