

Report No.: SEWM2311000454RG01

Rev.: 01 Page: 1 of 50

TEST REPORT

Application No.: SEWM2311000454RG

Applicant: Xiaomi Communications Co., Ltd.

Address of Applicant: #019, 9th Floor, Building 6, 33 Xi'erqi Middle Road, Haidian District, Beijing,

China, 100085

Manufacturer: Xiaomi Communications Co., Ltd.

Address of Manufacturer: #019, 9th Floor, Building 6, 33 Xi'erqi Middle Road, Haidian District, Beijing,

China, 100085

EUT Description: Mobile Phone

Model No.: XIG05
Trade Mark: Redmi

FCC ID: 2AFZZRA50J Standards: 47 CFR Part 2 47 CFR Part 22

47 CFR Part 24 47 CFR Part 27 47 CFR Part 90

Date of Receipt: 2023/11/10

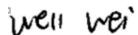
Date of Test: 2023/11/26 to 2024/03/26

Date of Issue: 2024/03/27

Test Result : PASS *

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

Authorized Signature:



Well Wei Wireless Laboratory Manager



Unless otherwise agreed in writing, 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.appx and, for electronic format documents, subject to Terms and Conditions for Electronic Documents at http://www.sgs.com/en/Terms-and-Conditions/Terms-a-Document.appx. 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 document does not exonerate parties to a transaction from exercising all their rights and obligations under the transaction forcement 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 extend 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,



Report No.: SEWM2311000454RG01

Rev.: 01 Page: 2 of 50

Version

Revision Record					
Version Chapter Date Modifier Remark					
01		2024/03/27		Original	

Prepared By	(Levi Li) / Test Engineer	
Checked By	5 to me Am	
	(Stone Gu) / Reviewer	



Unless otherwise agreed in writing, 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.aspx 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.aspx. 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, forger 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,

South of No. 6 Plant, No. 1, Runsheng Road, Suzhou Industrial Park, Suzhou Area, China (Jiangsu) Pilot Free Trade Zone 215000 中国 • 苏州 • 中国(江苏)自由贸易试验区苏州片区苏州工业园区润胜路1号的6号厂房南部 邮编: 215000

t (86-512) 62992980 www.sgsgroup.com.cn



Report No.: SEWM2311000454RG01

Rev.: 01 Page: 3 of 50

Contents

1	Versio	on	2
2	Test S	Summary	5
	2.1	GSM850/UMTS Band 5	5
	2.2	GSM 1900/UMTS Band 2	6
	2.3	UMTS Band 4	7
	2.4	LTE Band 2	8
	2.5	LTE Band 4 /66	9
	2.6	LTE Band 5/26(824~849 MHz)	10
	2.7	LTE Band 7/38	11
	2.8	LTE Band 41/CA_7C/ CA_38C	12
	2.9	LTE Band 12/17	14
	2.10	LTE Band 13	15
	2.11	LTE Band 26(814~824 MHz)	16
3	Gener	al Information	17
	3.1	Details of Client	17
	3.2	Test Location	17
	3.3	Test Facility	17
	3.4	General Description of EUT	18
	3.5	Test Mode	20
	3.6	Test Environment	20
	3.7	Description of Support Units	20
	3.8	Technical Specification	21
	3.9	Test Frequencies	25
4	Descri	iption of Tests	35
	4.1	Conducted Output Power	35
	4.2	Effective (Isotropic) Radiated Power of Transmitter	36
	4.3	Occupied Bandwidth	37
	4.4	Band Edge at Antenna Terminals	38
	4.5	Spurious And Harmonic Emissions at Antenna Terminal	39
	4.6	Peak-Average Ratio	40



Unless otherwise agreed in writing, 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.aspx 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.aspx. 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) test etailed 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@qs.com"

or email: CN_Doccheck@sgs.com South of No. 6 Part, No. 1, Runsheng Road, Suchou Industrial Park, Suchou Area, China (Jiangsul) Plod Free Trade Zone 215000 中国・苏州・中国(江苏)自由贸易试验区苏州上区苏州工业园区河社商(号から号)房南部 卓編: 215000



Report No.:	SEWM2311000454RG0
I (CDOIL I IO	

Rev.:	01	
Page:	4 of 50	

	5	
4.7	Field Strength of Spurious Radiation	41
4.8	Frequency Stability / Temperature Variation	42
4.9	Test Setups	43
	4.9.1 Test Setup 1	43
	4.9.2 Test Setup 2	43
	4.9.3 Test Setup 3	44
4.10	Test Conditions	45
Main	Test Instruments	47
Meas	urement Uncertainty	49
Appe	ndixes	50
	4.8 4.9 4.10 Main Meas	4.8 Frequency Stability / Temperature Variation



Unless otherwise agreed in writing, 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.aspx 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.aspx. 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) test etailed 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@qs.com"

South of No. 6 Plant, No. 1, Runsheng Road, Suzhou Industrial Park, Suzhou Area, China (Jiangsu) Pilot Free Trade Zone 215000 中国 • 苏州 • 中国(江苏)自由贸易试验区苏州片区苏州工业园区润胜路1号的6号厂房南部 邮编: 215000



Report No.: SEWM2311000454RG01

Rev.: 01 Page: 5 of 50

2 Test Summary

2.1 GSM850/UMTS Band 5

Test Item	FCC Rule No.	Requirements	Test Result	Verdict
Effective (Isotropic) Radiated Power Output Data	§2.1046, §22.913(a)(5)	ERP ≤ 7 W	Section 1 of Appendix B.1&B.5	Pass
Peak-Average Ratio	§22.913(d)	Limit≤13 dB	Section 5 of Appendix B.1&B.5	Pass
Bandwidth	§2.1049	OBW: No limit. EBW: No limit.	Section 4 of Appendix B.1&B.5	Pass
Band Edges Compliance	§2.1051, §22.917(a)	≤ -13 dBm/1%*EBW, in 1 MHz bands immediately outside and adjacent to the frequency block.	Section 6 of Appendix B.1&B.5	Pass
Spurious Emission at Antenna Terminals	§2.1051, §22.917(a)	FCC: ≤ -13 dBm/100 kHz, from 9 kHz to 10th harmonics but outside authorized operating frequency ranges.	Section 6 of Appendix B.1&B.5	Pass
Field Strength of Spurious Radiation	§2.1053, §22.917(a)	FCC: ≤ -13 dBm/100 kHz.	Section 3 of Appendix B.1&B.5	Pass
Frequency Stability	§2.1055(a)(1)(b) §2.1055(d)(2) §22.355	±2.5ppm.	Section 2 of Appendix B.1&B.5	Pass



Unless otherwise agreed in writing, this document is issued by the Company subject to its General Conditions of Service printed overteaf, available on request or accessible at http://www.sgs.com/en/Terms-and-Conditions.agpx, 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.aspx. Attention is dorawn 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, forger 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,

South of No. 6 Plant, No. 1, Runshang Road, Suzhou Industrial Park, Suzhou Area, China (Jiangsu) Plot Free Trade Zone 215000 中国 - 苏州 - 中国(江苏)自由贸易试验区苏州上亚国区湾胜路(号的6号厂房南部 邮编: 215000



Report No.: SEWM2311000454RG01

Rev.: 01 Page: 6 of 50

2.2 GSM 1900/UMTS Band 2

Test Item	FCC Rule No.	Requirements	Test Result	Verdict
Effective (Isotropic) Radiated Power Output Data	§2.1046, §24.232(c)	EIRP ≤ 2 W	Section 1 of Appendix B.2&B.3	Pass
Peak-Average Ratio	§24.232(d)	Limit≤13 dB	Section 5 of Appendix B.2&B.3	Pass
Bandwidth	§2.1049	OBW: No limit. EBW: No limit.	Section 4 of Appendix B.2&B.3	Pass
Band Edges Compliance	§2.1051, §24.238(a)	≤ -13 dBm/1%*EBW, in 1 MHz bands immediately outside and adjacent to the frequency block.	Section 6 of Appendix B.2&B.3	Pass
Spurious Emission at Antenna Terminals	§2.1051, §24.238(a)	≤ -13 dBm/1 MHz, from 9 kHz to 10 th harmonics but outside authorized operating frequency ranges.	Section 6 of Appendix B.2&B.3	Pass
Field Strength of Spurious Radiation	§2.1053, §24.238(a)	≤ -13 dBm/1 MHz.	Section 3 of Appendix B.2&B.3	Pass
Frequency Stability	§2.1055(a)(1)(b) §2.1055(d)(2) §24.235	Within authorized bands of operation/frequency block.	Section 2 of Appendix B.2&B.3	Pass



Unless otherwise agreed in writing, 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.aspx 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.aspx. 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, forger 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,

South of No. 6 Plant, No. 1, Runsheng Road, Suzhou Industrial Park, Suzhou Area, China (Jiangsu) Pilot Free Trade Zone 215000 中国 • 苏州 • 中国(江苏)自由贸易试验区苏州片区苏州工业园区润胜路1号的6号厂房南部 邮编: 215000

t (86-512) 62992980 sgs.china@sgs.com

t (86-512) 62992980 www.sgsgroup.com.cn



Report No.: SEWM2311000454RG01

Rev.: Page: 7 of 50

2.3 UMTS Band 4

Test Item	FCC Rule No.	Requirements	Test Result	Verdict
Effective (Isotropic) Radiated Power Output Data	§2.1046, §27.50(d)(4)	EIRP ≤ 1 W	Section 1 of Appendix B.4	Pass
Peak-Average Ratio	§27.50(d)(5)	Limit≤13 dB	Section 5 of Appendix B.4	Pass
Bandwidth	§2.1049	OBW: No limit. EBW: No limit.	Section 4 of Appendix B.4	Pass
Band Edges Compliance	§2.1051, §27.53(h)	≤ -13 dBm/1%*EBW, in 1 MHz bands immediately outside and adjacent to the frequency block.	Section 6 of Appendix B.4	Pass
Spurious Emission at Antenna Terminals	§2.1051, §27.53(h)	≤ -13 dBm/1 MHz, from 9 kHz to 10 th harmonics but outside authorized operating frequency ranges.	Section 6 of Appendix B.4	Pass
Field Strength of Spurious Radiation	§2.1053, §27.53(h)	≤ -13 dBm/1 MHz.	Section 3 of Appendix B.4	Pass
Frequency Stability	§2.1055(a)(1)(b) §2.1055(d)(2) §27.54	Within authorized bands of operation/frequency block.	Section 2 of Appendix B.4	Pass



Unless otherwise agreed in writing, 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.aspx 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.aspx. 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, forger 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,

South of No. 6 Plant, No. 1, Runsheng Road, Suzhou Industrial Park, Suzhou Area, China (Jiangsu) Pilot Free Trade Zone 215000 中国 • 苏州 • 中国(江苏)自由贸易试验区苏州片区苏州工业园区润胜路1号的6号厂房南部 邮编: 215000 t (86-512) 62992980 www.sgsgroup.com.cn



Report No.: SEWM2311000454RG01

Rev.: 01 Page: 8 of 50

2.4 LTE Band 2

Test Item	FCC Rule No.	Requirements	Test Result	Verdict
Effective (Isotropic) Radiated Power Output Data	§2.1046, §24.232(c)	EIRP ≤ 2 W	Section 1 of Appendix B.6	Pass
Peak-Average Ratio	§24.232(d)	Limit≤13 dB	Section 4 of Appendix B.6	Pass
Bandwidth	§2.1049	OBW: No limit. EBW: No limit.	Section 3 of Appendix B.6	Pass
Band Edges Compliance	§2.1051, §24.238(a)	≤ -13 dBm/1%*EBW, in 1 MHz bands immediately outside and adjacent to the frequency block.	Section 5 of Appendix B.6	Pass
Spurious Emission at Antenna Terminals	§2.1051, §24.238(a)	≤ -13 dBm/1 MHz, from 9 kHz to 10 th harmonics but outside authorized operating frequency ranges.	Section 5 of Appendix B.6	Pass
Field Strength of Spurious Radiation	§2.1053, §24.238(a)	≤ -13 dBm/1 MHz.	Section 6 of Appendix B.6	Pass
Frequency Stability	§2.1055(a)(1)(b) §2.1055(d)(2) §24.235	Within authorized bands of operation/frequency block.	Section 2 of Appendix B.6	Pass



Unless otherwise agreed in writing, 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.aspx 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.aspx. 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 related 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@ass.com

South of No. 6 Plant, No. 1, Runsheng Road, Suzhou Industrial Park, Suzhou Area, China (Jiangsu) Pilot Free Trade Zone 215000 中国 • 苏州 • 中国(江苏)自由贸易试验区苏州片区苏州工业园区润胜路1号的6号厂房南部 邮编: 215000 t (86-512) 62992980 www.sgsgroup.com.cn



Report No.: SEWM2311000454RG01

Rev.: 01 Page: 9 of 50

2.5 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 ≤ 1 W	Section 1 of Appendix B.7&B17	Pass
Peak-Average Ratio	§27.50(d)(5)	Limit≤13 dB	Section 4 of Appendix B.7&B17	Pass
Bandwidth	§2.1049	OBW: No limit. EBW: No limit.	Section 3 of Appendix B.7&B17	Pass
Band Edges Compliance	§2.1051, §27.53(h)	≤ -13 dBm/1%*EBW, in 1 MHz bands immediately outside and adjacent to the frequency block.	Section 5 of Appendix B.7&B17	Pass
Spurious Emission at Antenna Terminals	§2.1051, §27.53(h)	≤ -13 dBm/1 MHz, from 9 kHz to 10 th harmonics but outside authorized operating frequency ranges.	Section 5 of Appendix B.7&B17	Pass
Field Strength of Spurious Radiation	§2.1053, §27.53(h)	≤ -13 dBm/1 MHz.	Section 6 of Appendix B.7&B17	Pass
Frequency Stability	§2.1055(a)(1)(b) §2.1055(d)(2) §27.54	Within authorized bands of operation/frequency block.	Section 2 of Appendix B.7&B17	Pass



