

Report No.: SUHR/2021/A001201
 Rev.: 01
 Page: 1 of 44


TEST REPORT

Application No.: HR/2021/A0012
Applicant: SunPower Corporation
Address of Applicant: 1414 Harbour Way South Suite 1901, Richmond CA 94804, USA
Manufacturer: SunPower Corporation
Address of Manufacturer: 1414 Harbour Way South Suite 1901, Richmond CA 94804, USA
EUT Description: USB dongle
Model No.: QDM023-BG95-M1
Trade Mark: Sunpower
FCC ID: YAW-539622
Standards: 47 CFR Part 2
 47 CFR Part 24 subpart E
 47 CFR Part 27 subpart H
 47 CFR Part 27 subpart L
 47 CFR Part 27 subpart F
Date of Receipt: 2021/11/6
Date of Test: 2021/11/8 to 2021/11/17
Date of Issue: 2021/11/17

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

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

Authorized Signature:



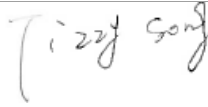
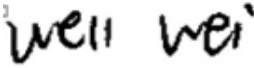
Panta Sun
 Wireless Laboratory Manager



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.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-Documents.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) 8307 1443, or email: CN.Doccheck@sgs.com
 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 www.sgs.com.cn
 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号厂房南楼 邮编: 215000 t (86-512) 62992980 sgs.china@sgs.com

1 Version

Revision Record				
Version	Chapter	Date	Modifier	Remark
01		2021/11/17		Original

Authorized for issue by:		
Prepared By		 _____ (Tizzy Song) / Engineer
Checked By		 _____ (Well Wei) /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-Documents.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) 8307 1443, or email: CN.Doccheck@sgs.com

Contents

1	Version	2
2	Test Summary.....	4
2.1	LTE CatM1 Band 2.....	4
2.2	LTE CatM1 Band 4.....	5
2.3	LTE CatM1 Band12.....	6
2.4	LTE CatM1 Band13.....	7
3	General Information	8
3.1	Details of Client.....	8
3.2	Test Location.....	8
3.3	Test Facility	9
3.4	General Description of EUT	10
3.5	Test Mode.....	11
3.6	Test Environment	11
3.7	Technical Specification.....	12
3.8	Test Frequencies.....	13
4	Description of Tests	16
4.1	Conducted Output Power.....	16
4.2	Effective (Isotropic) Radiated Power of Transmitter	16
4.2.1	Test Result	17
4.3	Field Strength of Spurious Radiation	26
4.3.1	Test Result	27
4.4	Test Setups	39
4.4.1	Test Setup 1	39
4.4.2	Test Setup 2.....	39
4.5	Test Conditions.....	40
5	Main Test Instruments	41
6	Measurement Uncertainty.....	43
7	Appendixes.....	44



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-Documents.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) 8307 1443, or email: CN.Doccheck@sgs.com

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 www.sgs.com.cn
 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号厂房南楼 邮编: 215000 t (86-512) 62992980 sgs.china@sgs.com

2 Test Summary

2.1 LTE CatM1 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	Clause4.1&4.2	Pass
Peak-Average Ratio	§24.232(d)	Limit≤13 dB	See Remark	
Modulation Characteristics	§2.1047	Digital modulation	See Remark	
Bandwidth	§2.1049	OBW: No limit. EBW: No limit.	See Remark	
Band Edges Compliance	§2.1051, §24.238(a)	≤ -13 dBm/1%*EBW, in 1 MHz bands immediately outside and adjacent to the frequency block.	See Remark	
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.	See Remark	
Field Strength of Spurious Radiation	§2.1053, §24.238(a)	≤ -13 dBm/1 MHz.	Clause4.3	Pass
Frequency Stability	§2.1055(a)(1)(b) §2.1055(d)(1) §24.235	≤Within authorized bands of operation/frequency block.	See Remark	
<p>Remark: Only the Effective (Isotropic) Radiated Power Output Data and Radiated Spurious Emission were fully tested. These items please refer to the LTE Module report R1907A0450-R2V2. The FCC ID is XMR2020BG95M1 has been certified, and the test report issued by TA Technology(shanghai)Co., Ltd on 03/16/2020.</p>				



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-Documents.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) 8307 1443, or email: CN.Doccheck@sgs.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号厂房南楼 邮编: 215000

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

2.2 LTE CatM1 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	Clause4.1&4.2	Pass
Peak-Average Ratio	§27.50(d)(5)	Limit≤13 dB	See Remark	
Modulation Characteristics	§2.1047	Digital modulation	See Remark	
Bandwidth	§2.1049	OBW: No limit. EBW: No limit.	See Remark	
Band Edges Compliance	§2.1051, §27.53(h)	≤ -13 dBm/1%*EBW, in 1 MHz bands immediately outside and adjacent to the frequency block.	See Remark	
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.	See Remark	
Field Strength of Spurious Radiation	§2.1053, §27.53(h)	≤ -13 dBm/1 MHz.	Clause4.3	Pass
Frequency Stability	§2.1055(a)(1)(b) §2.1055(d)(1) §27.54	≤Within authorized bands of operation/frequency block.	See Remark	

Remark:

Only the Effective (Isotropic) Radiated Power Output Data and Radiated Spurious Emission were fully tested. These items please refer to the LTE Module report R1907A0450-R3V3. The FCC ID is XMR2020BG95M1 has been certified, and the test report issued by TA Technology(shanghai)Co., Ltd on 03/17/2020.



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-Documents.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) 8307 1443, or email: CN.Doccheck@sgs.com

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 www.sgs.com.cn
 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号厂房南楼 邮编: 215000 t (86-512) 62992980 sgs.china@sgs.com

2.3 LTE CatM1 Band12

Test Item	FCC Rule No.	Requirements	Test Result	Verdict
Effective (Isotropic) Radiated Power Output Data	§2.1046 §27.50(c)(10)	ERP ≤ 3 W.	Clause4.1&4.2	Pass
Peak-Average Ratio	---	Limit≤13 dB	See Remark	
Modulation Characteristics	§2.1047	Digital modulation	See Remark	
Bandwidth	§2.1049	OBW: No limit. EBW: No limit.	See Remark	
Band Edges Compliance	§2.1051, §27.53(g)	≤ -13 dBm/1%*EBW, in 1 MHz bands immediately outside and adjacent to the frequency block.	See Remark	
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.	See Remark	
Field Strength of Spurious Radiation	§2.1053, §27.53(g)	FCC: ≤ -13 dBm/100 kHz.	Clause4.3	Pass
Frequency Stability	§2.1055(a)(1)(b) §2.1055(d)(1) §27.54	≤Within authorized bands of operation/frequency block.	See Remark	

Remark:

Only the Effective (Isotropic) Radiated Power Output Data and Radiated Spurious Emission were fully tested. These items please refer to the LTE Module report R1907A0450-R3V3. The FCC ID is XMR2020BG95M1 has been certified, and the test report issued by TA Technology(shanghai)Co., Ltd on 03/17/2020.



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-Documents.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) 8307 1443, or email: CN.Doccheck@sgs.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号厂房南楼 邮编: 215000

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

2.4 LTE CatM1 Band13

Test Item	FCC Rule No.	Requirements	Test Result	Verdict
Effective (Isotropic) Radiated Power Output Data	§2.1046, §27.50(b)	ERP ≤ 3 W.	Clause4.1&4.2	Pass
Peak-Average Ratio	---	Limit≤13 dB	See Remark	
Modulation Characteristics	§2.1047	Digital modulation	See Remark	
Bandwidth	§2.1049	OBW: No limit. EBW: No limit.	See Remark	
Band Edges Compliance	§2.1051, §27.53(c)	≤ -13 dBm/1%*EBW, in 1 MHz bands immediately outside and adjacent to the frequency block.	See Remark	
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.	See Remark	
Field Strength of Spurious Radiation	§2.1053, §27.53(c) §27.53(f)	≤ -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.	Clause4.3	Pass
Frequency Stability	§2.1055(a)(1)(b) §2.1055(d)(1) §27.54	≤Within authorized bands of operation/frequency block.	See Remark	
Remark: Only the Effective (Isotropic) Radiated Power Output Data and Radiated Spurious Emission were fully tested. These items please refer to the LTE Module report R1907A0450-R3V3. The FCC ID is XMR2020BG95M1 has been certified, and the test report issued by TA Technology(shanghai)Co., Ltd on 03/17/2020.				



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-Documents.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) 8307 1443, or email: CN.Doccheck@sgs.com

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

South of No. 6 Plant, No. 1, Runsheng Road, Suzhou Industrial Park, Suzhou Area, China (Jiangsu) Pilot Free Trade Zone 215000
 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号厂房南楼 邮编: 215000

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

Report No.: SUHR/2021/A001201
 Rev.: 01
 Page: 8 of 44

3 General Information

3.1 Details of Client

Applicant:	SunPower Corporation
Address of Applicant:	1414 Harbour Way South Suite 1901,Richmond CA 94804,USA
Manufacturer:	SunPower Corporation
Address of Manufacturer:	1414 Harbour Way South Suite 1901,Richmond CA 94804,USA

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:	Weller Liu, King Li



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-Documents.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) 8307 1443, or email: CN.Doccheck@sgs.com

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 www.sgs.com.cn
 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号厂房南楼 邮编: 215000 t (86-512) 62992980 sgs.china@sgs.com

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:0031225543



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-Documents.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) 8307 1443, or email: CN.Doccheck@sgs.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.sgs.com.cn
 t (86-512) 62992980 sgs.china@sgs.com

3.4 General Description of EUT

EUT Description:	USB dongle			
Model No.:	QDM023-BG95-M1			
Trade Mark:	Sunpower			
Hardware Version:	V1.2			
Software Version:	BG95M1LAR02A04			
Antenna Type:	<input checked="" type="checkbox"/> External, <input type="checkbox"/> Integrated			
Antenna Gain*:	<input checked="" type="checkbox"/> Provided by applicant			
	4G:			
	LTE Band 2:	2.32dBi	LTE Band 4:	2.51dBi
	LTE Band 12:	-1.58dBi	LTE Band 13:	-1.31dBi
RF Cable*:	<input checked="" type="checkbox"/> Provided by applicant			
	0.5dB(0.6~1GHz)	0.8dB(1.4~2GHz)	1.0dB(2.1~2.7GHz)	
	1.5dB(3~4GHz)	1.8dB(4.4~6GHz)		
Remark:	<p>*Since the above data and/or information is provided by the applicant relevant results or conclusions of this report are only made for these data and/or information , SGS is not responsible for the authenticity, integrity and results of the data and information and/or the validity of the conclusion.</p>			



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-Documents.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) 8307 1443, or email: CN.Doccheck@sgs.com

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 www.sgs.com.cn
 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号厂房南楼 邮编: 215000 t (86-512) 62992980 sgs.china@sgs.com

3.5 Test Mode

Test Mode	Test Modes Description
LTE/TM1	LTE system, QPSK modulation
LTE/TM2	LTE system, 16QAM modulation
Remark: The test mode(s) are selected according to relevant radio technology specifications.	