Unless otherwise agreed in writing, 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.aspx 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.aspx. 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, forger 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,

South of No. 6 Plant, No. 1, Runsheng Road, Suzhou Industrial Park, Suzhou Area, China (Jiangsu) Pilot Free Trade Zone 215000 中国 • 苏州 • 中国(江苏)自由贸易试验区苏州片区苏州工业园区润胜路1号的6号厂房南部 邮编: 215000 t (86-512) 62992980 www.sgsgroup.com.cn



Report No.: SEWM2311000454RG01

Rev.: 01 Page: 10 of 50

2.6 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 ≤ 7 W	Section 1 of Appendix B.8&B14	Pass
Peak-Average Ratio	§22.913(d)	Limit≤13 dB	Section 4 of Appendix B.8&B14	Pass
Bandwidth	§2.1049	OBW: No limit. EBW: No limit.	Section 3 of Appendix B.8&B14	Pass
Band Edges Compliance	§2.1051, §22.917(a)	≤ -13 dBm/1%*EBW, in 1 MHz bands immediately outside and adjacent to the frequency block.	Section 5 of Appendix B.8&B14	Pass
Spurious Emission at Antenna Terminals	§2.1051, §22.917(a)	FCC: ≤ -13 dBm/100 kHz, from 9 kHz to 10th harmonics but outside authorized operating frequency ranges.	Section 5 of Appendix B.8&B14	Pass
Field Strength of Spurious Radiation	§2.1053, §22.917(a)	FCC: ≤ -13 dBm/100 kHz.	Section 6 of Appendix B.8&B14	Pass
Frequency Stability	§2.1055(a)(1)(b) §2.1055(d)(2) §22.355	±2.5ppm.	Section 2 of Appendix B.8&B14	Pass



Unless otherwise agreed in writing, 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.aspx 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.aspx. 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) 83071443, or email: CN.Doccheck@sqs.com



Report No.: SEWM2311000454RG01

Rev.: Page: 11 of 50

2.7 LTE Band 7/38

Test Item	FCC Rule No.	Requirements	Test Result	Verdict
Effective (Isotropic) Radiated Power Output Data	§2.1046, §27.50(h)(2)	EIRP ≤ 2W	Section 1 of Appendix B.9&B15	Pass
Peak-Average Ratio		≤13 dB	Section 4 of Appendix B.9&B15	Pass
Bandwidth	§2.1049	OBW: No limit. EBW: No limit.	Section 3 of Appendix B.9&B15	Pass
Band Edges Compliance	§2.1051, §27.53(m4)	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.	Section 5 of Appendix B.9&B15	Pass
Spurious Emission at Antenna Terminals	§2.1051, §27.53(m)	Channel Edge -25dBm/ 1 MHz 1 MHz 1 MHz 9 kHz 95 MHz XMHz 10th harmonics X=Max {6MHz, EBW}	Section 5 of Appendix B.9&B15	Pass
Field Strength of Spurious Radiation	§2.1053, §27.53(m)	Channel Edge -25dBm/ 1 MHz 1 MHz 1 MHz 9 kHz 95 MHz X MHz 10 th harmonics X=Max {6MHz, EBW}	Section 6 of Appendix B.9&B15	Pass
Frequency Stability	§2.1055(a)(1)(b) §2.1055(d)(2) §27.54	Within authorized bands of operation/frequency block.	Section 2 of Appendix B B.9&B15	Pass



Unless otherwise agreed in writing, 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.aspx 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.aspx. 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) test etailed 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@qs.com"

South of No. 6 Plant, No. 1, Runsheng Road, Suzhou Industrial Park, Suzhou Area, China (Jiangsu) Pilot Free Trade Zone 215000 中国 • 苏州 • 中国(江苏)自由贸易试验区苏州片区苏州工业园区润胜路1号的6号厂房南部 邮编: 215000 t (86-512) 62992980 www.sgsgroup.com.cn



Report No.: SEWM2311000454RG01

Rev.: Page: 12 of 50

2.8 LTE Band 41/CA 7C/ CA 38C

Test Item	FCC Rule No.	Requirements	Test Result	Verdict
Effective (Isotropic) Radiated Power Output Data	§2.1046, §27.50(h)(2)	EIRP ≤ 2W	Section 1 of Appendix B.16& B.18&B.19	Pass
Peak-Average Ratio		≤13 dB	Section 2 of Appendix B.16& B.18&B.19	Pass
Bandwidth	§2.1049	OBW: No limit. EBW: No limit.	Section 3 of Appendix B.16& B.18&B.19	Pass
Band Edges Compliance	§2.1051, §27.53(m4)	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.	Section 4 of Appendix B.16& B.18&B.19	Pass
Spurious Emission at Antenna Terminals	§2.1051, §27.53(m)	Channel Edge -25dBm/ 1 MHz 1 MHz 1 MHz 9 kHz 9.5 MHz X MHz 10 th harmonics X=Max {6MHz, EBW}	Section 5 of Appendix B.16& B.18&B.19	Pass



Unless otherwise agreed in writing, 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.aspx 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.aspx. 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) 83071443, or email: CN.Doccheck@sqs.com

South of No. 6 Plant, No. 1, Runsheng Road, Suzhou Industrial Park, Suzhou Area, China (Jiangsu) Pilot Free Trade Zone 215000 中国 • 苏州 • 中国(江苏)自由贸易试验区苏州片区苏州工业园区润胜路1号的6号厂房南部 邮编: 215000

t (86-512) 62992980 sgs.china@sgs.com

t (86-512) 62992980 www.sgsgroup.com.cn



Report No.: SEWM2311000454RG01

Rev.: Page: 13 of 50

		i age.		
Field Strength of Spurious Radiation	§2.1053, §27.53(m)	Channel Edge -25dBm/ 1 MHz 1 MHz 1 MHz 9 kHz 95 MHz X MHz 10 th harmonics X=Max {6MHz, EBW}	Section 6 of Appendix B.16& B.18&B.19	Pass
Frequency Stability	§2.1055(a)(1)(b) §2.1055(d)(2) §27.54	Within authorized bands of operation/frequency block.	Section 7 of Appendix B.16& B.18&B.19	Pass



Unless otherwise agreed in writing, 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.aspx 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.aspx. 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, forger 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,

South of No. 6 Plant, No. 1, Runsheng Road, Suzhou Industrial Park, Suzhou Area, China (Jiangsu) Pilot Free Trade Zone 215000 中国 • 苏州 • 中国(江苏)自由贸易试验区苏州片区苏州工业园区润胜路1号的6号厂房南部 邮编: 215000

t (86-512) 62992980 www.sgsgroup.com.cn



Report No.: SEWM2311000454RG01

Rev.: Page: 14 of 50

2.9 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≤3W.	Section 1 of Appendix B.10&B12	Pass
Peak-Average Ratio		Limit≤13 dB	Section 4 of Appendix B.10&B12	Pass
Bandwidth	§2.1049	OBW: No limit. EBW: No limit.	Section 3 of Appendix B.10&B12	Pass
Band Edges Compliance	§2.1051, §27.53(g)	≤ -13 dBm/1%*EBW, in 1 MHz bands immediately outside and adjacent to the frequency block.	Section 5 of Appendix B.10&B12	Pass
Spurious Emission at Antenna Terminals	§2.1051, §27.53(g)	FCC: ≤ -13 dBm/100 kHz, from 9 kHz to 10 th harmonics but outside authorized operating frequency ranges.	Section 5 of Appendix B.10&B12	Pass
Field Strength of Spurious Radiation	§2.1053, §27.53(g)	FCC: ≤ -13 dBm/100 kHz.	Section 6 of Appendix B.10&B12	Pass
Frequency Stability	§2.1055(a)(1)(b) §2.1055(d)(2) §27.54	Within authorized bands of operation/frequency block.	Section 2 of Appendix B.10&B12	Pass



Unless otherwise agreed in writing, 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.aspx 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.aspx. 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, forger 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,

South of No. 6 Plant, No. 1, Runsheng Road, Suzhou Industrial Park, Suzhou Area, China (Jiangsu) Pilot Free Trade Zone 215000 中国 • 苏州 • 中国(江苏)自由贸易试验区苏州片区苏州工业园区润胜路1号的6号厂房南部 邮编: 215000 t (86-512) 62992980 www.sgsgroup.com.cn



Report No.: SEWM2311000454RG01

Rev.: 01 Page: 15 of 50

2.10 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.	Section 1 of Appendix B.11	Pass
Peak-Average Ratio		Limit≤13 dB	Section 4 of Appendix B.11	Pass
Bandwidth	§2.1049,	OBW: No limit. EBW: No limit.	Section 3 of Appendix B.11	Pass
Band Edges Compliance	§2.1051, §27.53(c)	≤ -13 dBm/1%*EBW, in 1 MHz bands immediately outside and adjacent to the frequency block.	Section 5 of Appendix B.11	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.	Section 5 of Appendix B.11	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 6 of Appendix B.11	Pass
Frequency Stability	§2.1055(a)(1)(b) §2.1055(d)(2) §27.54	Within authorized bands of operation/frequency block.	Section 2 of Appendix B.11	Pass



Unless otherwise agreed in writing, 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.aspx 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.aspx. 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 related 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@ass.com

South of No. 6 Plant, No. 1, Runshang Road, Suzhou Industrial Park, Suzhou Area, China (Jiangsu) Pilot Free Trade Zone 215000 中国 - 苏州 - 中国(江苏)自由贸易试验区苏州片区苏州工业园区润胜路1号的6号厂房南部 邮编: 215000

215000 t (86–512) 6299290 t (86–512) 6299290



Report No.: SEWM2311000454RG01

Rev.: Page: 16 of 50

LTE Band 26(814~824 MHz) 2.11

Test Item	FCC Rule No.	Requirements	Test Result	Verdict
Transmitter Conducted Power Output	§2.1046, §90.635(b)	< 100 W.	Section 1 of Appendix B.13	Pass
Peak-Average Ratio		Limit≤13 dB	Section 4 of Appendix B.13	Pass
Bandwidth	§2.1049	OBW: No limit. EBW: No limit.	Section 3 of Appendix B.13	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 Log10(f/6.1) decibels or 50+10Log10(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.	Section 5 of Appendix B.13	Pass
Spurious Emission at Antenna Terminals	§2.1051, §90.691	< 43 + 10Log10(P[Watts]) for all out-of-band emissions	Section 5 of Appendix B.13	Pass
Field Strength of Spurious Radiation	§2.1053, §90.691	< 43 + 10Log10(P[Watts]) for all out-of-band emissions	Section 6 of Appendix B.13	Pass
Frequency Stability	§2.1055(a)(1)(b) §2.1055(d)(2) §90.213	Within authorized bands of operation/frequency block.	Section 2 of Appendix B.13	Pass



Report Template No./Rev.: WI-TRF-RG(FCC)001/v01

Unless otherwise agreed in writing, 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/Ferms-and-Conditions.aspx.and, for electronic Documents at <a href="http://www.sgs.com/en/Ferms-and-Conditions-And-Ferms-and-Conditions-And-Ferms-and-Conditions-And-Ferms-and-Conditions-And-Ferms-and-Conditions-And-Ferms-and-Conditions-And-Ferms-and-Conditions-And-Ferms-and-Conditions-And-Ferms-and-Conditions-And-Ferms-and-Conditions-And-Ferms-and-Conditions-And-Ferms-and-Conditions-And-Ferms-and-Conditions-And-Ferms-and-Conditions-And-Ferms-and-Conditions-And-Ferms-and-Conditions-And-Ferms-and-Conditions-And-Ferms-and-Conditions-And-Ferms-and-Conditions-And-Ferms-and-Conditions-And-Ferms-and-Condit

South of No. 6 Plant, No. 1, Runsheng Road, Suzhou Industrial Park, Suzhou Area, China (Jiangsu) Pilot Free Trade Zone 215000 中国 • 苏州 • 中国(江苏)自由贸易试验区苏州片区苏州工业园区润胜路1号的6号厂房南部 邮编: 215000

t (86-512) 62992980 www.sgsgroup.com.cn



Report No.: SEWM2311000454RG01

Rev.: 01 Page: 17 of 50

3 General Information

3.1 Details of Client

Applicant:	Xiaomi Communications Co., Ltd.
Address of Applicant:	#019, 9th Floor, Building 6, 33 Xi'erqi Middle Road, Haidian District, Beijing, China, 100085
Manufacturer:	Xiaomi Communications Co., Ltd.
Address of Manufacturer:	#019, 9th Floor, Building 6, 33 Xi'erqi Middle Road, Haidian District, Beijing, China, 100085

3.2 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

3.3 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



Unless otherwise agreed in writing, 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.aspx and, for electronic format documents, subject to Terms and Conditions for Electronic Documents at http://www.sgs.com/en/Terms-and-Conditions.Appx Attention: The terms and the second of the second and the second and

 South of No. 6 Plant, No. 1, Runsheng Road, Suchou Industrial Park, Suchou Area, China (Jangsu) Plot Free Trade Zone
 215000
 t (86-512) 62992980