3.6 Test Environment

Environment Parameter	101.0~101.50 KPa Selected Values During Tests	
Relative Humidity	44~46 % RH Ambient	
Value	Temperature(°C)	Voltage(V)
NTNV	25	3.3
LTVN	-40	3.3
HTNV	85	3.3
Remark: NV: Normal Voltage NT: Normal Temperature LT: Low Extreme Test Temperature HT: High Extreme Test Temperature		



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-Documents.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) 8307 1443, or email: CN.Doccheck@sgs.com

3.7 Technical Specification

Characteristics	Description		
Radio System Type	<input checked="" type="checkbox"/> LTE		
Supported Frequency Range	Band	TX	RX
	LTE CatM1 Band 2	1850 to 1910 MHz	1930 to 1990 MHz
	LTE CatM1 Band 4	1710 to 1755 MHz	2110 to 2155 MHz
	LTE CatM1 Band 12	699 to 716 MHz	729 to 746 MHz
	LTE CatM1 Band 13	777 to 787 MHz	746 to 756 MHz
Supported Channel Bandwidth	LTE CatM1 Band 2	<input checked="" type="checkbox"/> 1.4 MHz <input checked="" type="checkbox"/> 3 MHz <input checked="" type="checkbox"/> 5 MHz <input checked="" type="checkbox"/> 10 MHz <input checked="" type="checkbox"/> 15 MHz <input checked="" type="checkbox"/> 20 MHz	
	LTE CatM1 Band 4	<input checked="" type="checkbox"/> 1.4 MHz <input checked="" type="checkbox"/> 3 MHz <input checked="" type="checkbox"/> 5 MHz <input checked="" type="checkbox"/> 10 MHz <input checked="" type="checkbox"/> 15 MHz <input checked="" type="checkbox"/> 20 MHz	
	LTE CatM1 Band 12	<input checked="" type="checkbox"/> 1.4 MHz <input checked="" type="checkbox"/> 3 MHz <input checked="" type="checkbox"/> 5 MHz <input checked="" type="checkbox"/> 10 MHz	
	LTE CatM1 Band 13	<input checked="" type="checkbox"/> 5 MHz <input checked="" type="checkbox"/> 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-Conditions/Terms-e-Documents.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) 8307 1443, or email: CN.Doccheck@sgs.com

3.8 Test Frequencies

Test Mode	Bandwidth	TX / RX	RF Channel		
			Low (L)	Middle (M)	High (H)
LTE CatM1 Band 2	1.4MHz	TX	Channel 18607	Channel 18900	Channel 19193
			1850.7 MHz	1880 MHz	1909.3 MHz
		RX	Channel 607	Channel 900	Channel 1193
			1930.7 MHz	1960 MHz	1989.3 MHz
	3MHz	TX	Channel 18615	Channel 18900	Channel 19185
			1851.5 MHz	1880 MHz	1908.5 MHz
		RX	Channel 615	Channel 900	Channel 1185
			1931.5 MHz	1960 MHz	1988.5 MHz
	5MHz	TX	Channel 18625	Channel 18900	Channel 19175
			1852.5 MHz	1880 MHz	1907.5 MHz
		RX	Channel 625	Channel 900	Channel 1175
			1932.5 MHz	1960 MHz	1987.5 MHz
	10MHz	TX	Channel 18650	Channel 18900	Channel 19150
			1855 MHz	1880 MHz	1905 MHz
		RX	Channel 650	Channel 900	Channel 1150
			1935 MHz	1960 MHz	1985 MHz
	15MHz	TX	Channel 18675	Channel 18900	Channel 19125
			1857.5 MHz	1880 MHz	1902.5 MHz
		RX	Channel 675	Channel 900	Channel 1125
			1937.5 MHz	1960 MHz	1982.5 MHz
	20MHz	TX	Channel 18700	Channel 18900	Channel 19100
			1860 MHz	1880 MHz	1900 MHz
		RX	Channel 700	Channel 900	Channel 1100
			1940 MHz	1960 MHz	1980 MHz



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-Documents.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) 8307 1443, or email: CN.Doccheck@sgs.com

Test Mode	Bandwidth	TX / RX	RF Channel		
			Low (L)	Middle (M)	High (H)
LTE CatM1 Band 4	1.4MHz	TX	Channel 19957	Channel 20175	Channel 20393
			1710.7 MHz	1732.5 MHz	1754.3 MHz
		RX	Channel 1975	Channel 2175	Channel 2375
			2112.5 MHz	2132.5MHz	2152.5 MHz
	3MHz	TX	Channel 19965	Channel 20175	Channel 20385
			1711.5 MHz	1732.5 MHz	1753.5 MHz
		RX	Channel 2000	Channel 2175	Channel 2350
			2115 MHz	2132.5MHz	2150 MHz
	5MHz	TX	Channel 19975	Channel 20175	Channel 20375
			1712.5 MHz	1732.5 MHz	1752.5 MHz
		RX	Channel 1975	Channel 2175	Channel 2375
			2112.5 MHz	2132.5MHz	2152.5 MHz
	10MHz	TX	Channel 20000	Channel 20175	Channel 20350
			1715 MHz	1732.5 MHz	1750 MHz
		RX	Channel 2000	Channel 2175	Channel 2350
			2115 MHz	2132.5MHz	2150 MHz
	15MHz	TX	Channel 20025	Channel 20175	Channel 20325
			1717.5 MHz	1732.5 MHz	1747.5 MHz
		RX	Channel 2025	Channel 2175	Channel 2325
			2117.5 MHz	2132.5MHz	2147.5 MHz
20MHz	TX	Channel 20050	Channel 20175	Channel 20300	
		1720 MHz	1732.5 MHz	1745 MHz	
	RX	Channel 2050	Channel 2175	Channel 2300	
		2120 MHz	2132.5MHz	2145 MHz	

Test Mode	Bandwidth	TX / RX	RF Channel		
			Low (L)	Middle (M)	High (H)
LTE CatM1 Band 12	1.4MHz	TX	Channel 23017	Channel 23095	Channel 23173
			699.7 MHz	707.5 MHz	715.3 MHz
		RX	Channel 5017	Channel 5095	Channel 5173
			729.7 MHz	737.5 MHz	745.3 MHz
	3MHz	TX	Channel 23025	Channel 23095	Channel 23165
			700.5 MHz	707.5 MHz	714.5 MHz
		RX	Channel 5025	Channel 5095	Channel 5165
			730.5 MHz	737.5 MHz	744.5 MHz
	5MHz	TX	Channel 23035	Channel 23095	Channel 23155
			701.5 MHz	707.5 MHz	713.5 MHz
		RX	Channel 5035	Channel 5095	Channel 5155
			731.5 MHz	737.5 MHz	743.5 MHz
	10MHz	TX	Channel 23060	Channel 23095	Channel 23130
			704 MHz	707.5 MHz	711 MHz
		RX	Channel 5060	Channel 5095	Channel 5130
			734 MHz	737.5 MHz	741 MHz



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-Documents.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) 8307 1443, or email: CN.Doccheck@sgs.com

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

South of No. 6 Plant, No. 1, Runsheng Road, Suzhou Industrial Park, Suzhou Area, China (Jiangsu) Pilot Free Trade Zone 215000
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号厂房南楼 邮编: 215000

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

Test Mode	Bandwidth	TX / RX	RF Channel		
			Low (L)	Middle (M)	High (H)
LTE CatM1 Band 13	5MHz	TX	Channel 23025	Channel 23230	Channel 23255
			779.5 MHz	782 MHz	784.5 MHz
		RX	Channel 5205	Channel 5230	Channel 5255
			748.5 MHz	751 MHz	753.5 MHz
	10MHz	TX	Channel 23230	Channel 23230	Channel 23230
			782 MHz	782 MHz	782 MHz
RX	Channel 5230	Channel 5230	Channel 5230		
	751 MHz	751 MHz	751 MHz		



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-Documents.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) 8307 1443, or email: CN.Doccheck@sgs.com

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

South of No. 6 Plant, No. 1, Runsheng Road, Suzhou Industrial Park, Suzhou Area, China (Jiangsu) Pilot Free Trade Zone 215000 t (86-512) 62992980 www.sgs.com.cn
 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号厂房南楼 邮编: 215000 t (86-512) 62992980 sgs.china@sgs.com

4 Description of Tests

4.1 Conducted Output Power

Measurement Procedure: FCC KDB 971168 D01 V03r01

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

4.2 Effective (Isotropic) Radiated Power of Transmitter

Measurement Procedure: FCC KDB 971168 D01 V03r01 ; ANSI/C63.26 (2015)

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

Measurement Procedure: FCC KDB 971168 D01 V03r01 ; ANSI/C63.26 (2015)

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.

$E (dB \mu V/m) = \text{Measured amplitude level (dBm)} + 107 + \text{Cable Loss (dB)} + \text{Antenna Factor (dB/m)}$

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

$ERP = EIRP - 2.15 (dB)$; where ERP and EIRP are expressed in consistent units.

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:

$E (dB \mu V/m) = \text{Measured amplitude level (dBm)} + 107 + \text{Cable Loss (dB)} + \text{Antenna Factor (dB/m)}$

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



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-Documents.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) 8307 1443, or email: CN.Doccheck@sgs.com

South of No. 6 Plant, No. 1, Punsheng 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号厂房南楼 邮编: 215000

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

- 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

Remark: Reference test setup 2

4.2.1 Test Result

4.2.1.1 Test result for CatM1 Band 2

Test Band	Test Mode	Test Bandwidth	Test channel	Test RB	Conducted Power (dBm)	EIRP (dBm)	limit (dBm)	Verdict
CatM1 Band 2	QPSK	1.4M	LCH	1RB#0	21.15	23.47	33.00	PASS
CatM1 Band 2	QPSK	1.4M	LCH	5RB#0	20.06	22.38	33.00	PASS
CatM1 Band 2	QPSK	1.4M	LCH	6RB#0	18.89	21.21	33.00	PASS
CatM1 Band 2	QPSK	1.4M	MCH	1RB#0	21.15	23.47	33.00	PASS
CatM1 Band 2	QPSK	1.4M	MCH	5RB#0	19.94	22.26	33.00	PASS
CatM1 Band 2	QPSK	1.4M	MCH	6RB#0	18.90	21.22	33.00	PASS
CatM1 Band 2	QPSK	1.4M	HCH	1RB#0	20.99	23.31	33.00	PASS
CatM1 Band 2	QPSK	1.4M	HCH	5RB#0	20.03	22.35	33.00	PASS
CatM1 Band 2	QPSK	1.4M	HCH	6RB#0	18.88	21.2	33.00	PASS
CatM1 Band 2	16QAM	1.4M	LCH	1RB#0	20.06	22.38	33.00	PASS
CatM1 Band 2	16QAM	1.4M	LCH	5RB#0	18.89	21.21	33.00	PASS
CatM1 Band 2	16QAM	1.4M	MCH	1RB#0	20.17	22.49	33.00	PASS
CatM1 Band 2	16QAM	1.4M	MCH	5RB#0	19.01	21.33	33.00	PASS
CatM1 Band 2	16QAM	1.4M	HCH	1RB#0	20.04	22.36	33.00	PASS
CatM1 Band 2	16QAM	1.4M	HCH	5RB#0	19.01	21.33	33.00	PASS
CatM1 Band 2	QPSK	3M	LCH	1RB#0	21.02	23.34	33.00	PASS
CatM1 Band 2	QPSK	3M	LCH	5RB#0	19.98	22.3	33.00	PASS
CatM1 Band 2	QPSK	3M	LCH	6RB#0	18.85	21.17	33.00	PASS
CatM1 Band 2	QPSK	3M	MCH	1RB#0	21.14	23.46	33.00	PASS
CatM1 Band 2	QPSK	3M	MCH	5RB#0	20.09	22.41	33.00	PASS
CatM1 Band 2	QPSK	3M	MCH	6RB#0	18.86	21.18	33.00	PASS
CatM1 Band 2	QPSK	3M	HCH	1RB#0	21.05	23.37	33.00	PASS
CatM1 Band 2	QPSK	3M	HCH	5RB#0	20.12	22.44	33.00	PASS
CatM1 Band 2	QPSK	3M	HCH	6RB#0	18.89	21.21	33.00	PASS
CatM1 Band 2	16QAM	3M	LCH	1RB#0	20.28	22.6	33.00	PASS
CatM1 Band 2	16QAM	3M	LCH	5RB#0	19.12	21.44	33.00	PASS
CatM1 Band 2	16QAM	3M	MCH	1RB#0	19.92	22.24	33.00	PASS
CatM1 Band 2	16QAM	3M	MCH	5RB#0	18.99	21.31	33.00	PASS
CatM1 Band 2	16QAM	3M	HCH	1RB#0	20.07	22.39	33.00	PASS
CatM1 Band 2	16QAM	3M	HCH	5RB#0	19.08	21.4	33.00	PASS
CatM1 Band 2	QPSK	5M	LCH	1RB#0	20.98	23.3	33.00	PASS
CatM1 Band 2	QPSK	5M	LCH	5RB#0	19.89	22.21	33.00	PASS
CatM1 Band 2	QPSK	5M	LCH	6RB#0	19.93	22.25	33.00	PASS
CatM1 Band 2	QPSK	5M	MCH	1RB#0	20.88	23.2	33.00	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-Documents.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) 8307 1443, or email: CN.Doccheck@sgs.com

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 www.sgs.com.cn
 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号厂房南楼 邮编: 215000 t (86-512) 62992980 sgs.china@sgs.com

CatM1 Band 2	QPSK	5M	MCH	5RB#0	19.83	22.15	33.00	PASS
CatM1 Band 2	QPSK	5M	MCH	6RB#0	19.93	22.25	33.00	PASS
CatM1 Band 2	QPSK	5M	HCH	1RB#0	20.76	23.08	33.00	PASS
CatM1 Band 2	QPSK	5M	HCH	5RB#0	19.67	21.99	33.00	PASS
CatM1 Band 2	QPSK	5M	HCH	6RB#0	19.81	22.13	33.00	PASS
CatM1 Band 2	16QAM	5M	LCH	1RB#0	20.66	22.98	33.00	PASS
CatM1 Band 2	16QAM	5M	LCH	5RB#0	19.53	21.85	33.00	PASS
CatM1 Band 2	16QAM	5M	MCH	1RB#0	20.71	23.03	33.00	PASS
CatM1 Band 2	16QAM	5M	MCH	5RB#0	19.47	21.79	33.00	PASS
CatM1 Band 2	16QAM	5M	HCH	1RB#0	20.57	22.89	33.00	PASS
CatM1 Band 2	16QAM	5M	HCH	5RB#0	19.36	21.68	33.00	PASS
CatM1 Band 2	QPSK	10M	LCH	1RB#0	20.88	23.2	33.00	PASS
CatM1 Band 2	QPSK	10M	LCH	5RB#0	20.69	23.01	33.00	PASS
CatM1 Band 2	QPSK	10M	LCH	6RB#0	19.83	22.15	33.00	PASS
CatM1 Band 2	QPSK	10M	MCH	1RB#0	20.67	22.99	33.00	PASS
CatM1 Band 2	QPSK	10M	MCH	5RB#0	20.52	22.84	33.00	PASS
CatM1 Band 2	QPSK	10M	MCH	6RB#0	19.83	22.15	33.00	PASS
CatM1 Band 2	QPSK	10M	HCH	1RB#0	20.88	23.2	33.00	PASS
CatM1 Band 2	QPSK	10M	HCH	5RB#0	20.77	23.09	33.00	PASS
CatM1 Band 2	QPSK	10M	HCH	6RB#0	19.75	22.07	33.00	PASS
CatM1 Band 2	16QAM	10M	LCH	1RB#0	20.67	22.99	33.00	PASS
CatM1 Band 2	16QAM	10M	LCH	5RB#0	20.52	22.84	33.00	PASS
CatM1 Band 2	16QAM	10M	MCH	1RB#0	20.37	22.69	33.00	PASS
CatM1 Band 2	16QAM	10M	MCH	5RB#0	20.55	22.87	33.00	PASS
CatM1 Band 2	16QAM	10M	HCH	1RB#0	20.61	22.93	33.00	PASS
CatM1 Band 2	16QAM	10M	HCH	5RB#0	20.53	22.85	33.00	PASS
CatM1 Band 2	QPSK	15M	LCH	1RB#0	21.03	23.35	33.00	PASS
CatM1 Band 2	QPSK	15M	LCH	5RB#0	20.99	23.31	33.00	PASS
CatM1 Band 2	QPSK	15M	LCH	6RB#0	20.88	23.2	33.00	PASS
CatM1 Band 2	QPSK	15M	MCH	1RB#0	20.76	23.08	33.00	PASS
CatM1 Band 2	QPSK	15M	MCH	5RB#0	20.94	23.26	33.00	PASS
CatM1 Band 2	QPSK	15M	MCH	6RB#0	21.02	23.34	33.00	PASS
CatM1 Band 2	QPSK	15M	HCH	1RB#0	20.85	23.17	33.00	PASS
CatM1 Band 2	QPSK	15M	HCH	5RB#0	20.83	23.15	33.00	PASS
CatM1 Band 2	QPSK	15M	HCH	6RB#0	20.98	23.3	33.00	PASS
CatM1 Band 2	16QAM	15M	LCH	1RB#0	20.73	23.05	33.00	PASS
CatM1 Band 2	16QAM	15M	LCH	5RB#0	20.53	22.85	33.00	PASS
CatM1 Band 2	16QAM	15M	MCH	1RB#0	20.83	23.15	33.00	PASS
CatM1 Band 2	16QAM	15M	MCH	5RB#0	20.74	23.06	33.00	PASS
CatM1 Band 2	16QAM	15M	HCH	1RB#0	20.76	23.08	33.00	PASS
CatM1 Band 2	16QAM	15M	HCH	5RB#0	20.68	23	33.00	PASS
CatM1 Band 2	QPSK	20M	LCH	1RB#0	20.98	23.3	33.00	PASS
CatM1 Band 2	QPSK	20M	LCH	5RB#0	20.85	23.17	33.00	PASS
CatM1 Band 2	QPSK	20M	LCH	6RB#0	20.24	22.56	33.00	PASS
CatM1 Band 2	QPSK	20M	MCH	1RB#0	20.85	23.17	33.00	PASS
CatM1 Band 2	QPSK	20M	MCH	5RB#0	19.85	22.17	33.00	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-Documents.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) 8307 1443, or email: CN.Doccheck@sgs.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号厂房南楼 邮编: 215000

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

Report No.: SUHR/2021/A001201

Rev.: 01

Page: 19 of 44

CatM1 Band 2	QPSK	20M	MCH	6RB#0	19.89	22.21	33.00	PASS
CatM1 Band 2	QPSK	20M	HCH	1RB#0	20.73	23.05	33.00	PASS
CatM1 Band 2	QPSK	20M	HCH	5RB#0	20.46	22.78	33.00	PASS
CatM1 Band 2	QPSK	20M	HCH	6RB#0	20.52	22.84	33.00	PASS
CatM1 Band 2	16QAM	20M	LCH	1RB#0	20.96	23.28	33.00	PASS
CatM1 Band 2	16QAM	20M	LCH	5RB#0	20.74	23.06	33.00	PASS
CatM1 Band 2	16QAM	20M	MCH	1RB#0	20.45	22.77	33.00	PASS
CatM1 Band 2	16QAM	20M	MCH	5RB#0	20.36	22.68	33.00	PASS
CatM1 Band 2	16QAM	20M	HCH	1RB#0	20.12	22.44	33.00	PASS
CatM1 Band 2	16QAM	20M	HCH	5RB#0	20.45	22.77	33.00	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-Documents.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) 8307 1443, or email: CN.Doccheck@sgs.com

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

South of No. 6 Plant, No. 1, Runsheng Road, Suzhou Industrial Park, Suzhou Area, China (Jiangsu) Pilot Free Trade Zone 215000 t (86-512) 62992980 www.sgs.com.cn
 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号厂房南楼 邮编: 215000 t (86-512) 62992980 sgs.china@sgs.com