 中国·苏州·中国(江苏)自由贸易试验区苏州上区苏州工业园区湾胜路(号龄6号/房商部
 邮编: 215000
 t (86-512) 62992980

sgs.china@sgs.com



Report No.: SEWM2311000454RG01

Rev.: 01 Page: 18 of 50

3.4 General Description of EUT

EUT Description:	Mobile Phone					
Model No.:	XIG05					
Trade Mark:	Redmi					
Hardware Version:	13510N16					
Software Version:	Xiaomi HyperOS 1.0	0				
Power Supply:	Lithium Battery (3.9	1V)				
	RF Conducted	8645940700133	28			
IMEI:	RSE	IMEI1:86459407 IMEI2:86459407				
Antenna Type:	IFA Antenna					
	GSM850:	-5dBi (Ant0) -4.6dBi (Ant1)	GSM1900:	-1.7dBi (Ant3) -2.2dBi (Ant4)		
	WCDMA Band II:		WCDMA Band IV:	-5.8dBi (Ant2) -2.2dBi (Ant3) -1.7dBi (Ant4) -4.5dBi (Ant5)		
	WCDMA Band V: -5dBi (Ant0) -4.6dBi (Ant1)					
	LTE Band 2:	-1.7dBi (Ant3) -2.2dBi (Ant4)	LTE Band 4:	-5.8dBi (Ant2) -2.2dBi (Ant3) -1.7dBi (Ant4) -4.5dBi (Ant5)		
Antenna Gain:	LTE Band 5:	-5dBi (Ant0) -4.6dBi (Ant1)	LTE Band 7:	-0.3dBi (Ant2) -1.2dBi (Ant3) -1.6dBi (Ant4) -2dBi (Ant5)		
	LTE Band 12:	-5.7dBi (Ant0) -5.5dBi (Ant1)	LTE Band 13:	-4.8dBi (Ant0) -6.5dBi (Ant1)		
	LTE Band 17:	-5.7dBi (Ant0) -5.7dBi (Ant1)	LTE Band 26:	-5dBi (Ant0) -5dBi (Ant1)		
	LTE Band 38:	-0.3dBi (Ant2) -1.2dBi (Ant3) -2dBi (Ant4) -3.8dBi (Ant5)	LTE Band 41:	-0.3dBi (Ant2) -1.2dBi (Ant3) -1.6dBi (Ant4) -2dBi (Ant5)		
	LTE Band 66:	-5.8dBi (Ant2) -2.2dBi (Ant3) -1.7dBi (Ant4) -4.5dBi (Ant5)				



Unless otherwise agreed in writing, 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.aspx 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.aspx. 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, forger 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,

 South of No. 6 Plant. No. 1, Runsheng Road, Suchou Industrial Park, Suchou Area, Chine (Liangsu) Plat Free Trade Zone
 215000
 t (86–512) 62992980
 wwww.sgsgroup.com.cn

 中国 - 苏州 中国 (江苏) 自由贸易试验区苏州广区苏州工业园区测胜路1号的6号厂房南部
 邮编:
 215000
 t (86–512) 62992980
 sgs.china@sgs.com



Report No.: SEWM2311000454RG01

Rev.: 01 Page: 19 of 50

	LTE CA_7C:	-1.2dE -1.6dE	Bi (Ant2) Bi (Ant3) Bi (Ant4) (Ant5)	LTE CA_38C	-0.3dBi (Ant2) -1.2dBi (Ant3) -2dBi (Ant4) -3.8dBi (Ant5)		
	Note: The antenna gain manufacturer.	na gain are derived from the gain information report provided by the rer.					
4.5dB(Below 10		z)	4.8dB(1.0~2	.4GHz)	5.2dB(2.4~3.4GHz)		
RF Cable:	5.5dB(Above 3.4G	5dB(Above 3.4GHz)					

Remark:

- 1. Conduction Power & EIRP of all antennas are tested, and only the worst data is presented.
- 2.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.



Unless otherwise agreed in writing, 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/Terms-en-Document.aspx.

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 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, **Attention:**To check the authenticity of testing /inspection report & certificate, please contact us at telephone: (86-755) 8307 1443,

South of No. 6 Plant, No. 1, Runshang Road, Suzhou Industrial Park, Suzhou Area, China (Jiangsu) Plot Free Trade Zone 215000 中国 - 苏州 - 中国(江苏)自由贸易试验区苏州上区苏州工业园区河胜路1号的6号厂房南部 邮编: 215000

t (86–512) 62992980 t (86–512) 62992980

www.sgsgroup.com.cn sgs.china@sgs.com



Report No.: SEWM2311000454RG01

Rev.: 01 Page: 20 of 50

3.5 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		
LTE/TM3	LTE system, 64QAM modulation		
Remark: The test mode(s	Remark: The test mode(s) are selected according to relevant radio technology specifications.		

3.6 Test Environment

Environment Parameter	101.0 kPa Selected Values During Tests				
Relative Humidity	44-46 % F	RH Ambient			
Value	Temperature(°C)	Voltage(Vdc)			
NTNV	22~23	3.91			
LTLV	-30	3.5			
LTHV	-30	4.35			
HTLV	50	3.5			
HTHV	50	4.35			

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

3.7 Description of Support Units

The EUT has been tested as an independent unit.



Unless otherwise agreed in writing, 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.aspx and, for electronic format documents, subject to Terms and Conditions for Electronic Documents at http://www.sgs.com/en/Terms-and-Conditions.Appx Attention: The terms and the second of the second and the second and

| South of No. 6 Plant, No. 1, Runsteing Read, Suchou Industrial Park, Suchou Area, China (Jiangsu) PHol Free Trade Zone 215000 t (86–512) 62992980 中国 - 苏州 - 中国(江苏)自由贸易试验区苏州片区苏州工业园区消胜部1号的6号厂房南部 邮编: 215000 t (86–512) 62992980

sgs.china@sgs.com



Report No.: SEWM2311000454RG01

Rev.: Page: 21 of 50

3.8 Technical Specification

Characteristics	Description							
Radio System Type	⊠ GSM	□ UMTS		□ LTE				
	Band		T	(RX		
	GSM850		82	4 to 849	MHz	869 to 8	94 MHz	
	GSM1900		18	50 to 19	10 MHz	1930 to	1990 MHz	
	UMTS Band II		18	50 to 19	10 MHz	1930 to	1990 MHz	
	UMTS Band I\	/	17	10 to 17	55 MHz	2110 to	2155 MHz	
	UMTS Band V	1	82	4 to 849	MHz	869 to 8	94 MHz	
	LTE Band 2		18	50 to 19	10 MHz	1930 to	1990 MHz	
	LTE Band 4		17	10 to 17	55 MHz	2110 to	2155 MHz	
	LTE Band 5		82	4 to 849	MHz	869 to 8	94 MHz	
	LTE Band 7		25	00 to 25	70 MHz	2620 to	2690 MHz	
	LTE Band 12		69	9 to 716	MHz	729 to 7	46 MHz	
Supported Frequency Range	LTE Band 13		77	777 to 787 MHz		746 to 7	56 MHz	
	LTE Band 17		70	704 to 716 MHz		734 to 7	734 to 746 MHz	
	LTE Band 26		81	4 to 824l	\/Hz	850 to 8	859 to 869 MHz	
	(814 to 824 MHz)		01	4 10 0241	VII IZ	059 10 0	O9 IVII IZ	
	LTE Band 26		82	4 to 849	MHz	869 to 8	94 MHz	
	(824 to 849 MI	Hz)						
	LTE Band 38		25	2570 to 2620 MHz		2570 to	2570 to 2620 MHz	
	LTE Band 41			2496 to 2690MHz			2496 to 2690MHz	
	LTE Band 66		1710 to 1780 MHz 2110 to 2200 MHz				2200 MHz	
	LTE CA:							
	LTE UL CA_7C; LTE UL CA_38C; LTE UL CA_4A-7A; LTE UL CA_2A-4A;							
	Remark: ULC/				E, report only	/ show wors	t mode.	
	GSM system:		⊠0.2 MHz					
	UMTS system	:		5 MHz	1	I	T	
	LTE Band 2				⊠3 MHz	⊠5 MHz	⊠10 MHz	
Supported Channel Bandwidth				15 MHz	⊠20 MHz			
	LTE Band 4	LTF Band 4			⊠3 MHz	⊠5 MHz	⊠10 MHz	
	LIE Dallu 4			15 MHz	⊠20 MHz			
	LTE Band 5		\boxtimes	1.4 MHz	⊠3 MHz	⊠5 MHz	⊠10 MHz	



Unless otherwise agreed in writing, 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.aspx and, for electronic format documents, subject to Terms and Conditions for Electronic Documents at http://www.sgs.com/en/Terms-and-ConditionsTerms-e-Document.aspx. 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) test erained for 30 days only.

Attention: To check the authenticity of testing /inspection report & certificate, please contact us at telephone: (86-755) 83071443, or email: CND.Doccheck@gs.com"

South of No. 6 Plant, No. 1, Runsheng Road, Suzhou Industrial Park, Suzhou Area, China (Jiangsu) Pilot Free Trade Zone 215000 中国 • 苏州 • 中国(江苏)自由贸易试验区苏州片区苏州工业园区润胜路1号的6号厂房南部 邮编: 215000

t (86-512) 62992980 www.sgsgroup.com.cn



Report No.: SEWM2311000454RG01

01 Page. 22 of 50

LTE Band 7				F	Page:	22 of	f 50	
LTE Band 13		LTE Band 7		⊠5 MHz	⊠10 MH	z 🔯	15 MHz	⊠20 MHz
LTE Band 17		LTE Band 12	LTE Band 12		Iz ⊠3 MHz	\boxtimes	5 MHz	⊠10 MHz
LTE Band 26(814-824)		LTE Band 13		⊠5 MHz	⊠10 MH	z		
LTE Band 26(824-849)		LTE Band 17		⊠5 MHz	⊠10 MH	z		
LTE Band 26(824-849)		LTE Band 26(814-824)		⊠1.4 MH	Iz ⊠3 MHz	\boxtimes	5 MHz	⊠10 MHz
LTE Band 38		LTE Band 26(824-840	١	⊠1.4 MH	Iz ⊠3 MHz	\boxtimes	5 MHz	⊠10 MHz
LTE Band 41 S MHz S 10 MHz S 15 MHz S 10 MHz LTE Band 66 S MHz S MHz S MHz S MHz S MHz S MHz S MHz S MHz S MHz S MHz S MHz S MHz S MHz S MHz S MHz S MHz S MHz S MHz S MHz S MHz S MHz S MHz S MHz S MHz S MHz S MHz S MHz S MHz S MHz S MHz S MHz S MHz S MHz S MHz S MHz S MHz S MHz S MHz S MHz S MHz + 15MHz S 15MHz + 10MHz S MHz + 15MHz S 20MHz + 15MHz S MHz + 20MHz S MHz + 15MHz S MHz + 15MHz S 20MHz + 20MHz S MHz + 20MHz S MHz + 15MHz S MHz + 15MHz S 20MHz + 20MHz S MHz + 15MHz S 20MHz + 15MHz S MHz + 15MHz S 15MHz + 15MHz S MHz + 15MHz + 15MHz		LTE Band 20(024-043	,	⊠15 MH:	Z			
LTE Band 66		LTE Band 38		⊠5 MHz	⊠10 MH	z 🔯	15 MHz	⊠20 MHz
LTE Band 66		LTE Band 41		⊠5 MHz	⊠10 MH	z 🔯	15 MHz	⊠20 MHz
Manage		LTE Rand 66		⊠1.4 MH	Iz ⊠3 MHz	\boxtimes	5 MHz	⊠10 MHz
LTE Band CA_7C		LTE Band 00		⊠15MHz	⊠20MHz	:		
LTE Band CA_7C				⊠10MHz	+20MHz	\boxtimes	15MHz+	10MHz
		LTF Band CA 7C		⊠15MHz	+15MHz	\boxtimes	15MHz+2	20MHz
LTE Band CA_38C □15MHz+15MHz □20MHz+20MHz Note: WCDMA supports HSUPA, HSDPA, DC-HSDPA, HSPA+, but only the worst case was tested and the data displayed in this report. Characteristics □ Description GSM: GMSK 8PSK □ GSM850 246KGXW 250KG7W □ GSM1900 246KGXW 252KG7W □ UMTS: QPSK □ Band II 4M18F9W □ Band IV 4M18F9W □ Band IV 4M18F9W □ E-UTRA: QPSK 16QAM 64QAM □ E-UTRA: QPSK 16QAM 18M3W7D 18M3W7D 18M3W7D 13M7W7D 18M2W7D 18M2W7D 18M2W7D		LTE Band O/ (_/ O		⊠20MHz	+10MHz	\boxtimes 2	⊠20MHz+15MHz	
Note: WCDMA supports HSUPA, HSDPA, DC-HSDPA, HSPA+, but only the worst case was tested and the data displayed in this report. Characteristics				⊠20MHz+20MHz				
Worst case was tested and the data displayed in this report.		LTE Band CA_38C		⊠15MHz+15MHz		\boxtimes 2	20MHz+2	20MHz
GSM: GMSK 8PSK GSM850 246KGXW 250KG7W UMTS: QPSK Band II 4M18F9W Band IV 4M18F9W Band V 4M17F9W E-UTRA: QPSK 16QAM 64QAM Configuration.) E-UTRA: QPSK 1M13W7D 1M13W7D 2M76G7D 2M76W7D 2M76W7D 2M76G7D 2M76W7D 2M76W7D 2M7G7D 3M7W7D 13M7W7D 13M7W7D 13M7W7D 13M7W7D 13M7W7D 13M7W7D 18M2W7D 18M2								but only the
GSM850 246KGXW 250KG7W	Characteristics	Description						
Campaign		GSM:	GM	ISK	8PSK			
Designation of Emissions (Remark: the necessary bandwidth of which is the worst value from the measured occupied bandwidths for each type of channel bandwidth configuration.) Amount		GSM850	246	SKGXW	250KG7W			
Band II		GSM1900	246	SKGXW	252KG7W			
Band IV 4M18F9W		UMTS:	QP	SK				
(Remark: the necessary bandwidth of which is the worst value from the measured occupied bandwidths for each type of channel bandwidth configuration.) Band V 4M17F9W E-UTRA: QPSK 16QAM 64QAM LTE Band 2 1M13G7D 1M13W7D 1M13W7D 1M13W7D 2M76G7D 2M76W7D 2M76W7D 2M76W7D 4M58G7D 4M59W7D 4M58W7D 9M12G7D 9M10W7D 9M11W7D 13M7G7D 13M7W7D 13M7W7D 18M2G7D 18M2W7D 18M2W7D		Band II	4M	18F9W				
bandwidth of which is the worst value from the measured occupied bandwidths for each type of channel bandwidth configuration.) E-UTRA: QPSK 16QAM 64QAM 1M13G7D 1M13W7D 1M13W7D 2M76G7D 2M76W7D 2M76W7D 4M58G7D 4M59W7D 4M58W7D 9M12G7D 9M10W7D 9M11W7D 13M7G7D 13M7W7D 13M7W7D 18M2G7D 18M2W7D 18M2W7D		Band IV	4M	18F9W				
The state of the	bandwidth of which is the	Band V	4M	17F9W				
bandwidths for each type of channel bandwidth configuration.) LTE Band 2 M13G7D 1M13W7D 1M13W7D 2M76W7D 2M76W7D 4M58W7D 4M58W7D 4M58W7D 4M58W7D 13M7W7D 13M7W7D 13M7W7D 18M2W7D		E-UTRA:	QP	SK	16QAM	64Q	AM	
Configuration.) LTE Band 2 2M76G7D 2M76W7D 2M76W7D 2M76W7D 4M58W7D 4M58W7D 4M58W7D 9M12G7D 9M10W7D 9M11W7D 13M7G7D 13M7W7D 18M2W7D 18M2W	bandwidths for each type of		1M	13G7D	1M13W7D	1M1	3W7D	
LTE Band 2 4M58G7D 4M59W7D 4M58W7D 9M12G7D 9M10W7D 9M11W7D 13M7G7D 13M7W7D 13M7W7D 18M2G7D 18M2W7D 18M2W7D			2M	76G7D	2M76W7D	2M7	6W7D	
9M12G7D 9M10W7D 9M11W7D 13M7G7D 13M7W7D 13M7W7D 18M2G7D 18M2W7D 18M2W7D	ooi.ii.ga.ai.o.ii.)	LTE Band 2	4M	58G7D	4M59W7D	4M5	8W7D	
18M2G7D 18M2W7D 18M2W7D		LIL Band 2	9M	12G7D	9M10W7D	9M1	1W7D	
			13	M7G7D	13M7W7D	13M	7W7D	
LTE Band 4 1M13G7D 1M13W7D 1M12W7D			181	M2G7D	18M2W7D	18M	2W7D	
		LTE Band 4	1M	13G7D	1M13W7D	1M1	2W7D	



Unless otherwise agreed in writing, 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.aspx 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.aspx. Attention is drawn to the limitation of liability, indemnification and jurisdiction issues define 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) 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: Ch.Doccheck@ass.com"

South of No. 6 Plant, No. 1, Runsheng Road, Suzhou Industrial Park, Suzhou Area, China (Jiangsu) Pilot Free Trade Zone 215000 中国 • 苏州 • 中国(江苏)自由贸易试验区苏州片区苏州工业园区润胜路1号的6号厂房南部 邮编: 215000

t (86-512) 62992980 www.sgsgroup.com.cn



Report No.: SEWM2311000454RG01

Rev.: 23 of 50 Page:

2M75G7D 2M76W7D 2M75W7D				9-	
9M10G7D 9M11W7D 9M12W7D 13M7W7D 13M7W7D 13M7W7D 13M7W7D 13M7W7D 13M7W7D 18M3W7D 18M3W7D 18M3W7D 1M13W7D 1M13W7D 2M76W7D 2M76W7D 2M76W7D 4M59G7D 4M58W7D 4M59W7D 3M08W7D 3M08W7D 3M08W7D 3M08W7D 3M08W7D 3M7W7D 3M09W7D 3M09W7			2M75G7D	2M76W7D	2M75W7D
13M7G7D			4M60G7D	4M59W7D	4M59W7D
18M2G7D			9M10G7D	9M11W7D	9M12W7D
LTE Band 5 Mail			13M7G7D	13M7W7D	13M7W7D
LTE Band 5 2M77G7D 2M75W7D 2M76W7D 4M59G7D 4M59W7D 4M59W7D 9M08W7D 9M08W7D 9M08W7D 4M59W7D 9M08W7D 9M11W7D 9M12W7D 13M7W7D 2M75G7D 2M77W7D 2M76W7D 2M75W7D 2M75W7D 2M76W7D 3M66W7D 3M			18M2G7D	18M3W7D	18M3W7D
LTE Band 5 4M59G7D 4M58W7D 4M57W7D 9M08G7D 9M08W7D 8M08W7D 4M59G7D 4M58W7D 4M59W7D 9M14G7D 9M11W7D 9M12W7D 13M7G7D 13M7W7D 13M7W7D 18M3G7D 18M2W7D 18M2W7D 18M3G7D 18M2W7D 18M2W7D 2M75G7D 2M77W7D 2M76W7D 4M59G7D 4M59W7D 4M59W7D 9M09G7D 9M09W7D 9M08W7D 1M13G7D 1M14W7D 1M13W7D 2M75G7D 2M77W7D 2M76W7D 4M59G7D 4M59W7D 4M59W7D 9M09G7D 9M07W7D 9M08W7D 1M13G7D 1M13W7D 1M12W7D 2M75G7D 9M07W7D 9M05W7D 1M13G7D 1M13W7D 1M12W7D 2M75G7D 9M07W7D 9M05W7D 4M59W7D 4M59W7D 4M58W7D 1M13G7D 1M13W7D 1M12W7D 2M75G7D 2M76W7D 2M75W7D 4M59G7D 4M58W7D 4M59W7D 1M13G7D 1M13W7D 1M12W7D 2M75G7D 2M76W7D 2M75W7D 4M59G7D 4M58W7D 9M09W7D 9M07G7D 9M08W7D 9M09W7D 1M13G7D 1M13W7D 1M12W7D 2M75G7D 2M76W7D 2M76W7D 4M59W7D 4M59W7D 1M13G7D 1M13W7D 1M12W7D 2M75G7D 2M75W7D 2M76W7D 4M59W7D 4M59W7D 4M59W7D 9M07G7D 9M09W7D 9M08W7D 1M5G7D 1M5W7D 1M5W7D 1M5G7D 1M5W7D 1M5W7D 1M5W7D 1M5W7D 1M5W7D 1M5W7D 1M5W7D 1M5W7D 4M59W7D 4M59W7D 4M58W7D 4M59W7D 4M59W7D 4M58W7D 4M60G7D 4M59W7D 4M58W7D 4M58W7D 4M60G7D 4M59W7D 4M59W7D 4M60G7D 4M59W7D 4M59W7D 4M60G7D 4M59W7D 4M59W7D 4M60G7D 4M59W7D 4M59W7D 4M60G7D 4M59W7D 4M60G7D 4M59W7D 4M60G7D 4M58W7D 4M60G7D 4M59W7D 4M60G7D 4M59W7D 4M60G7D 4M59W7D 4M60G7D 4M60G7D			1M13G7D	1M13W7D	1M13W7D
AM59G7D AM58W7D AM57W7D 9M08G7D 9M08W7D 8M08W7D AM59G7D AM58W7D AM59W7D AM59G7D AM58W7D AM59W7D AM59G7D AM58W7D AM59W7D AM59G7D AM59W7D AM59W7D AM5G		LTE Pand 5	2M77G7D	2M75W7D	2M76W7D
LTE Band 7 4M59G7D 4M58W7D 4M59W7D 9M12W7D 13M7W7D 13M7G7D 13M7W7D 13M7W7D 18M3G7D 18M2W7D 18M2W7D 18M3G7D 1M14W7D 1M13W7D 2M76W7D 2M76W7D 2M76W7D 2M76W7D 9M09G7D 9M10W7D 9M08W7D 1M58W7D 1M59W7D 1M		LIE Ballu 5	4M59G7D	4M58W7D	4M57W7D
LTE Band 7 9M14G7D 9M11W7D 9M12W7D 13M7W7D 13M7W7D 13M7W7D 13M7W7D 13M7W7D 13M7W7D 18M3G7D 18M2W7D 18M2W7D 18M2W7D 18M3G7D 18M13W7D 18M13W7D 2M75G7D 2M77W7D 2M76W7D 2M75W7D 4M59W7D 9M09W7D 9M09W7D 9M09W7D 9M09W7D 9M07G7D 9M07W7D 9M05W7D 9M07G7D 9M08W7D 9M07G7D 9M06W7D 1M13G7D 1M13W7D 1M12W7D 2M75W7D 2M75W7D 4M59G7D 2M76W7D 2M75W7D 9M07G7D 9M09W7D 1M13G7D 1M13W7D 1M12W7D 2M75G7D 2M75W7D 2M75W7D 1M13G7D 1M13W7D 1M12W7D 2M75G7D 2M75W7D 2M75W7D 1M13G7D 1M13W7D 1M12W7D 2M75G7D 2M75W7D 2M75W7D 2M75G7D 2M75W7D 2M75G7D 2M75W7D 2M75W7D 2M75G7D 2M75W7D 2M75W7D 2M75G7D 2M75W7D 2M75W7D 2M75G7D 2M75W7D 2M75W7D 3M5G7D 3M5W7D 4M59W7D 4			9M08G7D	9M08W7D	8M08W7D
LTE Band 7 13M7G7D 13M7W7D 13M7W7D 18M3G7D 18M2W7D 18M2W7D 1M13G7D 1M14W7D 1M13W7D 2M75G7D 2M77W7D 2M76W7D 4M59G7D 4M59W7D 4M59W7D 9M09G7D 9M10W7D 9M08W7D 4M60G7D 4M59W7D 4M58W7D 1M13G7D 1M13W7D 2M76W7D 4M60G7D 4M59W7D 4M58W7D 4M60G7D 4M59W7D 4M58W7D 4M60G7D 4M59W7D 4M58W7D 1M13G7D 1M13W7D 1M12W7D 1M13G7D 1M13W7D 1M12W7D 4M59G7D 4M58W7D 4M59W7D 1M13G7D 1M13W7D 1M12W7D 2M75G7D 2M76W7D 2M75W7D 4M59G7D 4M58W7D 9M09W7D 1M13G7D 1M13W7D 1M12W7D 2M75G7D 9M08W7D 9M09W7D 4M58G7D 4M59W7D 4M59W7D 9M07G7D 9M08W7D 9M09W7D 1M13G7D 1M13W7D 1M12W7D 2M75G7D 2M75W7D 2M76W7D 4M58G7D 4M59W7D 4M59W7D 9M07G7D 9M09W7D 9M08W7D 1M13G7D 13M5W7D 13M5W7D 1M5G7D 13M5W7D 13M5W7D 4M60G7D 4M59W7D 4M58W7D 4M60G7D 4M59W7D 4M58W7D 4M60G7D 4M59W7D 4M58W7D 4M60G7D 4M59W7D 4M58W7D			4M59G7D	4M58W7D	4M59W7D
13M7G7D 13M7W7D 13M7W7D 18M3W7D 18M3G7D 18M2W7D 18M2W7D 18M3W7D 18M3W7D 18M3W7D 18M3W7D 18M3W7D 18M3W7D 18M3W7D 18M3W7D 18M3W7D 2M76W7D 2M76W7D 2M76W7D 4M59W7D 4M59W7D 9M09G7D 9M10W7D 9M08W7D 18M3W7D 9M07G7D 9M07W7D 9M05W7D 18M3W7D 18M5W7D 18M5		LTE Dand 7	9M14G7D	9M11W7D	9M12W7D
LTE Band 12 1M13G7D		LIE Band /	13M7G7D	13M7W7D	13M7W7D
LTE Band 12 2M75G7D 2M77W7D 2M76W7D 4M59W7D 4M59G7D 4M59W7D 9M08W7D 9M09G7D 9M10W7D 9M08W7D 9M07G7D 9M07G7D 9M07G7D 9M07G7D 9M07G7D 9M06W7D 4M58W7D 4M58W7D 4M58W7D 9M07G7D 9M08W7D 9M06W7D 4M59W7D 4M58W7D 9M07G7D 9M08W7D 9M06W7D 4M59G7D 2M76W7D 2M75W7D 2M75W7D 2M76W7D 9M07G7D 9M08W7D 9M09W7D 9M09W7D 2M75W7D 2M75G7D 2M76W7D 2M75W7D 2M75G7D 2M76W7D 2M76W7D 2M75G7D 2M76W7D 2M76W7D 2M75G7D 2M76W7D 2M76W7D 2M76W7D 2M76W7D 2M76W7D 2M76W7D 2M76W7D 3M5G7D 3M5W7D 3M5W7D 3M5W7D 3M5W7D 3M5W7D 3M5W7D 4M59W7D 4M59W7D			18M3G7D	18M2W7D	18M2W7D
LTE Band 12 4M59G7D 4M59W7D 4M59W7D 9M09G7D 9M10W7D 9M08W7D 4M58G7D 4M58W7D 4M59W7D 9M07G7D 9M07W7D 9M05W7D 4M60G7D 4M59W7D 4M58W7D 4M60G7D 9M08W7D 9M06W7D 1M13G7D 1M13W7D 1M12W7D LTE Band 26 (814-824) 4M59G7D 4M58W7D 4M59W7D 2M75G7D 2M76W7D 2M75W7D 9M07G7D 9M08W7D 9M09W7D 1M13G7D 1M13W7D 1M12W7D 2M75G7D 2M76W7D 2M75W7D 4M59G7D 4M58W7D 4M59W7D 2M75G7D 2M75W7D 2M76W7D 4M58G7D 1M13W7D 1M12W7D 2M75G7D 2M75W7D 2M76W7D 4M58G7D 4M59W7D 4M59W7D 9M07G7D 9M09W7D 9M08W7D 13M5G7D 13M5W7D 13M5W7D 4M60G7D 4M59W7D 4M58W7D 4M60G7D 4M59W7D 4M58W7D 4M60G7D 9M09W7D 9M09W7D 4M60G7D 9M09W7D 9M09W7D			1M13G7D	1M14W7D	1M13W7D
AM59G7D AM59W7D AM59W7D		LTE Band 12	2M75G7D	2M77W7D	2M76W7D
LTE Band13 4M58G7D 4M58W7D 4M59W7D 9M07G7D 9M07W7D 9M05W7D 4M60G7D 4M59W7D 4M58W7D 9M07G7D 9M08W7D 9M06W7D 1M13G7D 1M13W7D 1M12W7D LTE Band 26 (814-824) 4M59G7D 4M58W7D 2M75W7D 2M75G7D 2M76W7D 2M75W7D 9M07G7D 9M08W7D 9M09W7D 9M07G7D 9M08W7D 9M09W7D 1M13G7D 1M13W7D 1M12W7D 2M75G7D 2M75W7D 2M76W7D 2M75G7D 2M75W7D 2M76W7D 4M58G7D 4M59W7D 4M59W7D 9M07G7D 9M09W7D 9M08W7D 13M5G7D 13M5W7D 13M5W7D 4M60G7D 4M59W7D 4M58W7D 4M60G7D 4M59W7D 9M09W7D LTE Band 38 9M09G7D 9M07W7D 9M09W7D			4M59G7D	4M59W7D	4M59W7D
LTE Band 13 9M07G7D 9M07W7D 9M05W7D LTE Band 17 4M60G7D 4M59W7D 4M58W7D 9M07G7D 9M08W7D 9M06W7D 1M13G7D 1M13W7D 1M12W7D 2M75W7D 2M75W7D 9M07G7D 9M08W7D 9M09W7D 4M59W7D 9M09W7D 9M07G7D 9M08W7D 9M09W7D 1M13G7D 1M13W7D 1M12W7D 2M75G7D 2M75W7D 2M76W7D 2M75G7D 2M75W7D 2M76W7D 4M58G7D 4M59W7D 4M59W7D 9M07G7D 9M09W7D 9M08W7D 13M5G7D 13M5W7D 13M5W7D LTE Band 38 9M09G7D 9M07W7D 9M09W7D 4M60G7D 4M59W7D 4M58W7D 9M09W7D 9M09W7D 9M09W7D 9M09W7D			9M09G7D	9M10W7D	9M08W7D
SM07G7D SM07W7D SM05W7D		LTE Band13	4M58G7D	4M58W7D	4M59W7D
LTE Band 17 9M07G7D 9M08W7D 9M06W7D 1M13G7D 1M13W7D 1M12W7D 2M75G7D 2M76W7D 2M75W7D 4M59G7D 4M58W7D 4M59W7D 9M07G7D 9M08W7D 9M09W7D 1M13G7D 1M13W7D 1M12W7D 2M75G7D 2M75W7D 2M76W7D 2M75G7D 2M75W7D 2M76W7D 4M58G7D 4M59W7D 4M59W7D 9M07G7D 9M09W7D 9M08W7D 13M5G7D 13M5W7D 13M5W7D 4M60G7D 4M59W7D 4M58W7D 4M60G7D 4M59W7D 4M58W7D 9M09G7D 9M09W7D 9M09W7D			9M07G7D	9M07W7D	9M05W7D
9M07G7D 9M08W7D 9M06W7D		LTE D 147	4M60G7D	4M59W7D	4M58W7D
LTE Band 26 (814-824) 2M75G7D 2M76W7D 2M75W7D 4M59G7D 4M58W7D 4M59W7D 9M07G7D 9M08W7D 9M09W7D 1M13G7D 1M13W7D 1M12W7D 2M75G7D 2M75W7D 2M76W7D 4M58G7D 4M59W7D 4M59W7D 9M07G7D 9M09W7D 9M08W7D 13M5G7D 13M5W7D 13M5W7D 4M60G7D 4M59W7D 4M58W7D 4M60G7D 4M59W7D 9M09W7D 4M60G7D 9M07W7D 9M09W7D		LIE Band 17	9M07G7D	9M08W7D	9M06W7D
(814-824) 4M59G7D 4M58W7D 4M59W7D 9M07G7D 9M08W7D 9M09W7D 1M13G7D 1M13W7D 1M12W7D 2M75G7D 2M75W7D 2M76W7D 4M58G7D 4M59W7D 4M59W7D 9M07G7D 9M09W7D 9M08W7D 13M5G7D 13M5W7D 13M5W7D 4M60G7D 4M59W7D 4M58W7D 9M09G7D 9M07W7D 9M09W7D			1M13G7D	1M13W7D	1M12W7D
9M07G7D 9M08W7D 9M09W7D 1M13G7D 1M13W7D 1M12W7D 2M75G7D 2M75W7D 2M76W7D 4M58G7D 4M59W7D 4M59W7D 9M07G7D 9M09W7D 9M08W7D 13M5G7D 13M5W7D 13M5W7D 4M60G7D 4M59W7D 4M58W7D LTE Band 38 9M09G7D 9M07W7D 9M09W7D		LTE Band 26	2M75G7D	2M76W7D	2M75W7D
TM13G7D		(814-824)	4M59G7D	4M58W7D	4M59W7D
LTE Band 26 (824-849) 2M75G7D 2M75W7D 2M76W7D 4M59W7D 4M59W7D 9M07G7D 9M09W7D 9M08W7D 13M5G7D 13M5W7D 13M5W7D 4M60G7D 4M59W7D 4M58W7D LTE Band 38 9M09G7D 9M07W7D 9M09W7D			9M07G7D	9M08W7D	9M09W7D
LTE Band 26 (824-849) 4M58G7D 4M59W7D 4M59W7D 9M07G7D 9M09W7D 9M08W7D 13M5G7D 13M5W7D 13M5W7D 4M60G7D 4M59W7D 4M58W7D LTE Band 38 9M09G7D 9M07W7D 9M09W7D			1M13G7D	1M13W7D	1M12W7D
(824-849) 4M59W7D 4M59W7D 9M07G7D 9M09W7D 9M08W7D 13M5G7D 13M5W7D 13M5W7D 4M60G7D 4M59W7D 4M58W7D LTE Band 38 9M09G7D 9M07W7D 9M09W7D			2M75G7D	2M75W7D	2M76W7D
9M07G7D 9M09W7D 9M08W7D 13M5G7D 13M5W7D 13M5W7D 4M60G7D 4M59W7D 4M58W7D LTE Band 38 9M09G7D 9M07W7D 9M09W7D			4M58G7D	4M59W7D	4M59W7D
4M60G7D 4M59W7D 4M58W7D LTE Band 38 9M09G7D 9M07W7D 9M09W7D		(024-049)	9M07G7D	9M09W7D	9M08W7D
LTE Band 38 9M09G7D 9M07W7D 9M09W7D			13M5G7D	13M5W7D	13M5W7D
			4M60G7D	4M59W7D	4M58W7D
13M6G7D		LTE Band 38	9M09G7D	9M07W7D	9M09W7D
			13M6G7D	13M7W7D	13M6W7D