4.2.1.2 Test result for CatM1 Band 4

Test Band	Test Mode	Test Bandwidth	Test channel	Test RB	Conducted Power (dBm)	EIRP (dBm)	limit (dBm)	Verdict
CatM1 Band 4	QPSK	1.4M	LCH	1RB#0	20.97	23.48	33.00	PASS
CatM1 Band 4	QPSK	1.4M	LCH	5RB#0	19.88	22.39	33.00	PASS
CatM1 Band 4	QPSK	1.4M	LCH	6RB#0	18.79	21.3	33.00	PASS
CatM1 Band 4	QPSK	1.4M	MCH	1RB#0	21.26	23.77	33.00	PASS
CatM1 Band 4	QPSK	1.4M	MCH	5RB#0	20.36	22.87	33.00	PASS
CatM1 Band 4	QPSK	1.4M	MCH	6RB#0	19.06	21.57	33.00	PASS
CatM1 Band 4	QPSK	1.4M	HCH	1RB#0	21.52	24.03	33.00	PASS
CatM1 Band 4	QPSK	1.4M	HCH	5RB#0	20.39	22.9	33.00	PASS
CatM1 Band 4	QPSK	1.4M	HCH	6RB#0	19.27	21.78	33.00	PASS
CatM1 Band 4	16QAM	1.4M	LCH	1RB#0	20.20	22.71	33.00	PASS
CatM1 Band 4	16QAM	1.4M	LCH	5RB#0	19.23	21.74	33.00	PASS
CatM1 Band 4	16QAM	1.4M	MCH	1RB#0	20.41	22.92	33.00	PASS
CatM1 Band 4	16QAM	1.4M	MCH	5RB#0	19.15	21.66	33.00	PASS
CatM1 Band 4	16QAM	1.4M	HCH	1RB#0	20.46	22.97	33.00	PASS
CatM1 Band 4	16QAM	1.4M	HCH	5RB#0	19.52	22.03	33.00	PASS
CatM1 Band 4	QPSK	3M	LCH	1RB#0	20.85	23.36	33.00	PASS
CatM1 Band 4	QPSK	3M	LCH	5RB#0	19.74	22.25	33.00	PASS
CatM1 Band 4	QPSK	3M	LCH	6RB#0	18.85	21.36	33.00	PASS
CatM1 Band 4	QPSK	3M	MCH	1RB#0	21.08	23.59	33.00	PASS
CatM1 Band 4	QPSK	3M	MCH	5RB#0	20.35	22.86	33.00	PASS
CatM1 Band 4	QPSK	3M	MCH	6RB#0	18.93	21.44	33.00	PASS
CatM1 Band 4	QPSK	3M	HCH	1RB#0	21.48	23.99	33.00	PASS
CatM1 Band 4	QPSK	3M	HCH	5RB#0	20.25	22.76	33.00	PASS
CatM1 Band 4	QPSK	3M	HCH	6RB#0	19.38	21.89	33.00	PASS
CatM1 Band 4	16QAM	3M	LCH	1RB#0	20.04	22.55	33.00	PASS
CatM1 Band 4	16QAM	3M	LCH	5RB#0	18.83	21.34	33.00	PASS
CatM1 Band 4	16QAM	3M	MCH	1RB#0	20.56	23.07	33.00	PASS
CatM1 Band 4	16QAM	3M	MCH	5RB#0	19.36	21.87	33.00	PASS
CatM1 Band 4	16QAM	3M	HCH	1RB#0	21.38	23.89	33.00	PASS
CatM1 Band 4	16QAM	3M	HCH	5RB#0	19.66	22.17	33.00	PASS
CatM1 Band 4	QPSK	5M	LCH	1RB#0	20.81	23.32	33.00	PASS
CatM1 Band 4	QPSK	5M	LCH	5RB#0	19.78	22.29	33.00	PASS
CatM1 Band 4	QPSK	5M	LCH	6RB#0	19.73	22.24	33.00	PASS
CatM1 Band 4	QPSK	5M	MCH	1RB#0	20.81	23.32	33.00	PASS
CatM1 Band 4	QPSK	5M	MCH	5RB#0	19.97	22.48	33.00	PASS
CatM1 Band 4	QPSK	5M	MCH	6RB#0	19.98	22.49	33.00	PASS
CatM1 Band 4	QPSK	5M	HCH	1RB#0	20.89	23.4	33.00	PASS
CatM1 Band 4	QPSK	5M	HCH	5RB#0	20.02	22.53	33.00	PASS
CatM1 Band 4	QPSK	5M	HCH	6RB#0	19.99	22.5	33.00	PASS
CatM1 Band 4	16QAM	5M	LCH	1RB#0	20.75	23.26	33.00	PASS
CatM1 Band 4	16QAM	5M	LCH	5RB#0	19.49	22	33.00	PASS
CatM1 Band 4	16QAM	5M	MCH	1RB#0	21.04	23.55	33.00	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-Documents.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) 8307 1443, or email: CN.Doccheck@sgs.com

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 www.sgs.com.cn
 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号厂房南楼 邮编: 215000 t (86-512) 62992980 sgs.china@sgs.com



CatM1 Band 4	16QAM	5M	MCH	5RB#0	19.93	22.44	33.00	PASS
CatM1 Band 4	16QAM	5M	HCH	1RB#0	20.75	23.26	33.00	PASS
CatM1 Band 4	16QAM	5M	HCH	5RB#0	19.52	22.03	33.00	PASS
CatM1 Band 4	QPSK	10M	LCH	1RB#0	20.73	23.24	33.00	PASS
CatM1 Band 4	QPSK	10M	LCH	5RB#0	20.56	23.07	33.00	PASS
CatM1 Band 4	QPSK	10M	LCH	6RB#0	19.64	22.15	33.00	PASS
CatM1 Band 4	QPSK	10M	MCH	1RB#0	20.96	23.47	33.00	PASS
CatM1 Band 4	QPSK	10M	MCH	5RB#0	20.93	23.44	33.00	PASS
CatM1 Band 4	QPSK	10M	MCH	6RB#0	20.03	22.54	33.00	PASS
CatM1 Band 4	QPSK	10M	HCH	1RB#0	21.27	23.78	33.00	PASS
CatM1 Band 4	QPSK	10M	HCH	5RB#0	21.06	23.57	33.00	PASS
CatM1 Band 4	QPSK	10M	HCH	6RB#0	20.05	22.56	33.00	PASS
CatM1 Band 4	16QAM	10M	LCH	1RB#0	20.73	23.24	33.00	PASS
CatM1 Band 4	16QAM	10M	LCH	5RB#0	20.56	23.07	33.00	PASS
CatM1 Band 4	16QAM	10M	MCH	1RB#0	20.92	23.43	33.00	PASS
CatM1 Band 4	16QAM	10M	MCH	5RB#0	20.77	23.28	33.00	PASS
CatM1 Band 4	16QAM	10M	HCH	1RB#0	21.04	23.55	33.00	PASS
CatM1 Band 4	16QAM	10M	HCH	5RB#0	20.97	23.48	33.00	PASS
CatM1 Band 4	QPSK	15M	LCH	1RB#0	20.65	23.16	33.00	PASS
CatM1 Band 4	QPSK	15M	LCH	5RB#0	20.53	23.04	33.00	PASS
CatM1 Band 4	QPSK	15M	LCH	6RB#0	20.75	23.26	33.00	PASS
CatM1 Band 4	QPSK	15M	MCH	1RB#0	20.85	23.36	33.00	PASS
CatM1 Band 4	QPSK	15M	MCH	5RB#0	20.83	23.34	33.00	PASS
CatM1 Band 4	QPSK	15M	MCH	6RB#0	20.91	23.42	33.00	PASS
CatM1 Band 4	QPSK	15M	HCH	1RB#0	20.98	23.49	33.00	PASS
CatM1 Band 4	QPSK	15M	HCH	5RB#0	21.04	23.55	33.00	PASS
CatM1 Band 4	QPSK	15M	HCH	6RB#0	21.08	23.59	33.00	PASS
CatM1 Band 4	16QAM	15M	LCH	1RB#0	20.65	23.16	33.00	PASS
CatM1 Band 4	16QAM	15M	LCH	5RB#0	20.41	22.92	33.00	PASS
CatM1 Band 4	16QAM	15M	MCH	1RB#0	20.85	23.36	33.00	PASS
CatM1 Band 4	16QAM	15M	MCH	5RB#0	20.65	23.16	33.00	PASS
CatM1 Band 4	16QAM	15M	HCH	1RB#0	21.01	23.52	33.00	PASS
CatM1 Band 4	16QAM	15M	HCH	5RB#0	20.65	23.16	33.00	PASS
CatM1 Band 4	QPSK	20M	LCH	1RB#0	20.71	23.22	33.00	PASS
CatM1 Band 4	QPSK	20M	LCH	5RB#0	20.34	22.85	33.00	PASS
CatM1 Band 4	QPSK	20M	LCH	6RB#0	20.63	23.14	33.00	PASS
CatM1 Band 4	QPSK	20M	MCH	1RB#0	20.89	23.4	33.00	PASS
CatM1 Band 4	QPSK	20M	MCH	5RB#0	20.77	23.28	33.00	PASS
CatM1 Band 4	QPSK	20M	MCH	6RB#0	20.85	23.36	33.00	PASS
CatM1 Band 4	QPSK	20M	HCH	1RB#0	21.06	23.57	33.00	PASS
CatM1 Band 4	QPSK	20M	HCH	5RB#0	20.92	23.43	33.00	PASS
CatM1 Band 4	QPSK	20M	HCH	6RB#0	20.97	23.48	33.00	PASS
CatM1 Band 4	16QAM	20M	LCH	1RB#0	20.61	23.12	33.00	PASS
CatM1 Band 4	16QAM	20M	LCH	5RB#0	20.42	22.93	33.00	PASS
CatM1 Band 4	16QAM	20M	MCH	1RB#0	20.75	23.26	33.00	PASS
CatM1 Band 4	16QAM	20M	MCH	5RB#0	20.61	23.12	33.00	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-Documents.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) 8307 1443, or email: CN.Doccheck@sgs.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号厂房南楼 邮编: 215000

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



Report No.: SUHR/2021/A001201

Rev.: 01

Page: 22 of 44

CatM1 Band 4	16QAM	20M	HCH	1RB#0	20.97	23.48	33.00	PASS
CatM1 Band 4	16QAM	20M	HCH	5RB#0	20.79	23.3	33.00	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-Documents.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) 8307 1443, or email: CN.Doccheck@sgs.com

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 www.sgs.com.cn
 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号厂房南楼 邮编: 215000 t (86-512) 62992980 sgs.china@sgs.com