Unless otherwise agreed in writing, 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.aspx 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.aspx. 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 falisfication 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) terretained for 30 days only.

Attention: To check the authenticity of testing /inspection report & certificate, please contact us at telephone: (86-75) 8307 1443, or email: Ch.Doccheck@ss.com

South of No. 6 Plant, No. 1, Runsheng Road, Suzhou Industrial Park, Suzhou Area, China (Jiangsu) Pilot Free Trade Zone 215000 中国 • 苏州 • 中国(江苏)自由贸易试验区苏州片区苏州工业园区润胜路1号的6号厂房南部 邮编: 215000 t (86-512) 62992980 www.sgsgroup.com.cn



Report No.: SEWM2311000454RG01

Rev.: 24 of 50 Page:

		. age.			
	18M1G7D	18M2W7D	18M2W7D		
	4M48G7D	4M48W7D	4M48W7D		
LTE Band 41	8M96G7D	8M95W7D	8M96W7D		
LTE Band 41	13M5G7D	13M5W7D	13M5W7D		
	17M9G7D	17M9W7D	17M9W7D		
	1M12G7D	1M13W7D	1M12W7D		
	2M76G7D	2M76W7D	2M76W7D		
LTE Band 66	4M59G7D	4M59W7D	4M58W7D		
LIE Band 00	9M09G7D	9M13W7D	9M10W7D		
	13M7G7D	13M7W7D	13M7W7D		
	18M2G7D	18M2W7D	18M2W7D		
	50RB+100R	B:			
	27M8G7D	27M8W7D	27M8W7D		
	75RB+50RB:				
	23M2G7D	23M2W7D	23M2W7D		
	75RB+75RB:				
	28M4G7D	28M4W7D	28M4W7D		
LTE Bond CA 7C	75RB+100RB:				
LTE Band CA_7C	32M7G7D	32M6W7D	32M7W7D		
	100RB+50RB:				
	27M8G7D	27M8W7D	27M8W7D		
	100RB+75R	B:			
	32M7G7D	32M6W7D	32M7W7D		
	100RB+100	RB:			
	37M8G7D	37M8W7D	37M8W7D		
	75RB+75RB	3:			
LTE Band CA_38C	28M2G7D	28M2W7D	28M2W7D		
LIE DAIIU CA_30C	100RB+100	RB:			
	37M6G7D	37M5W7D	37M5W7D		
•	•	•			



Unless otherwise agreed in writing, 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.aspx 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.aspx. 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) test etailed 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@qs.com"

South of No. 6 Plant, No. 1, Runsheng Road, Suzhou Industrial Park, Suzhou Area, China (Jiangsu) Pilot Free Trade Zone 215000 中国 • 苏州 • 中国(江苏)自由贸易试验区苏州片区苏州工业园区润胜路1号的6号厂房南部 邮编: 215000

t (86-512) 62992980 www.sgsgroup.com.cn



Report No.: SEWM2311000454RG01

Rev.: 01 Page: 25 of 50

3.9 Test Frequencies

Test Mode	TX / RX RF Channel				
i est ivioue	IA/NA	Low (L)	Middle (M)	High (H)	
	TV	Channel 128	Channel 190	Channel 251	
CCMOFO	TX	824.2MHz	836.6 MHz	848.8 MHz	
GSM850	DV	Channel 128	Channel 190	Channel 251	
	RX	869.2 MHz	881.6 MHz	893.8 MHz	

Test Mode	TX / RX	RF Channel				
rest Mode	IA/NA	Low (L)	Middle (M)	High (H)		
	TX	Channel 512	Channel 661	Channel 810		
CCM1000	1.7	1850.2MHz	1880.0 MHz	1909.8 MHz		
GSM1900	RX	Channel 512	Channel 661	Channel 810		
		1930.2 MHz	1960.0 MHz	1989.8 MHz		

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

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

Test Mode	TX / RX	RF Channel		
rest widde	IA/IX	Low (L)	Middle (M)	High (H)
	TX	Channel 4132	Channel 4182	Channel 4233
MCDMA Bond V	17	826.4MHz	836.4 MHz	846.6 MHz
WCDMA Band V	DV	Channel 4357	Channel 4407	Channel 4458
	RX	871.4 MHz	881.4 MHz	891.6 MHz



Unless otherwise agreed in writing, 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.aspx 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.aspx. 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) 83071443, or email: CN.Doccheck@sqs.com

 South of No. 6 Plant, No. 1, Runsheng Road, Sudhou Industrial Park, Sudhou Area, China (Jiangsu) Plot Free Trade Zone
 215000
 t (86–512) 62992980
 wwww.sgsgroup.com.cn

 中国 - 苏州 中国(江苏)自由贸易试验区苏州广区苏州工业园区周胜路1号的6号厂房南部
 邮编:
 215000
 t (86–512) 62992980
 sgs.china@sgs.com



Report No.: SEWM2311000454RG01

Rev.: Page: 26 of 50

T (M)	D 1 1 1 1 1 1	TV / DV		RF Channel	
Test Mode	Bandwidth	TX / RX	Low (L)	Middle (M)	High (H)
			Channel 18607	Channel 18900	Channel 19193
		TX	1850.7 MHz	1880 MHz	1909.3 MHz
	1.4MHz	RX	Channel 607	Channel 900	Channel 1193
		KΛ	1930.7 MHz	1960 MHz	1989.3 MHz
			Channel 18615	Channel 18900	Channel 19185
		TX	1851.5 MHz	1880 MHz	1908.5 MHz
	3MHz	RX	Channel 615	Channel 900	Channel 1185
		NΛ	1931.5 MHz	1960 MHz	1988.5 MHz
			Channel 18625	Channel 18900	Channel 19175
		TX	1852.5 MHz	1880 MHz	1907.5 MHz
	5MHz	RX	Channel 625	Channel 900	Channel1175
LTE Band 2			1932.5 MHz	1960 MHz	1987.5 MHz
LIE Ballu Z			Channel 18650	Channel 18900	Channel 19150
		TX	1855 MHz	1880 MHz	1905 MHz
	10MHz	RX	Channel 650	Channel 900	Channel 1150
		KA	1935 MHz	1960 MHz	1985 MHz
			Channel 18675	Channel 18900	Channel 19125
		TX	1857.5 MHz	1880 MHz	1902.5 MHz
	15MHz	DV	Channel 675	Channel 900	Channel 1125
_		RX	1937.5 MHz	1960 MHz	1982.5 MHz
			Channel 18700	Channel 18900	Channel 19100
		TX	1860 MHz	1880 MHz	1900 MHz
	20MHz	RX	Channel 700	Channel 900	Channel 1100
		KΛ	1940 MHz	1960 MHz	1980 MHz



Unless otherwise agreed in writing, 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.aspx 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.aspx. 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) test etailed 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@qs.com"

South of No. 6 Plant, No. 1, Runsheng Road, Suzhou Industrial Park, Suzhou Area, China (Jiangsu) Pilot Free Trade Zone 215000 中国 • 苏州 • 中国(江苏)自由贸易试验区苏州片区苏州工业园区润胜路1号的6号厂房南部 邮编: 215000 t (86-512) 62992980 www.sgsgroup.com.cn



Report No.: SEWM2311000454RG01

Rev.: 01 Page: 27 of 50

			ı ag			
Test Mode	Bandwidth	TX / RX	RF Channel			
I EST IVIOUE	Danuwiutii	1// 1//	Low (L)	Middle (M)	High (H)	
			Channel 19957	Channel 20175	Channel 20393	
		TX	1710.7 MHz	1732.5 MHz	1754.3 MHz	
	1.4MHz	RX	Channel 1975	Channel 2175	Channel 2375	
		KΛ	2112.5 MHz	2132.5MHz	2152.5 MHz	
			Channel 19965	Channel 20175	Channel 20385	
		TX	1711.5 MHz	1732.5 MHz	1753.5 MHz	
	3MHz	DV	Channel 2000	Channel 2175	Channel 2350	
		RX	2115 MHz	2132.5MHz	2150 MHz	
	5MHz		Channel 19975	Channel 20175	Channel 20375	
		TX	1712.5 MHz	1732.5 MHz	1752.5 MHz	
		RX	Channel 1975	Channel 2175	Channel 2375	
LTE Daniel 4			2112.5 MHz	2132.5MHz	2152.5 MHz	
LTE Band 4	10MHz		Channel 20000	Channel 20175	Channel 20350	
		TX	1715 MHz	1732.5 MHz	1750 MHz	
		RX	Channel 2000	Channel 2175	Channel 2350	
		KΛ	2115 MHz	2132.5MHz	2150 MHz	
			Channel 20025	Channel 20175	Channel 20325	
		TX	1717.5 MHz	1732.5 MHz	1747.5 MHz	
	15MHz	RX	Channel 2025	Channel 2175	Channel 2325	
-		IXX	2117.5 MHz	2132.5MHz	2147.5 MHz	
			Channel 20050	Channel 20175	Channel 20300	
		TX	1720 MHz	1732.5 MHz	1745 MHz	
	20MHz	DV	Channel 2050	Channel 2175	Channel 2300	
		RX	2120 MHz	2132.5MHz	2145 MHz	

Toot Mode	Dondwidth	Donah vidth TV / DV		RF Channel			
Test Mode	Bandwidth	TX / RX	Low (L)	Middle (M)	High (H)		
			Channel 20407	Channel 20525	Channel 20643		
		TX	824.7 MHz	836.5 MHz	848.3 MHz		
	1.4MHz	RX	Channel 2407	Channel 2525	Channel 2643		
		KA.	869.7 MHz	881.5 MHz	893.3 MHz		
	3MHz		Channel 20415	Channel 20525	Channel 20635		
		TX	825.5 MHz	836.5 MHz	847.5 MHz		
		3MHz RX	Channel 2415	Channel 2525	Channel 2635		
LTE Davide			870.5 MHz	881.5 MHz	892.5 MHz		
LTE Band 5		TX	Channel 20425	Channel 20525	Channel 20625		
	51411		826.5 MHz	836.5 MHz	846.5 MHz		
	5MHz	RX	Channel 2425	Channel 2525	Channel 2625		
		KΛ	871.5 MHz	881.5 MHz	891.5 MHz		
	10MHz		Channel 20450	Channel 20525	Channel 20600		
		TX	829 MHz	836.5 MHz	844 MHz		
		RX	Channel 2450	Channel 2525	Channel 2600		
		KΛ	874 MHz	881.5 MHz	889 MHz		



Unless otherwise agreed in writing, 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.aspx 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.aspx. 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 falisfication 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) terretained for 30 days only.

Attention: To check the authenticity of testing /inspection report & certificate, please contact us at telephone: (86-75) 8307 1443, or email: Ch.Doccheck@ss.com

 South of No. 6 Plant, No. 1, Runsheng Road, Suzhou Industrial Park, Suzhou Area, China (Jängsu) Ploto Free Trade Zone
 215000
 t (86–5

 中国·苏州·中国(江苏)自由贸易试验区苏州上区苏州工业园区周胜路(号龄6号)后南部
 邮编: 215000
 t (86–5

t (86–512) 62992980 www.sgsgroup.com.cn t (86–512) 62992980 sgs.china@sgs.com

Member of the SGS Group (SGS SA)



Report No.: SEWM2311000454RG01

Rev.: 28 of 50 Page:

			гау	e. 20 01 30	,
Test Mode	Bandwidth	TX / RX		RF Channel	
Test Mode	Dariuwiutii	17/17	Low (L)	Middle (M)	High (H)
			Channel 20775	Channel 21100	Channel 21425
		TX	2502.5 MHz	2535 MHz	2567.5 MHz
	5MHz	RX	Channel 2775	Channel 3100	Channel 5825
		KA.	2622.5 MHz	2655 MHz	2687.5 MHz
			Channel 20800	Channel 21100	Channel 21400
		TX	2505 MHz	2535 MHz	2565 MHz
	10MHz	RX	Channel 2800	Channel 3100	Channel 3400
1.TE D 1.7			2625 MHz	2655 MHz	2685 MHz
LTE Band 7		TX	Channel 20825	Channel 21100	Channel 21375
	45141-		2507.5 MHz	2535 MHz	2562.5 MHz
	15MHz	RX	Channel 2825	Channel 3100	Channel 3375
		KA	2627.5 MHz	2655 MHz	2682.5 MHz
			Channel 20850	Channel 21100	Channel 21350
		TX	2510 MHz	2535 MHz	2560 MHz
	20MHz	RX	Channel 2850	Channel 3100	Channel 3350
		KΛ	2630 MHz	2655 MHz	2680 MHz

Tart Marda	D d - 2.10.	TV / DV		RF Channel	
Test Mode	Bandwidth	TX / RX	Low (L)	Middle (M)	High (H)
			Channel 23017	Channel 23095	Channel 23173
		TX	699.7 MHz	707.5 MHz	715.3 MHz
	1.4MHz	RX	Channel 5017	Channel 5095	Channel 5173
		KA	729.7 MHz	737.5 MHz	745.3 MHz
			Channel 23025	Channel 23095	Channel 23165
		TX	700.5 MHz	707.5 MHz	714.5 MHz
	3MHz	RX TX	Channel 5025	Channel 5095	Channel 5165
LTE David 40			730.5 MHz	737.5 MHz	744.5 MHz
LTE Band 12			Channel 23035	Channel 23095	Channel 23155
	51411		701.5 MHz	707.5 MHz	713.5 MHz
	5MHz	RX	Channel 5035	Channel 5095	Channel 5155
		KA	731.5 MHz	737.5 MHz	743.5 MHz
			Channel 23060	Channel 23095	Channel 23130
		TX	704 MHz	707.5 MHz	711 MHz
	10MHz	RX	Channel 5060	Channel 5095	Channel 5130
		ľΛ	734 MHz	737.5 MHz	741 MHz



Unless otherwise agreed in writing, 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.aspx 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.aspx. 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) test etailed 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@qs.com"

South of No. 6 Plant, No. 1, Runsheng Road, Suzhou Industrial Park, Suzhou Area, China (Jiangsu) Pilot Free Trade Zone 215000 中国 • 苏州 • 中国(江苏)自由贸易试验区苏州片区苏州工业园区润胜路1号的6号厂房南部 邮编: 215000

t (86-512) 62992980 www.sgsgroup.com.cn



Report No.: SEWM2311000454RG01

Rev.: 01 Page: 29 of 50

Toot Mode	Dandwidth	TX / RX	RF Channel				
Test Mode	Bandwidth	IA/KA	Low (L)	Middle (M)	High (H)		
			Channel 23025	Channel 23230	Channel 23255		
		TX	779.5 MHz	782 MHz	784.5 MHz		
	5MHz	RX	Channel 5205	Channel 5230	Channel 5255		
LTE Band 13		KA.	748.5 MHz	751 MHz	753.5 MHz		
LIE Dallu 13		TX	Channel 23230	Channel 23230	Channel 23230		
			782 MHz	782 MHz	782 MHz		
	10MHz	RX	Channel 5230	Channel 5230	Channel 5230		
		KA.	751 MHz	751 MHz	751 MHz		

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



Unless otherwise agreed in writing, 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.aspx 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.aspx. 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, forger 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,

South of No. 6 Plant, No. 1, Runsheng Road, Suzhou Industrial Park, Suzhou Area, China (Jiangsu) Pilot Free Trade Zone 215000 中国 • 苏州 • 中国(江苏)自由贸易试验区苏州片区苏州工业园区润胜路1号的6号厂房南部 邮编: 215000 t (86-512) 62992980 www.sgsgroup.com.cn



Report No.: SEWM2311000454RG01

Rev.: 01 Page: 30 of 50

			1 ago: 00 01 00				
Test Mode	Bandwidth	TX / RX		RF Channel			
Test Mode	Danuwium	IA/KA	Low (L)	Middle (M)	High (H)		
			Channel 26697	Channel 26740	Channel 26783		
		TX	814.7 MHz	819 MHz	823.3 MHz		
	1.4MHz	DV	Channel 8697	Channel 8740	Channel 8783		
		RX	859.7 MHz	864MHz	868.3 MHz		
			Channel 26705	Channel 26740	Channel 26775		
		TX	815.5 MHz	819 MHz	822.5 MHz		
	3MHz	RX	Channel 8705	Channel 8740	Channel 8775		
LTE Band 26			860.5 MHz	864MHz	867.5 MHz		
(814-824)		TX	Channel 26715	Channel 26740	Channel 26765		
(011 021)			816.5 MHz	819 MHz	821.5 MHz		
	5MHz	RX	Channel 8715	Channel 8740	Channel 8755		
		KA.	861.5 MHz	864MHz	866.5 MHz		
			Channel 26740	Channel 26740	Channel 26740		
	10MHz	TX	819 MHz	819 MHz	819 MHz		
		RX	Channel 8740	Channel 8740	Channel 8740		
		KΛ	864MHz	864MHz	864MHz		

Toot Mode	Dondwidth	TV / DV		RF Channel	
Test Mode	Bandwidth	TX / RX	Low (L)	Middle (M)	High (H)
			Channel 26797	Channel 26915	Channel 27033
		TX	824.7 MHz	836.5 MHz	848.3 MHz
	1.4MHz	DV	Channel 8697	Channel 8915	Channel 9033
		RX	859.7 MHz	881.5 MHz	893.3 MHz
			Channel 26805	Channel 26915	Channel 27025
		TX	825.5 MHz	836.5 MHz	847.5 MHz
	3MHz	DV	Channel 8805	Channel 8915	Channel 9025
		RX	860.5 MHz	881.5 MHz	892.5 MHz
	5MHz	TX RX	Channel 26815	Channel 26915	Channel 27015
LTE Band26			826.5 MHz	836.5 MHz	846.5 MHz
(824-849)			Channel 8815	Channel 8915	Channel 9015
(02:0:0)		KΛ	871.5 MHz	881.5 MHz	891.5 MHz
			Channel 26840	Channel 26915	Channel 26990
		TX	829 MHz	836.5 MHz	844 MHz
	10MHz	DV	Channel 8840	Channel 8915	Channel 8990
		RX	874 MHz	881.5 MHz	889 MHz
			Channel 26865	Channel 26915	Channel 26965
		TX	831.5 MHz	836.5 MHz	841.5 MHz
	15MHz	RX	Channel 8865	Channel 8915	Channel 8965
		107	876.5 MHz	881.5 MHz	886.5 MHz



Unless otherwise agreed in writing, 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.aspx 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.aspx. 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) test etailed 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@qs.com"

South of No. 6 Plant, No. 1, Runsheng Road, Suzhou Industrial Park, Suzhou Area, China (Jiangsu) Pilot Free Trade Zone 215000 中国 • 苏州 • 中国(江苏)自由贸易试验区苏州片区苏州工业园区润胜路1号的6号厂房南部 邮编: 215000



Report No.: SEWM2311000454RG01

Rev.: Page: 31 of 50

Toot Mode	Bandwidth	TX / RX	RF Channel				
Test Mode	Danawiain	IA/KA	Low (L)	Middle (M)	High (H)		
	5MHz	TX/RX	Channel 37775	Channel38000	Channel 38225		
	SIVIDZ	17/17	2572.5 MHz	2595 MHz	2617.5 MHz		
	10MHz	TX/RX	Channel 37800	Channel38000	Channel 38200		
LTE Band 38			2575 MHz	2595 MHz	2615 MHz		
LIE Danu 30	15MHz	TX/RX	Channel 37825	Channel38000	Channel 38175		
	IOIVITZ		2577.5 MHz	2595 MHz	2612.5 MHz		
	20MHz	TX/RX	Channel 37850	Channel38000	Channel 38150		
	ZUIVITZ	17/1/	2580 MHz	2595 MHz	2610 MHz		