4.2.1.3 Test result for CatM1 Band 12

Test Band	Test Mode	Test Bandwidth	Test channel	Test RB	Conducted Power (dBm)	ERP (dBm)	limit (dBm)	Verdict
CatM1 Band 12	QPSK	1.4M	LCH	1RB#0	21.17	17.44	34.77	PASS
CatM1 Band 12	QPSK	1.4M	LCH	5RB#0	20.20	16.47	34.77	PASS
CatM1 Band 12	QPSK	1.4M	LCH	6RB#0	19.31	15.58	34.77	PASS
CatM1 Band 12	QPSK	1.4M	MCH	1RB#0	20.78	17.05	34.77	PASS
CatM1 Band 12	QPSK	1.4M	MCH	5RB#0	19.75	16.02	34.77	PASS
CatM1 Band 12	QPSK	1.4M	MCH	6RB#0	18.81	15.08	34.77	PASS
CatM1 Band 12	QPSK	1.4M	HCH	1RB#0	20.71	16.98	34.77	PASS
CatM1 Band 12	QPSK	1.4M	HCH	5RB#0	19.72	15.99	34.77	PASS
CatM1 Band 12	QPSK	1.4M	HCH	6RB#0	18.74	15.01	34.77	PASS
CatM1 Band 12	16QAM	1.4M	LCH	1RB#0	20.17	16.44	34.77	PASS
CatM1 Band 12	16QAM	1.4M	LCH	5RB#0	19.13	15.4	34.77	PASS
CatM1 Band 12	16QAM	1.4M	MCH	1RB#0	19.9	16.17	34.77	PASS
CatM1 Band 12	16QAM	1.4M	MCH	5RB#0	18.98	15.25	34.77	PASS
CatM1 Band 12	16QAM	1.4M	HCH	1RB#0	20.03	16.3	34.77	PASS
CatM1 Band 12	16QAM	1.4M	HCH	5RB#0	19.14	15.41	34.77	PASS
CatM1 Band 12	QPSK	3M	LCH	1RB#0	20.85	17.12	34.77	PASS
CatM1 Band 12	QPSK	3M	LCH	5RB#0	19.74	16.01	34.77	PASS
CatM1 Band 12	QPSK	3M	LCH	6RB#0	18.79	15.06	34.77	PASS
CatM1 Band 12	QPSK	3M	MCH	1RB#0	20.84	17.11	34.77	PASS
CatM1 Band 12	QPSK	3M	MCH	5RB#0	19.65	15.92	34.77	PASS
CatM1 Band 12	QPSK	3M	MCH	6RB#0	18.57	14.84	34.77	PASS
CatM1 Band 12	QPSK	3M	HCH	1RB#0	20.74	17.01	34.77	PASS
CatM1 Band 12	QPSK	3M	HCH	5RB#0	19.93	16.2	34.77	PASS
CatM1 Band 12	QPSK	3M	HCH	6RB#0	18.82	15.09	34.77	PASS
CatM1 Band 12	16QAM	3M	LCH	1RB#0	20.07	16.34	34.77	PASS
CatM1 Band 12	16QAM	3M	LCH	5RB#0	19.06	15.33	34.77	PASS
CatM1 Band 12	16QAM	3M	MCH	1RB#0	19.93	16.2	34.77	PASS
CatM1 Band 12	16QAM	3M	MCH	5RB#0	18.81	15.08	34.77	PASS
CatM1 Band 12	16QAM	3M	HCH	1RB#0	20.13	16.4	34.77	PASS
CatM1 Band 12	16QAM	3M	HCH	5RB#0	19.05	15.32	34.77	PASS
CatM1 Band 12	QPSK	5M	LCH	1RB#0	20.85	17.12	34.77	PASS
CatM1 Band 12	QPSK	5M	LCH	5RB#0	19.90	16.17	34.77	PASS
CatM1 Band 12	QPSK	5M	LCH	6RB#0	19.81	16.08	34.77	PASS
CatM1 Band 12	QPSK	5M	MCH	1RB#0	20.77	17.04	34.77	PASS
CatM1 Band 12	QPSK	5M	MCH	5RB#0	19.72	15.99	34.77	PASS
CatM1 Band 12	QPSK	5M	MCH	6RB#0	19.66	15.93	34.77	PASS
CatM1 Band 12	QPSK	5M	HCH	1RB#0	20.57	16.84	34.77	PASS
CatM1 Band 12	QPSK	5M	HCH	5RB#0	19.63	15.9	34.77	PASS
CatM1 Band 12	QPSK	5M	HCH	6RB#0	19.61	15.88	34.77	PASS
CatM1 Band 12	16QAM	5M	LCH	1RB#0	20.64	16.91	34.77	PASS
CatM1 Band 12	16QAM	5M	LCH	5RB#0	19.50	15.77	34.77	PASS
CatM1 Band 12	16QAM	5M	MCH	1RB#0	20.55	16.82	34.77	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-Documents.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) 8307 1443, or email: CN.Doccheck@sgs.com

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 www.sgs.com.cn
 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号厂房南楼 邮编: 215000 t (86-512) 62992980 sgs.china@sgs.com



Report No.: SUHR/2021/A001201

Rev.: 01

Page: 24 of 44

CatM1 Band 12	16QAM	5M	MCH	5RB#0	19.57	15.84	34.77	PASS
CatM1 Band 12	16QAM	5M	HCH	1RB#0	20.55	16.82	34.77	PASS
CatM1 Band 12	16QAM	5M	HCH	5RB#0	19.65	15.92	34.77	PASS
CatM1 Band 12	QPSK	10M	LCH	1RB#0	20.96	17.23	34.77	PASS
CatM1 Band 12	QPSK	10M	LCH	5RB#0	20.78	17.05	34.77	PASS
CatM1 Band 12	QPSK	10M	LCH	6RB#0	19.78	16.05	34.77	PASS
CatM1 Band 12	QPSK	10M	MCH	1RB#0	20.75	17.02	34.77	PASS
CatM1 Band 12	QPSK	10M	MCH	5RB#0	20.71	16.98	34.77	PASS
CatM1 Band 12	QPSK	10M	MCH	6RB#0	19.66	15.93	34.77	PASS
CatM1 Band 12	QPSK	10M	HCH	1RB#0	20.74	17.01	34.77	PASS
CatM1 Band 12	QPSK	10M	HCH	5RB#0	20.67	16.94	34.77	PASS
CatM1 Band 12	QPSK	10M	HCH	6RB#0	19.55	15.82	34.77	PASS
CatM1 Band 12	16QAM	10M	LCH	1RB#0	20.65	16.92	34.77	PASS
CatM1 Band 12	16QAM	10M	LCH	5RB#0	20.63	16.9	34.77	PASS
CatM1 Band 12	16QAM	10M	MCH	1RB#0	20.82	17.09	34.77	PASS
CatM1 Band 12	16QAM	10M	MCH	5RB#0	20.54	16.81	34.77	PASS
CatM1 Band 12	16QAM	10M	HCH	1RB#0	20.49	16.76	34.77	PASS
CatM1 Band 12	16QAM	10M	HCH	5RB#0	20.47	16.74	34.77	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-Documents.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) 8307 1443, or email: CN.Doccheck@sgs.com

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

South of No. 6 Plant, No. 1, Runsheng Road, Suzhou Industrial Park, Suzhou Area, China (Jiangsu) Pilot Free Trade Zone 215000 t (86-512) 62992980 www.sgs.com.cn
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号厂房南楼 邮编: 215000 t (86-512) 62992980 sgs.china@sgs.com

4.2.1.4 Test result for CatM1 Band 13

Test Band	Test Mode	Test Bandwidth	Test channel	Test RB	Conducted Power (dBm)	ERP (dBm)	limit (dBm)	Verdict
CatM1 Band 13	QPSK	5M	LCH	1RB#0	20.56	17.1	34.77	PASS
CatM1 Band 13	QPSK	5M	LCH	5RB#0	20.33	16.87	34.77	PASS
CatM1 Band 13	QPSK	5M	LCH	6RB#0	20.24	16.78	34.77	PASS
CatM1 Band 13	QPSK	5M	MCH	1RB#0	20.64	17.18	34.77	PASS
CatM1 Band 13	QPSK	5M	MCH	5RB#0	20.72	17.26	34.77	PASS
CatM1 Band 13	QPSK	5M	MCH	6RB#0	20.43	16.97	34.77	PASS
CatM1 Band 13	QPSK	5M	HCH	1RB#0	20.72	17.26	34.77	PASS
CatM1 Band 13	QPSK	5M	HCH	5RB#0	20.33	16.87	34.77	PASS
CatM1 Band 13	QPSK	5M	HCH	6RB#0	20.74	17.28	34.77	PASS
CatM1 Band 13	16QAM	5M	LCH	1RB#0	20.88	17.42	34.77	PASS
CatM1 Band 13	16QAM	5M	LCH	5RB#0	20.61	17.15	34.77	PASS
CatM1 Band 13	16QAM	5M	MCH	1RB#0	20.69	17.23	34.77	PASS
CatM1 Band 13	16QAM	5M	MCH	5RB#0	20.51	17.05	34.77	PASS
CatM1 Band 13	16QAM	5M	HCH	1RB#0	20.3	16.84	34.77	PASS
CatM1 Band 13	16QAM	5M	HCH	5RB#0	20.33	16.87	34.77	PASS
CatM1 Band 13	QPSK	10M	MCH	1RB#0	20.86	17.4	34.77	PASS
CatM1 Band 13	QPSK	10M	MCH	5RB#0	20.11	16.65	34.77	PASS
CatM1 Band 13	QPSK	10M	MCH	6RB#0	20.34	16.88	34.77	PASS
CatM1 Band 13	16QAM	10M	MCH	1RB#0	20.92	17.46	34.77	PASS
CatM1 Band 13	16QAM	10M	MCH	5RB#0	20.08	16.62	34.77	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-Documents.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) 8307 1443, or email: CN.Doccheck@sgs.com

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

South of No. 6 Plant, No. 1, Runsheng Road, Suzhou Industrial Park, Suzhou Area, China (Jiangsu) Pilot Free Trade Zone 215000 t (86-512) 62992980 www.sgs.com.cn
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号厂房南楼 邮编: 215000 t (86-512) 62992980 sgs.china@sgs.com

4.3 Field Strength of Spurious Radiation

Measurement Procedure: FCC KDB 971168 D01 V03r01

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.

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

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

Above 1GHz test procedure as below:

- 1) Different between above is the test site, change from Semi- Anechoic Chamber to fully Anechoic Chamber
- 2) Calculate power in dBm by the following formula:

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

$$\text{EIRP (dBm)} = E \text{ (dB}\mu\text{V/m)} + 20 \log D - 104.8; \text{ where D is the measurement distance in meters}$$
- 3). Test the EUT in the lowest channel, the middle channel the Highest channel
- 4). The radiation measurements are performed in X, Y, Z axis positioning. And found the 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.

Remark: Reference test setup 2

- 1) The field strength is calculated by adding the Antenna Factor, Cable Factor & Preamplifier. The basic equation with a sample calculation is as follows:
 Final Test Level =Receiver Reading + Factor(Antenna Factor + Cable Factor – Preamplifier Factor)
- 2) Scan from 9kHz to 40GHz,The disturbance between 9KHz to 30MHz and 18GHz to 40GHz was very low, and the above harmonics were the highest point could be found when testing, so only the above 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.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-Documents.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) 8307 1443, or email: CN.Doccheck@sgs.com

4.3.1 Test Result

4.3.1.1. Test Band = CAT-M1 Band 2

4.3.1.1.1. Test Channel = Low Channel

Data List									
NO.	Frequency [MHz]	Reading [dBμV]	Factor [dB]	Level [dBm]	Limit [dBm]	Margin [dB]	Height [cm]	Angle [°]	Polarity
1	1272.0000	44.33	-95.43	-51.10	-13.00	38.10	365	173	Horizontal
2	3702.1800	73.12	-111.07	-37.95	-13.00	24.95	258	103	Horizontal
3	5553.2700	64.21	-106.36	-42.15	-13.00	29.15	369	256	Horizontal
4	7404.3600	48.63	-100.78	-52.15	-13.00	39.15	147	357	Horizontal
5	9255.4500	45.77	-95.08	-49.31	-13.00	36.31	236	40	Horizontal
6	11106.5400	43.61	-91.12	-47.51	-13.00	34.51	224	9	Horizontal