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



Unless otherwise agreed in writing, 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.aspx 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.aspx. 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) test etailed 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@qs.com"

South of No. 6 Plant, No. 1, Runsheng Road, Suzhou Industrial Park, Suzhou Area, China (Jiangsu) Pilot Free Trade Zone 215000 中国 • 苏州 • 中国(江苏)自由贸易试验区苏州片区苏州工业园区润胜路1号的6号厂房南部 邮编: 215000 t (86-512) 62992980 www.sgsgroup.com.cn



Report No.: SEWM2311000454RG01

Rev.: 01 Page: 32 of 50

				RF Channel	
Test Mode	Bandwidth	TX / RX	Low (L)	Middle (M)	High (H)
			Channel 131979	Channel 132322	Channel 132665
		TX	1710.7 MHz	1745 MHz	1779.3 MHz
	1.4MHz	DV	Channel 66443	Channel 66786	Channel 67329
		RX	2110.7 MHz	2145MHz	2199.3 MHz
			Channel 131987	Channel 132322	Channel 132657
		TX	1711.5 MHz	1745 MHz	1778.5MHz
	3MHz	RX	Channel 66451	Channel 66786	Channel 67321
		KA	2111.5 MHz	2145MHz	2198.5MHz
			Channel 131997	Channel 132322	Channel 132647
		TX	1712.5 MHz	1745 MHz	1777.5 MHz
	5MHz	RX	Channel 66461	Channel 66786	Channel 67311
LTE Band66			2112.5 MHz	2145MHz	2197.5 MHz
LIE Bandoo			Channel 132022	Channel 132322	Channel 132622
		TX	1715 MHz	1745 MHz	1775 MHz
	10MHz	RX	Channel 66486	Channel 66786	Channel 67286
		NA.	2115 MHz	2145MHz	2195 MHz
			Channel 132047	Channel 132322	Channel 132597
		TX	1717.5 MHz	1745 MHz	1772.5 MHz
	15MHz	RX	Channel 66511	Channel 66786	Channel 67261
		100	2117.5 MHz	2145MHz	2192.5 MHz
			Channel 132072	Channel 132322	Channel 132572
		TX	1720 MHz	1745 MHz	1770 MHz
	20MHz	DV	Channel 66536	Channel 66786	Channel 67236
		RX	2120 MHz	2145MHz	2190 MHz



Unless otherwise agreed in writing, 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.aspx 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.aspx. 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) test etailed 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@qs.com"

South of No. 6 Plant, No. 1, Runsheng Road, Suzhou Industrial Park, Suzhou Area, China (Jiangsu) Plot Free Trade Zone 215000 中国 - 苏州 - 中国(江苏)自由贸易试验区苏州广区苏州工业园区消胜路1号的6号厂房南部 邮编: 215000



Report No.: SEWM2311000454RG01

Page: 33 of 50

Table 4.3.1.1.7A-1: Test frequencies for CA 7C

Range	CC-Combo / N _{RB_agg} [RB]			CC1 Note1					CC2 Note1		
		BW [RB]	NuL	fuL [MHz]	N _{DL}	f _{DL} [MHz]	BW [RB]	NuL	fuL [MHz]	N _{DL}	f _{DL} [MHz]
Low	50+100	50	20805	2505.5	2805	2625.5	100	20949	2519.9	2949	2639.9
		100	20850	2510	2850	2630	50	20994	2524.4	2994	2644.4
	75+50	75	20825	2507.5	2825	2627.5	50	20945	2519.5	2945	2639.5
	75+75	75	20825	2507.5	2825	2627.5	75	20975	2522.5	2975	2642.5
	75+100	75	20828	2507.8	2828	2627.8	100	20999	2524.9	2999	2644.9
		100	20850	2510	2850	2630	75	21021	2527.1	3021	2647.1
	100+100	100	20850	2510	2850	2630	100	21048	2529.8	3048	2649.8
Mid	50+100	50	21006	2525.6	3006	2645.6	100	21150	2540	3150	2660
		100	21051	2530.1	3051	2650.1	50	21195	2544.5	3195	2664.5
	75+50	75	21051	2530.1	3051	2650.1	50	21171	2542.1	3171	2662.1
	75+75	75	21025	2527.5	3025	2647.5	75	21175	2542.5	3175	2662.5
	75+100	75	21003	2525.3	3003	2645.3	100	21174	2542.4	3174	2662.4
		100	21026	2527.6	3026	2647.6	75	21197	2544.7	3197	2664.7
	100+100	100	21001	2525.1	3001	2645.1	100	21199	2544.9	3199	2664.9
High	50+100	50	21206	2545.6	3206	2665.6	100	21350	2560	3350	2680
		100	21251	2550.1	3251	2670.1	50	21395	2564.5	3395	2684.5
	75+50	75	21277	2552.7	3277	2672.7	50	21397	2564.7	3397	2684.7
	75+75	75	21225	2547.5	3225	2667.5	75	21375	2562.5	3375	2682.5
	75+100	75	21179	2542.9	3179	2662.9	100	21350	2560	3350	2680
		100	21201	2545.1	3201	2665.1	75	21372	2562.2	3372	2682.2
	100+100	100	21152	2540.2	3152	2660.2	100	21350	2560	3350	2680
Note 1:	Carriers in inc	reasing f	requency	order.							



Unless otherwise agreed in writing, 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.aspx 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.aspx. 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, forger 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,

South of No. 6 Plant, No. 1, Runsheng Road, Suzhou Industrial Park, Suzhou Area, China (Jiangsu) Pilot Free Trade Zone 215000 中国 • 苏州 • 中国(江苏)自由贸易试验区苏州片区苏州工业园区润胜路1号的6号厂房南部 邮编: 215000 t (86-512) 62992980 www.sgsgroup.com.cn



Report No.: SEWM2311000454RG01

Rev.: 01 Page: 34 of 50

Table 4.3.1.2.6A-1: Test frequencies for CA_38C

Range	CC- Combo / NRB_agg [RB]		CC1 Note1			CC2 Note1	
		BW [RB]	N _{UL/DL}	ful/bl [MHz]	BW [RB]	N _{UL/DL}	f _{UL/DL} [MHz]
Low	75+75	75	37825	2577.5	75	37975	2592.5
	100+100	100	37850	2580	100	38048	2599.8
Mid	75+75	75	37925	2587.5	75	38075	2602.5
	100+100	100	37901	2585.1	100	38099	2604.9
High	75+75	75	38025	2597.5	75	38175	2612.5
	100+100	100	37952	2590.2	100	38150	2610
Note 1:	Carriers in i	ncreasing fr	equency or	der.			



Unless otherwise agreed in writing, 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.aspx 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.aspx. 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) 83071443, or email: CN.Doccheck@sqs.com

South of No. 6 Plant, No. 1, Runsheng Road, Suzhou Industrial Park, Suzhou Area, Chine (Jiangsu) Plot Free Trade Zone 215000 中国 - 苏州 - 中国(江苏)自由贸易试验区苏州广区苏州工业园区河胜商(号的6号厂房南部 鄉編: 215000

215000 t (86–512) 62992980 www.sgsgroup.com.cn 215000 t (86–512) 62992980 sgs.china@sgs.com



Report No.: SEWM2311000454RG01

Rev.: 01 Page: 35 of 50

4 Description of Tests

4.1 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



Unless otherwise agreed in writing, 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.appx and, for electronic format documents, subject to Terms and Conditions for Electronic Documents at http://www.sgs.com/en/Terms-and-Conditions/Terms-a-Document.appx. 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 document does not exonerate parties to a transaction from exercising all their rights and obligations under the transaction forcement 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 extend 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,

South of No. 6 Plant, No. 1, Runsheng Road, Suchou Industrial Park, Suchou Area, China (liangsu) Pilot Free Trade Zone 215000 中国 - 苏州 - 中国(江苏)自由贸易试验区苏州片区苏州工业园区润胜路1号的6号厂房南部 邮编: 215000 t (86-512) 62992980 t (86-512) 62992980

www.sgsgroup.com.cn sgs.china@sgs.com



Report No.: SEWM2311000454RG01

Rev.: 01 Page: 36 of 50

4.2 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) = Conducted Power (dBm) + antenna gain (dBd) EIRP(dBm) = Conducted Power (dBm) + antenna gain (dBi)

EIRP=ERP+2.15dB



Unless otherwise agreed in writing, 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/Terms-en-Document.aspx.

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 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, **Attention:**To check the authenticity of testing /inspection report & certificate, please contact us at telephone: (86-755) 8307 1443,

South of No. 6 Plant, No. 1, Runsheng Road, Suzhou Industrial Park, Suzhou Area, China (Jiangsu) Pilot Free Trade Zone 215000 中国 - 苏州 - 中国(江苏)自由贸易试验区苏州片区苏州工业园区润胜路1号的0号厂房南部 邮编: 215000

t (86-512) 62992980 www.sgsgroup.com.cn t (86-512) 62992980

sgs.china@sgs.com



Report No.: SEWM2311000454RG01

Rev.: 01 Page: 37 of 50

4.3 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

- 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 ≥ 3 x 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



Unless otherwise agreed in writing, 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.appx and, for electronic format documents, subject to Terms and Conditions for Electronic Documents at http://www.sgs.com/en/Terms-and-Conditions/Terms-a-Document.appx. 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 document does not exonerate parties to a transaction from exercising all their rights and obligations under the transaction forcement 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 extend 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,

South of No. 6 Plant, No. 1, Runsheng Road, Suzhou Industrial Park, Suzhou Area, China (Jiangsu) Pllot Free Trade Zone 中国 - 苏州 - 中国(江苏)自由贸易试验区苏州片区苏州工业园区润胜路1号的6号厂房南部 邮编: 215000

215000 t (86–512) 62992980 215000 t (86–512) 62992980

www.sgsgroup.com.cn sgs.china@sgs.com



Report No.: SEWM2311000454RG01

Rev.: 38 of 50 Page:

4.4 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

- 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 > 1% of the emission bandwidth
- VBW > 3 x RBW
- Detector = RMS
- Number of sweep points ≥ 2 x Span/RBW
- Trace mode = trace average for continuous emissions, max hold for pulse emissions
- 8. Sweep time = auto couple
- 9. The trace was allowed to stabilize



Unless otherwise agreed in writing, 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.appx and, for electronic format documents, subject to Terms and Conditions for Electronic Documents at http://www.sgs.com/en/Terms-and-Conditions/Terms-a-Document.appx. 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 document does not exonerate parties to a transaction from exercising all their rights and obligations under the transaction forcement 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 extend 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,

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

t (86-512) 62992980 中国 - 苏州 - 中国(江苏)自由贸易试验区苏州片区苏州工业园区润胜路1号的0号厂房南部 邮编: 215000 t (86-512) 62992980



Report No.: SEWM2311000454RG01

Rev.: 01 Page: 39 of 50

4.5 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 emissinos, 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



Unless otherwise agreed in writing, 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.appx and, for electronic format documents, subject to Terms and Conditions for Electronic Documents at http://www.sgs.com/en/Terms-and-Conditions/Terms-a-Document.appx. 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 document does not exonerate parties to a transaction from exercising all their rights and obligations under the transaction forcement 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 extend 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,

South of No. 6 Pfart, No. 1, Runsheng Read, Suchou Industrial Park, Suchou Area, China (langsu) Pilot Free Trade Zone 215000 中国 - 苏州 - 中国(江苏)自由贸易试验区苏州片区苏州工业园区润胜路1号的6号厂房南部 邮编: 215000

t (86–512) 62992980 t (86–512) 62992980



Report No.: SEWM2311000454RG01

Rev.: 01 Page: 40 of 50

4.6 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



Unless otherwise agreed in writing, 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.appx and, for electronic format documents, subject to Terms and Conditions for Electronic Documents at http://www.sgs.com/en/Terms-and-Conditions/Terms-a-Document.appx. 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 document does not exonerate parties to a transaction from exercising all their rights and obligations under the transaction forcement 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 extend 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,

South of No. 6 Plant, No. 1, Runsheng Road, Suchou Industrial Park, Suchou Area, China (Jiangsu) Pilot Free Trade Zone 中国 - 苏州 - 中国(江苏)自由贸易试验区苏州片区苏州工业园区润胜路1号的6号厂房南部 邮编: 215000

215000 t (86–512) 62992980 215000 t (86–512) 62992980



Report No.: SEWM2311000454RG01

Rev.: 01 41 of 50 Page:

4.7 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 X 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 (dBμV/m) = Measured amplitude level (dBμV) + (Cable Loss (dB) + Antenna Factor (dB/m) – AMP(dB)) EIRP (dBm) = E (dBμV/m) + 20 log D - 104.8; 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 (dBμV/m) = Measured amplitude level (dBμV) + (Cable Loss (dB) + Antenna Factor (dB/m) – AMP(dB)) EIRP (dBm) = E (dB μ V/m) + 20 log D - 104.8; 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 X 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*LOG(3/1) = 9.54 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:

AF = Antenna Factor(dB/m)

Factor = Cable Factor(dB) - Preamplifier (dB)

Level = Reading Level + AF + Factor -95.26

Margin = Limit - 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.