Data List									
NO.	Frequency [MHz]	Reading [dBμV]	Factor [dB]	Level [dBm]	Limit [dBm]	Margin [dB]	Height [cm]	Angle [°]	Polarity
1	1206.5000	44.42	-95.49	-51.07	-13.00	38.07	269	108	Vertical
2	3702.1800	77.03	-111.07	-34.04	-13.00	21.04	365	153	Vertical
3	5553.2700	64.11	-106.36	-42.25	-13.00	29.25	357	40	Vertical
4	7404.3600	48.37	-100.78	-52.41	-13.00	39.41	159	357	Vertical
5	9255.4500	45.86	-95.08	-49.22	-13.00	36.22	258	302	Vertical
6	11106.5400	44.08	-91.12	-47.04	-13.00	34.04	169	158	Vertical



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-Documents.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) 8307 1443, or email: CN.Doccheck@sgs.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号厂房南楼 邮编: 215000

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

4.3.1.2. Test Band = CAT-M1 Band 2

4.3.1.2.1. Test Channel = Mid Channel

Data List									
NO.	Frequency [MHz]	Reading [dBμV]	Factor [dB]	Level [dBm]	Limit [dBm]	Margin [dB]	Height [cm]	Angle [°]	Polarity
1	1126.5000	44.90	-95.74	-50.84	-13.00	37.84	159	200	Horizontal
2	3742.1800	72.84	-110.86	-38.02	-13.00	25.02	357	219	Horizontal
3	5613.2700	64.08	-106.14	-42.06	-13.00	29.06	256	256	Horizontal
4	7484.3600	48.37	-100.43	-52.06	-13.00	39.06	365	213	Horizontal
5	9355.4500	45.26	-94.96	-49.70	-13.00	36.70	247	338	Horizontal
6	13215.750	42.45	-90.42	-44.97	-13.00	31.97	241	311	Horizontal

Data List									
NO.	Frequency [MHz]	Reading [dBμV]	Factor [dB]	Level [dBm]	Limit [dBm]	Margin [dB]	Height [cm]	Angle [°]	Polarity
1	1360.0000	43.56	-95.20	-51.64	-13.00	38.64	159	115	Vertical
2	3742.1800	76.36	-110.86	-34.50	-13.00	21.50	368	258	Vertical
3	5613.2700	64.58	-106.14	-41.56	-13.00	28.56	258	338	Vertical
4	7484.3600	48.95	-100.43	-51.48	-13.00	38.48	149	307	Vertical
5	9355.4500	45.56	-94.96	-49.40	-13.00	36.40	256	147	Vertical
6	11226.540	43.66	-90.95	-47.29	-13.00	34.29	365	276	Vertical



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-Documents.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) 8307 1443, or email: CN.Doccheck@sgs.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号厂房南楼 邮编: 215000

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

4.3.1.3. Test Band = CAT-M1 Band 2
4.3.1.3.1. Test Channel = High Channel

Data List									
NO.	Frequency [MHz]	Reading [dBμV]	Factor [dB]	Level [dBm]	Limit [dBm]	Margin [dB]	Height [cm]	Angle [°]	Polarity
1	1095.0000	45.58	-95.75	-50.17	-13.00	37.17	258	359	Horizontal
2	3815.2500	69.61	-110.54	-40.93	-13.00	27.93	369	173	Horizontal
3	5723.2500	61.29	-105.62	-44.33	-13.00	31.33	357	351	Horizontal
4	7564.3600	48.57	-100.01	-51.44	-13.00	38.44	159	218	Horizontal
5	9455.4500	45.43	-94.86	-49.43	-13.00	36.43	358	262	Horizontal
6	11346.540	45.06	-91.44	-46.38	-13.00	33.38	157	206	Horizontal

Data List									
NO.	Frequency [MHz]	Reading [dBμV]	Factor [dB]	Level [dBm]	Limit [dBm]	Margin [dB]	Height [cm]	Angle [°]	Polarity
1	1216.0000	45.31	-95.48	-50.17	-13.00	37.17	258	61	Vertical
2	3815.2500	73.26	-110.54	-37.28	-13.00	24.28	269	356	Vertical
3	5722.5000	66.02	-105.62	-39.60	-13.00	26.60	254	125	Vertical
4	7564.3600	47.33	-100.01	-52.68	-13.00	39.68	247	345	Vertical
5	9455.4500	45.23	-94.86	-49.63	-13.00	36.63	236	99	Vertical
6	11346.540	44.75	-91.44	-46.69	-13.00	33.69	301	263	Vertical



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-Documents.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) 8307 1443, or email: CN.Doccheck@sgs.com
 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 www.sgs.com.cn
 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号厂房南楼 邮编: 215000 t (86-512) 62992980 sgs.china@sgs.com

4.3.1.4. Test Band = CAT-M1 Band 4

4.3.1.4.1. Test Channel = Low Channel

Data List									
NO.	Frequency [MHz]	Reading [dBμV]	Factor [dB]	Level [dBm]	Limit [dBm]	Margin [dB]	Height [cm]	Angle [°]	Polarity
1	1183.0000	44.83	-95.56	-50.73	-13.00	37.73	152	276	Horizontal
2	3422.1800	76.66	-111.71	-35.05	-13.00	22.05	123	159	Horizontal
3	5133.2700	58.37	-106.90	-48.53	-13.00	35.53	125	258	Horizontal
4	6844.3600	49.57	-101.87	-52.30	-13.00	39.30	265	274	Horizontal
5	8555.4500	46.21	-96.83	-50.62	-13.00	37.62	368	98	Horizontal
6	10266.540	44.01	-93.20	-49.19	-13.00	36.19	347	135	Horizontal

Data List									
NO.	Frequency [MHz]	Reading [dBμV]	Factor [dB]	Level [dBm]	Limit [dBm]	Margin [dB]	Height [cm]	Angle [°]	Polarity
1	1283.0000	44.12	-95.42	-51.30	-13.00	38.30	156	136	Vertical
2	3422.1800	74.58	-111.71	-37.13	-13.00	24.13	154	351	Vertical
3	5133.2700	64.63	-106.90	-42.27	-13.00	29.27	169	111	Vertical
4	6844.3600	49.19	-101.87	-52.68	-13.00	39.68	258	301	Vertical
5	8555.4500	46.86	-96.83	-49.97	-13.00	36.97	269	194	Vertical
6	10266.540	43.79	-93.20	-49.41	-13.00	36.41	287	126	Vertical



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-Documents.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) 8307 1443, or email: CN.Doccheck@sgs.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号厂房南楼 邮编: 215000

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

4.3.1.5. Test Band = CAT-M1 Band 4

4.3.1.5.1. Test Channel = Mid Channel

Data List									
NO.	Frequency [MHz]	Reading [dBμV]	Factor [dB]	Level [dBm]	Limit [dBm]	Margin [dB]	Height [cm]	Angle [°]	Polarity
1	1230.5000	44.86	-95.47	-50.61	-13.00	37.61	148	348	Horizontal
2	3447.1800	78.76	-111.65	-32.89	-13.00	19.89	159	344	Horizontal
3	5170.7700	61.29	-106.85	-45.56	-13.00	32.56	269	338	Horizontal
4	6894.3600	49.07	-101.71	-52.64	-13.00	39.64	358	117	Horizontal
5	8617.9500	46.12	-96.82	-50.70	-13.00	37.70	346	192	Horizontal
6	10341.540	45.09	-93.06	-47.97	-13.00	34.97	365	186	Horizontal

Data List									
NO.	Frequency [MHz]	Reading [dBμV]	Factor [dB]	Level [dBm]	Limit [dBm]	Margin [dB]	Height [cm]	Angle [°]	Polarity
1	1340.0000	46.60	-95.27	-48.67	-13.00	35.67	158	343	Vertical
2	3447.1800	77.91	-111.65	-33.74	-13.00	20.74	256	224	Vertical
3	5170.7700	68.86	-106.85	-37.99	-13.00	24.99	354	124	Vertical
4	6894.3600	49.05	-101.71	-52.66	-13.00	39.66	259	256	Vertical
5	8617.9500	45.73	-96.82	-51.09	-13.00	38.09	229	159	Vertical
6	10341.540	43.65	-93.06	-49.41	-13.00	36.41	119	220	Vertical



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-Documents.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) 8307 1443, or email: CN.Doccheck@sgs.com

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

South of No. 6 Plant, No. 1, Runsheng Road, Suzhou Industrial Park, Suzhou Area, China (Jiangsu) Pilot Free Trade Zone 215000
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号厂房南楼 邮编: 215000

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

4.3.1.6. Test Band = CAT-M1 Band 4

4.3.1.6.1. Test Channel = High Channel

Data List									
NO.	Frequency [MHz]	Reading [dBμV]	Factor [dB]	Level [dBm]	Limit [dBm]	Margin [dB]	Height [cm]	Angle [°]	Polarity
1	1281.0000	44.51	-95.42	-50.91	-13.00	37.91	159	259	Horizontal
2	3504.7500	79.49	-111.52	-32.03	-13.00	19.03	269	50	Horizontal
3	5257.5000	63.77	-106.73	-42.96	-13.00	29.96	358	307	Horizontal
4	6944.3600	50.61	-101.67	-51.06	-13.00	38.06	147	307	Horizontal
5	8680.4500	47.54	-96.47	-48.93	-13.00	35.93	263	232	Horizontal
6	10416.540	43.61	-92.76	-49.15	-13.00	36.15	332	181	Horizontal

Data List									
NO.	Frequency [MHz]	Reading [dBμV]	Factor [dB]	Level [dBm]	Limit [dBm]	Margin [dB]	Height [cm]	Angle [°]	Polarity
1	1242.5000	45.35	-95.46	-50.11	-13.00	37.11	236	220	Vertical
2	3504.7500	81.18	-111.52	-30.34	-13.00	17.34	158	256	Vertical
3	5258.2500	70.12	-106.73	-36.61	-13.00	23.61	222	131	Vertical
4	6944.3600	48.63	-101.67	-53.04	-13.00	40.04	239	326	Vertical
5	8680.4500	46.49	-96.47	-49.98	-13.00	36.98	354	194	Vertical
6	10416.540	44.54	-92.76	-48.22	-13.00	35.22	158	23	Vertical



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-Documents.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) 8307 1443, or email: CN.Doccheck@sgs.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号厂房南楼 邮编: 215000

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

4.3.1.7. Test Band = CAT-M1 Band 12
4.3.1.7.1. Test Channel = Low Channel

Data List									
NO.	Frequency [MHz]	Reading [dBμV]	Factor [dB]	Level [dBm]	Limit [dBm]	Margin [dB]	Height [cm]	Angle [°]	Polarity
1	1014.0000	57.01	-117.47	-60.46	-13.00	47.46	158	223	Horizontal
2	1398.0000	81.43	-118.59	-37.16	-13.00	24.16	256	118	Horizontal
3	2098.0000	72.74	-116.05	-43.31	-13.00	30.31	236	22	Horizontal
4	2798.0000	59.14	-113.03	-53.89	-13.00	40.89	302	360	Horizontal
5	3497.9500	54.69	-111.91	-57.22	-13.00	44.22	208	27	Horizontal
6	4197.5400	52.78	-109.46	-56.68	-13.00	43.68	258	360	Horizontal

Data List									
NO.	Frequency [MHz]	Reading [dBμV]	Factor [dB]	Level [dBm]	Limit [dBm]	Margin [dB]	Height [cm]	Angle [°]	Polarity
1	1044.0000	56.69	-117.79	-61.10	-13.00	48.10	269	122	Vertical
2	1398.0000	83.25	-118.59	-35.34	-13.00	22.34	302	357	Vertical
3	2098.0000	73.31	-116.05	-42.74	-13.00	29.74	158	166	Vertical
4	2798.0000	58.97	-113.03	-54.06	-13.00	41.06	226	122	Vertical
5	3497.9500	54.48	-111.91	-57.43	-13.00	44.43	335	21	Vertical
6	4197.5400	51.59	-109.46	-57.87	-13.00	44.87	254	159	Vertical



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-Documents.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) 8307 1443, or email: CN.Doccheck@sgs.com
 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 www.sgs.com.cn
 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号厂房南楼 邮编: 215000 t (86-512) 62992980 sgs.china@sgs.com

4.3.1.8. Test Band = CAT-M1 Band 12

4.3.1.8.1. Test Channel = Mid Channel

Data List									
NO.	Frequency [MHz]	Reading [dBμV]	Factor [dB]	Level [dBm]	Limit [dBm]	Margin [dB]	Height [cm]	Angle [°]	Polarity
1	1018.0000	57.30	-117.51	-60.21	-13.00	47.21	256	70	Horizontal
2	1406.0000	76.24	-118.57	-42.33	-13.00	29.33	365	42	Horizontal
3	2109.2700	73.08	-116.01	-42.93	-13.00	29.93	115	80	Horizontal
4	2812.0000	58.41	-112.99	-54.58	-13.00	41.58	229	4	Horizontal
5	3515.4500	53.24	-111.85	-58.61	-13.00	45.61	357	108	Horizontal
6	4218.5400	51.45	-109.42	-57.97	-13.00	44.97	325	147	Horizontal

Data List									
NO.	Frequency [MHz]	Reading [dBμV]	Factor [dB]	Level [dBm]	Limit [dBm]	Margin [dB]	Height [cm]	Angle [°]	Polarity
1	1008.0000	58.42	-117.40	-58.98	-13.00	45.98	256	179	Vertical
2	1406.0000	79.46	-118.57	-39.11	-13.00	26.11	266	241	Vertical
3	2109.2700	73.63	-116.01	-42.38	-13.00	29.38	169	194	Vertical
4	2812.0000	58.14	-112.99	-54.85	-13.00	41.85	357	145	Vertical
5	3515.4500	56.60	-111.85	-55.25	-13.00	42.25	236	357	Vertical
6	4218.5400	51.50	-109.42	-57.92	-13.00	44.92	228	328	Vertical



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-Documents.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) 8307 1443, or email: CN.Doccheck@sgs.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号厂房南楼 邮编: 215000

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

4.3.1.9. Test Band = CAT-M1 Band 12

4.3.1.9.1. Test Channel = High Channel

Data List									
NO.	Frequency [MHz]	Reading [dBμV]	Factor [dB]	Level [dBm]	Limit [dBm]	Margin [dB]	Height [cm]	Angle [°]	Polarity
1	1010.0000	56.17	-117.43	-61.26	-13.00	48.26	167	128	Horizontal
2	1428.0000	79.61	-118.49	-38.88	-13.00	25.88	231	237	Horizontal
3	2142.0000	77.89	-115.90	-38.01	-13.00	25.01	127	36	Horizontal
4	2856.0000	56.26	-112.90	-56.64	-13.00	43.64	119	75	Horizontal
5	3532.9500	52.47	-111.79	-59.32	-13.00	46.32	230	17	Horizontal
6	4239.5400	51.94	-109.39	-57.45	-13.00	44.45	278	75	Horizontal

Data List									
NO.	Frequency [MHz]	Reading [dBμV]	Factor [dB]	Level [dBm]	Limit [dBm]	Margin [dB]	Height [cm]	Angle [°]	Polarity
1	1020.0000	56.83	-117.53	-60.70	-13.00	47.70	156	214	Vertical
2	1428.0000	79.47	-118.49	-39.02	-13.00	26.02	213	123	Vertical
3	2142.0000	70.74	-115.90	-45.16	-13.00	32.16	165	200	Vertical
4	2858.0000	56.60	-112.89	-56.29	-13.00	43.29	112	123	Vertical
5	3532.9500	52.80	-111.79	-58.99	-13.00	45.99	178	123	Vertical
6	4239.5400	51.38	-109.39	-58.01	-13.00	45.01	114	85	Vertical



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-Documents.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) 8307 1443, or email: CN.Doccheck@sgs.com

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 www.sgs.com.cn
 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号厂房南楼 邮编: 215000 t (86-512) 62992980 sgs.china@sgs.com

4.3.1.10. Test Band = CAT-M1 Band 13_5MHz

4.3.1.10.1. Test Channel = Low Channel

Data List									
NO.	Frequency [MHz]	Reading [dBμV]	Factor [dB]	Level [dBm]	Limit [dBm]	Margin [dB]	Height [cm]	Angle [°]	Polarity
1	1554.0000	68.68	-118.21	-49.53	-13.00	36.53	185	40	Horizontal
2	2332.0000	65.55	-115.31	-49.76	-13.00	36.76	147	213	Horizontal
3	3109.3600	53.36	-112.22	-58.86	-13.00	45.86	163	31	Horizontal
4	3886.7000	52.34	-110.47	-58.13	-13.00	45.13	204	357	Horizontal
5	4664.0400	51.03	-108.04	-57.01	-13.00	44.01	168	266	Horizontal
6	5441.3800	51.09	-106.49	-55.40	-13.00	42.40	380	185	Horizontal

Data List									
NO.	Frequency [MHz]	Reading [dBμV]	Factor [dB]	Level [dBm]	Limit [dBm]	Margin [dB]	Height [cm]	Angle [°]	Polarity
1	1554.0000	71.49	-118.21	-46.72	-13.00	33.72	185	209	Vertical
2	2332.0000	72.93	-115.31	-42.38	-13.00	29.38	176	47	Vertical
3	3109.3600	54.40	-112.22	-57.82	-13.00	44.82	205	85	Vertical
4	3886.7000	52.27	-110.47	-58.20	-13.00	45.20	346	347	Vertical
5	4664.0400	50.30	-108.04	-57.74	-13.00	44.74	197	309	Vertical
6	5441.3800	51.29	-106.49	-55.20	-13.00	42.20	108	56	Vertical



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-Documents.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) 8307 1443, or email: CN.Doccheck@sgs.com

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 www.sgs.com.cn
 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号厂房南楼 邮编: 215000 t (86-512) 62992980 sgs.china@sgs.com

4.3.1.11. Test Band = CAT-M1 Band 13_10MHz

4.3.1.11.1. Test Channel = Mid Channel

Data List									
NO.	Frequency [MHz]	Reading [dBμV]	Factor [dB]	Level [dBm]	Limit [dBm]	Margin [dB]	Height [cm]	Angle [°]	Polarity
1	1559.6800	65.31	-118.21	-52.90	-40.00	12.90	168	299	Horizontal
2	2339.5200	63.55	-115.29	-51.74	-13.00	38.74	179	44	Horizontal
3	3119.3600	54.97	-112.19	-57.22	-13.00	44.22	206	35	Horizontal
4	3899.2000	52.25	-110.43	-58.18	-13.00	45.18	341	16	Horizontal
5	4679.0400	50.59	-107.99	-57.40	-13.00	44.40	219	117	Horizontal
6	5458.8800	50.47	-106.48	-56.01	-13.00	43.01	351	323	Horizontal

Data List									
NO.	Frequency [MHz]	Reading [dBμV]	Factor [dB]	Level [dBm]	Limit [dBm]	Margin [dB]	Height [cm]	Angle [°]	Polarity
1	1559.6800	73.30	-118.21	-44.91	-40.00	4.91	216	210	Vertical
2	2339.5200	72.29	-115.29	-43.00	-13.00	30.00	165	42	Vertical
3	3119.3600	53.20	-112.19	-58.99	-13.00	45.99	308	100	Vertical
4	3899.2000	51.76	-110.43	-58.67	-13.00	45.67	168	8	Vertical
5	4679.0400	51.14	-107.99	-56.85	-13.00	43.85	195	3	Vertical
6	5458.8800	50.21	-106.48	-56.27	-13.00	43.27	214	311	Vertical



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-Documents.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) 8307 1443, or email: CN.Doccheck@sgs.com

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 www.sgs.com.cn
 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号厂房南楼 邮编: 215000 t (86-512) 62992980 sgs.china@sgs.com

4.3.1.12. Test Band = CAT-M1 Band 13_5MHz

4.3.1.12.1. Test Channel = High Channel

Data List									
NO.	Frequency [MHz]	Reading [dBμV]	Factor [dB]	Level [dBm]	Limit [dBm]	Margin [dB]	Height [cm]	Angle [°]	Polarity
1	1564.0000	69.22	-118.21	-48.99	-40.00	8.99	165	338	Horizontal
2	2346.0000	66.53	-115.28	-48.75	-13.00	35.75	102	213	Horizontal
3	3129.3600	54.35	-112.17	-57.82	-13.00	44.82	196	41	Horizontal
4	3896.0000	54.53	-110.44	-55.91	-13.00	42.91	215	275	Horizontal
5	4694.0400	51.48	-107.94	-56.46	-13.00	43.46	324	213	Horizontal
6	5476.3800	50.47	-106.46	-55.99	-13.00	42.99	157	203	Horizontal

Data List									
NO.	Frequency [MHz]	Reading [dBμV]	Factor [dB]	Level [dBm]	Limit [dBm]	Margin [dB]	Height [cm]	Angle [°]	Polarity
1	1564.0000	73.48	-118.21	-44.73	-40.00	4.73	165	355	Vertical
2	2347.0200	70.94	-115.27	-44.33	-13.00	31.33	178	360	Vertical
3	3129.3600	56.97	-112.17	-55.20	-13.00	42.20	196	127	Vertical
4	3911.7000	52.17	-110.40	-58.23	-13.00	45.23	246	46	Vertical
5	4694.0400	51.90	-107.94	-56.04	-13.00	43.04	306	3	Vertical
6	5476.3800	50.83	-106.46	-55.63	-13.00	42.63	197	328	Vertical



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-Documents.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.