Unless otherwise agreed in writing, 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/Terms-en/Con

South of No. 6 Plant, No. 1, Runsheng Road, Suzhou Industrial Park, Suzhou Area, China (Jiangsu) Pilot Free Trade Zone 215000 中国 - 苏州 - 中国(江苏)自由贸易试验区苏州片区苏州工业园区润胜路1号的6号厂房南部 邮编: 215000

t (86-512) 62992980



Report No.: SEWM2311000454RG01

Rev.: 01 Page: 42 of 50

4.8 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 ±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



Unless otherwise agreed in writing, 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.appx and, for electronic format documents, subject to Terms and Conditions for Electronic Documents at http://www.sgs.com/en/Terms-and-Conditions/Terms-a-Document.appx. 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 document does not exonerate parties to a transaction from exercising all their rights and obligations under the transaction forcement 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 extend 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,

South of No. 6 Plant, No. 1, Runsheng Read, Suzhou Industrial Park, Suzhou Area, China (Jangsu) Pilot Free Trade Zone 215000 中国 - 苏州 - 中国(江苏)自由贸易试验区苏州片区苏州工业园区润胜路1号的6号厂房南部 邮编: 215000

: 215000 t (86–512) 62992980

www.sgsgroup.com.c sgs.china@sgs.com

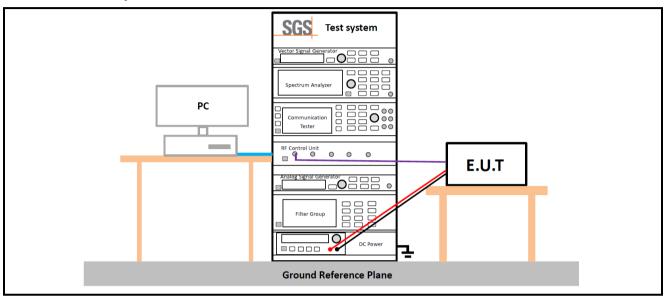


Report No.: SEWM2311000454RG01

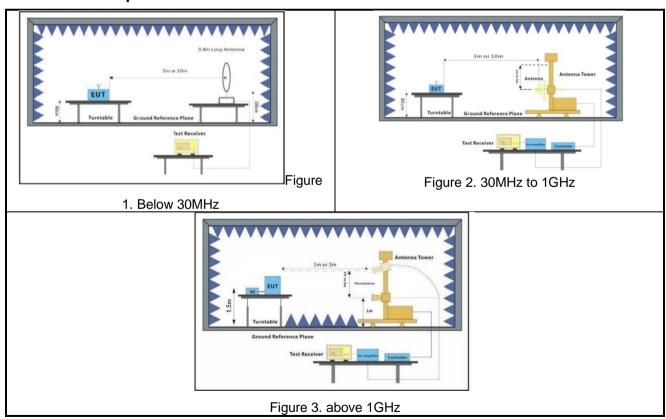
Rev.: Page: 43 of 50

4.9 Test Setups

4.9.1 **Test Setup 1**



4.9.2 **Test Setup 2**





Unless otherwise agreed in writing, 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.aspx and, for electronic Documents at <a href="http://www.sgs.com/en/Terms-en/Conditions/Terms-en/Comditi

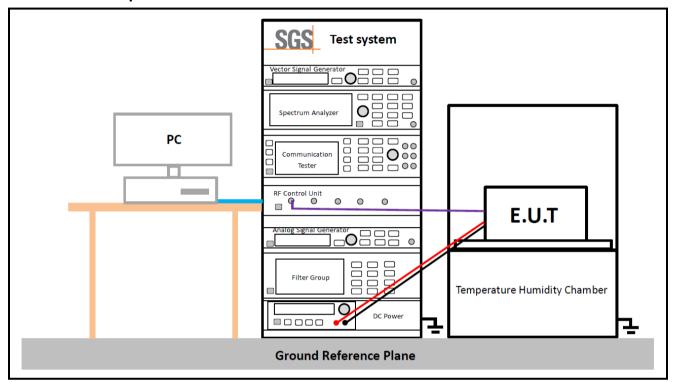
South of No. 6 Plant, No. 1, Runsheng Road, Suzhou Industrial Park, Suzhou Area, China (Jiangsu) Pilot Free Trade Zone 215000 中国・苏州・中国(江苏)自由贸易试验区苏州片区苏州工业园区润胜路1号的0号厂房南部 邮编: 215000 t (86-512) 62992980 t (86-512) 62992980 sgs.china@sgs.com



Report No.: SEWM2311000454RG01

Rev.: 01 Page: 44 of 50

4.9.3 Test Setup 3





Unless otherwise agreed in writing, 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/Terms-en-Document.aspx.

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 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, **Attention:**To check the authenticity of testing (inspection report & certificate, please contact us at telephone: (86-755) 8307 1443,

South of No. Phart, No. 1, Runsheng Rose, Subrou Industral Park, Suchou Area, Chine (Jiangsu) Phot Free Trade Zone 中国 - 苏州 - 中国(江苏)自由贸易试验区苏州 | 上の国区海胜裔 | 号的6号 「房南部 邮编: 215000

t (86–512) 62992980 www.sgsgroup.com.cn t (86–512) 62992980 sgs.china@sgs.com



Report No.: SEWM2311000454RG01

Rev.: 01 Page: 45 of 50

4.10Test 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;LTE/TM2; LTE/TM3			



Unless otherwise agreed in writing, 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.aspx 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.aspx. 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) terretained for 30 days only.

Attention: To check the authenticity of testing /inspection report & certificate, please contact us at telephone: (86-75) 8307 1443, or email: Ch.Doccheck@ass.com

 South of No. 6 Plant, No. 1, Runsherg Road, Surbou Industrial Park, Surbou Area, China (Liangsu) Plot Free Trate Zone
 215000
 t (86–512) 62992980
 wwww.sgsgroup.com.cn

 中国 - 苏州 - 中国 (江苏) 自由贸易试量区苏州广区苏州工业园区测胜路(号的6号厂房南部
 邮编:
 215000
 t (86–512) 62992980
 sgs.china@sgs.com



Report No.: SEWM2311000454RG01

Rev.: 01 Page: 46 of 50

	Page: 46 01 50			
Spurious Emission at Antenna Terminals				
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			
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;UMTS/TM1; LTE/TM1;LTE/TM2; LTE/TM3			
I EST MORE	The report only show the bandwidth with the worst case.			



Unless otherwise agreed in writing, 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.aspx 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.aspx. 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, forger 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,

South of No. 6 Plant, No. 1, Runsheng Road, Suzhou Industrial Park, Suzhou Area, China (Jiangsu) Pilot Free Trade Zone 215000 中国 • 苏州 • 中国(江苏)自由贸易试验区苏州片区苏州工业园区润胜路1号的6号厂房南部 邮编: 215000

t (86-512) 62992980 www.sgsgroup.com.cn t (86-512) 62992980 sgs.china@sgs.com



Report No.: SEWM2311000454RG01

Rev.: Page: 47 of 50

5 **Main Test Instruments**

RF conducted test					
Toot Equipment	Manufacturer	Model No.	Inventory No.	Cal. date	Cal.Due date
Test Equipment				(yyyy/mm/dd)	(yyyy/mm/dd)
Shielding Room	Brilliant-emc	N/A	SUWI-04-01-06	2021/05/08	2024/05/07
Temperature and	MingGao	TH101B	SUWI-01-01-07	2023/02/06	2024/02/05
humidity meter	MingGao	IHIUIB	30001-01-01-07	2024/02/18	2025/02/17
Signal Analyzer	ROHDE &SCHWARZ	FSV3030	SUWI-01-02-02	2023/05/11	2024/05/10
Measurement Software	TST	TST-271-2.0	SUWI-03-55-01	NCR	NCR
Measurement Software	Tonscend	JS1120-3 Test System V 2.6.88.0336	SUWI-02-09-09	NCR	NCR
Radio Communication Analyzer	Anritsu	MT8821C	SUWI-01-26-03	2023/11/21	2024/11/20
Temperature Chamber	ESPEC	SU-242	SUWI-01-13-01	2023/02/06	2024/02/05
				2024/02/04	2025/02/03
Signal Analyzer	ROHDE&SCHWAR Z	FSW43	SUWI-01-02-04	2023/05/11	2024/05/10



Unless otherwise agreed in writing, 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.aspx 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.aspx. 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, forger 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,

South of No. 6 Plant, No. 1, Runsheng Road, Suzhou Industrial Park, Suzhou Area, China (Jiangsu) Pilot Free Trade Zone 215000 中国 • 苏州 • 中国(江苏)自由贸易试验区苏州片区苏州工业园区润胜路1号的6号厂房南部 邮编: 215000 t (86-512) 62992980 www.sgsgroup.com.cn

t (86-512) 62992980 sgs.china@sgs.com



Report No.: SEWM2311000454RG01

Rev.: Page: 48 of 50

RSE Test System					
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	2021/11/25	2024/11/24
Temperature and humidity	MingGao	TH101B	SUWI-01-01-13	2023/02/07	2024/02/06
meter	WilligGao	ТПІОТЬ	SUVII-01-01-13	2024/02/08	2025/02/07
Signal Analyzer	ROHDE&SCHWARZ	FSW43	SUWI-01-02-04	2023/05/11	2024/05/10
Signal Analyzer	KEYSIGHT	N9020A	SUWI-01-02-06	2023/11/21	2024/11/20
Test receiver	ROHDE&SCHWARZ	ESR7	SUWI-01-10-01	2023/02/08	2024/02/07
restreceivei	KUNDEASCHWAKZ	ESK/	30001-01-10-01	2024/02/01	2025/01/31
Receiving antenna	SCHWRZBECK MESS- ELEKTRONIK	VULB 9168	SUWI-01-11-04	2023/11/25	2024/11/24
Receiving antenna	SCHWRZBECK MESS- ELEKTRONIK	BBHA 9120D	SUWI-01-11-05	2023/11/25	2024/11/24
Receiving antenna	SCHWRZBECK MESS- ELEKTRONIK	BBHA 9170	SUWI-01-11-03	2023/05/12	2024/05/11
Active Loop Antenna	SCHWRZBECK MESS- ELEKTRONIK	FMZB 1519B	SUWI-01-21-01	2023/05/13	2024/05/12
Amplifier	Tonscend	TAP9K3G32	SUWI-01-14-06	2023/11/21	2024/11/20
Amplifier	Tonscend	TAP01018050	SUWI-01-14-04	2023/11/21	2024/11/20
Amplifier	Tonscend	TAP30M7G30	SUWI-01-14-05	2023/11/21	2024/11/20
Wideband	Radio	MT8820C	SUWI-01-16-08	2023/02/06	2024/02/05
Communication				2024/02/04	2025/02/03
Wideband Radio Communication Tester	Anritsu	MT8821C	SUWI-01-26-03	2023/11/21	2024/11/20
Measurement Software	Tonscend	JS32-RE V4.0.0.0	SUWI-02-09-04	NCR	NCR

Remark: NCR=No Calibration Requirement.



Unless otherwise agreed in writing, 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.aspx 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.aspx. 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, forger 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,

South of No. 6 Plant, No. 1, Runsheng Road, Suzhou Industrial Park, Suzhou Area, China (Jiangsu) Pilot Free Trade Zone 215000 中国 • 苏州 • 中国(江苏)自由贸易试验区苏州片区苏州工业园区润胜路1号的6号厂房南部 邮编: 215000 t (86-512) 62992980 www.sgsgroup.com.cn t (86-512) 62992980



Report No.: SEWM2311000454RG01

Rev.: 01 Page: 49 of 50

6 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	±0.54dB
2	RF power density, conducted	±1.03dB
3	Spurious emissions, conducted	±0.54dB
4	Radio Frequency	±1.0 %
5	Duty Cycle	±0.37%
6	Occupied Bandwidth	±1.0 %
7		± 3.13dB (9k -30MHz)
	Radiated Emission	± 4.88dB (30M -1GHz)
		± 4.75dB (1GHz to 18 GHz)
		+ 4 77dB (Above 18GHz)

Remark:

The U_{lab} (lab Uncertainty) is less than U_{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.



Unless otherwise agreed in writing, 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.appx and, for electronic format documents, subject to Terms and Conditions for Electronic Documents at http://www.sgs.com/en/Terms-and-Conditions/Terms-a-Document.appx. 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 document does not exonerate parties to a transaction from exercising all their rights and obligations under the transaction forcement 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 extend 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,

South of No. 6 Plant, No. 1, Runsheng Road, Suzhou Industrial Park, Suzhou Area, Chine (Jiangsu) Plot Free Trade Zone 215000 中国 - 苏州 - 中国(江苏)自由贸易试验区苏州广区苏州工业园区河胜商1号的6号厂房商部 邮编: 215000

t (86-512) 62992980 t (86-512) 62992980

www.sgsgroup.com.cn sgs.china@sgs.com



Report No.: SEWM2311000454RG01

Rev.: 01 Page: 50 of 50

7 Appendixes

Appendix A.3	WWAN Setup Photos
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 17
Appendix B.13	LTE Band 26(814-824)
Appendix B.14	LTE Band 26(824-849)
Appendix B.15	LTE Band 38
Appendix B.16	LTE Band 41
Appendix B.17	LTE Band 66
Appendix B.18	LTE CA_7C
Appendix B.19	LTE CA_38C

---End of Report---



Unless otherwise agreed in writing, this document is issued by the Company subject to its General Conditions of Service printed overteaf, available on request or accessible at http://www.sgs.com/en/Terms-and-Conditions.agpx, 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.aspx. Attention is dorawn 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, forger 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,

 South of No. 6 Plant, No. 1, Runsherg Road, Suchou Industrial Park, Suchou Area, Chine (Liangsu) Plot Free Trade Zone
 215000
 t (86–512) 62992980
 wwww.sgsgroup.com.cn

 中国 - 苏州 中国(江苏)自由贸易试验区苏州广区苏州工业园区测胜数号的6号厂房南部
 邮编:
 215000
 t (86–512) 62992980
 sgs.china@sgs.com