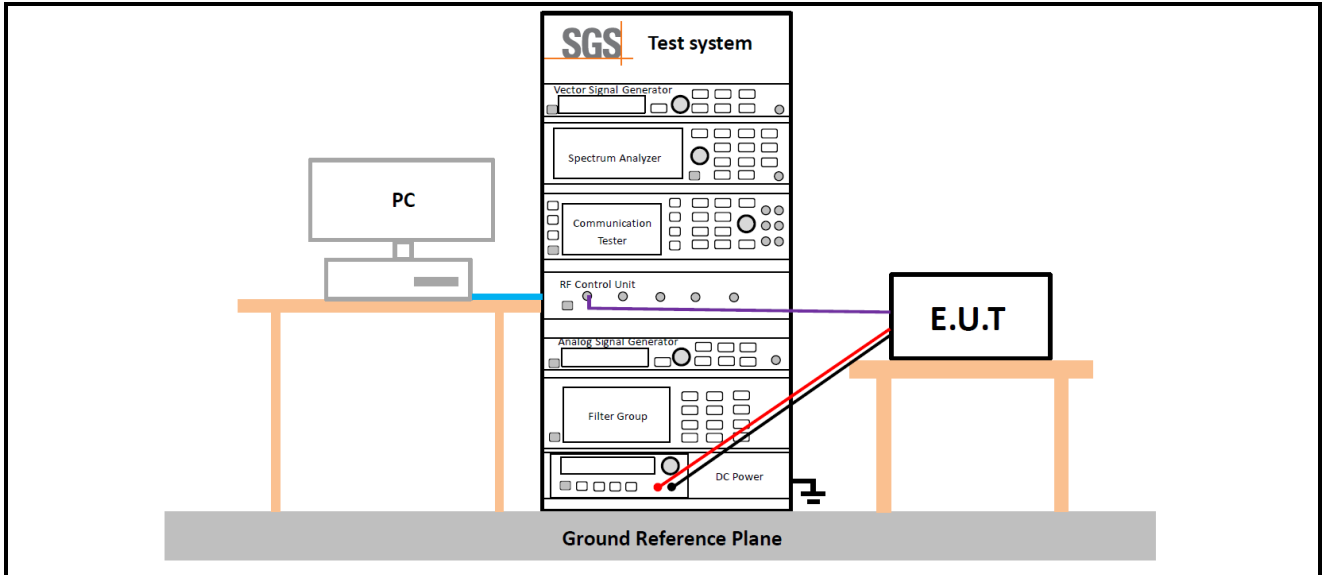
Attention: To check the authenticity of testing/inspection report & certificate, please contact us at telephone: (86-755) 8307 1443, or email: CN.Doccheck@sgs.com

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号厂房南楼 邮编: 215000

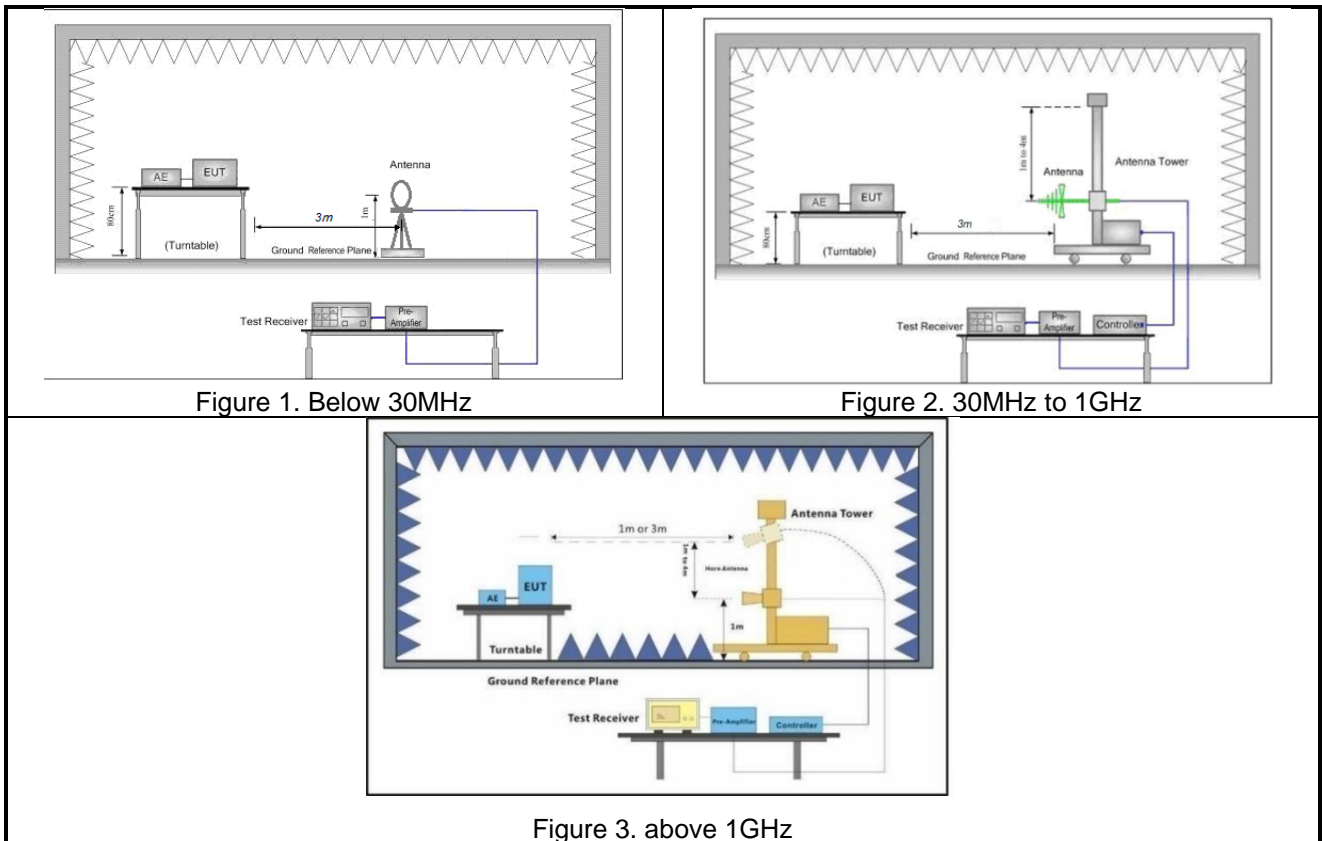
t (86-512) 62992980 www.sgs.com.cn
 t (86-512) 62992980 sgs.china@sgs.com

4.4 Test Setups

4.4.1 Test Setup 1



4.4.2 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 format documents, subject to Terms and Conditions for Electronic Documents at <http://www.sgs.com/en/Terms-and-Conditions/Terms-e-Documents.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) 8307 1443, or email: CN.Doccheck@sgs.com

4.5 Test Conditions

Test Case		Test Conditions	
Transmit Output Power Data	Average Power, Total	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	LTE/TM1;LTE/TM2;
Field Strength of Spurious Radiation		Test Environment	Ambient Climate & Rated Voltage
		Test Setup	Test Setup 2
		Test Mode	LTE/TM1;LTE/TM2;
		RF Channels (TX)	L, M, H (L= low channel, M= middle channel, H= high channel)



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-Documents.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) 8307 1443, or email: CN.Doccheck@sgs.com

5 Main Test Instruments

RF Test Equipment					
Equipment	Manufacturer	Model No.	Inventory No.	Cal Date	Cal Due Date
Shielding Room	Brilliant-emc	N/A	SUWI-04-01-06	2021-05-08	2024-05-07
Temperature and humidity meter	MingGao	TH101B	SUWI-01-01-07	2021-02-20	2022-02-19
Signal Analyzer	ROHDE&SCHWARZ	FSV3030	SUWI-01-02-02	2021-02-20	2022-02-19
DC Power Supply	HYELEC	HY3005B	SUWI-01-18-01	2021-02-20	2022-02-19
Measurement Software	Tonscend	JS1120-3 Test System V 2.6.88.0336	SUWI-02-09-09	NCR	NCR
Wideband Radio Communication Tester	ROHDE&SCHWARZ	CMW500	SUWI-01-16-05	2021-02-20	2022-02-19



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-Documents.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) 8307 1443, or email: CN.Doccheck@sgs.com

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

South of No. 6 Plant, No. 1, Runsheng Road, Suzhou Industrial Park, Suzhou Area, China (Jiangsu) Pilot Free Trade Zone 215000
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号厂房南楼 邮编: 215000

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

RE Test Equipment					
Equipment	Manufacturer	Model No.	Inventory No.	Cal Date	Cal Due Date
Semi-Anechoic Chamber	Brilliant-emc	N/A	SUWI-04-02-01	2021-05-08	2024-05-07
Temperature and humidity meter	MingGao	TH101B	SUWI-01-01-05	2021-02-20	2022-02-19
Signal Analyzer	ROHDE&SCHWARZ	FSW43	SUWI-01-02-04	2021-05-28	2022-05-27
Test receiver	ROHDE&SCHWARZ	ESR7	SUWI-01-10-01	2021-02-20	2022-02-19
Receiving antenna	SCHWRZBECK MESS-ELEKTRONIK	VULB 9163	SUWI-01-11-01	2021-05-16	2024-05-15
Receiving antenna	SCHWRZBECK MESS-ELEKTRONIK	BBHA 9120D	SUWI-01-11-02	2021-05-16	2022-05-15
Receiving antenna	SCHWRZBECK MESS-ELEKTRONIK	BBHA 9170	SUWI-01-11-03	2021-05-14	2022-05-13
Amplifier	Tonscend	TAP9K3G40	SUWI-01-14-01	2021-02-20	2022-02-19
Amplifier	Tonscend	TAP01018050	SUWI-01-14-02	2021-02-20	2022-02-19
Amplifier	Tonscend	TAP18040048	SUWI-01-14-03	2021-02-20	2022-02-19
Active Loop Antenna	SCHWRZBECK MESS-ELEKTRONIK	FMZB 1519B	SUWI-01-21-01	2021-06-10	2022-06-09
Temperature and humidity meter	MingGao	TH101B	SUWI-01-01-05	2021-02-20	2022-02-19
Measurement Software	Tonscend	JS32-RE	SUWI-02-09-04	NCR	NCR
		V3.0.0.3			
Wideband Radio Communication Tester	ROHDE&SCHWARZ	CMW500	SUWI-01-16-05	2021-02-20	2022-02-19



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-Documents.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) 8307 1443, or email: CN.Doccheck@sgs.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号厂房南楼 邮编: 215000

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

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	Radiated Emission	± 3.13dB (9k -30MHz)
		± 4.8dB (30M -1GHz)
		± 4.8dB (1GHz to 18GHz)
		± 4.8dB (Above 18GHz)



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-Documents.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) 8307 1443, or email: CN.Doccheck@sgs.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号厂房南楼 邮编: 215000

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



Report No.: SUHR/2021/A001201

Rev.: 01

Page: 44 of 44

7 Appendixes

Appendix A.1	WWAN Setup Photos
--------------	-------------------

The End



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-Documents.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) 8307 1443, or email: CN.Doccheck@sgs.com

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

South of No. 6 Plant, No. 1, Runsheng Road, Suzhou Industrial Park, Suzhou Area, China (Jiangsu) Pilot Free Trade Zone 215000
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号厂房南楼 邮编: 215000

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