

Report No.: KSCR220800158701

Page: 1 of 108

# TEST REPORT

**Application No.:** KSCR2208001587AT **FCC ID:** 2APV2-CSC6C1H3

Applicant: Hangzhou Ezviz Software Co., Ltd.

Address of Applicant: Room 302, Unit B, Building 2,399 Danfeng Road, Binjiang

District, Hangzhou, Zhejiang

**Manufacturer:** Hangzhou Ezviz Software Co., Ltd.

Address of Manufacturer: Room 302, Unit B, Building 2,399 Danfeng Road, Binjiang

District, Hangzhou, Zhejiang

**Equipment Under Test (EUT):** 

**EUT Name:** Smart Home Camera

Model No.: CS-C6c; CS-C6c (3WF,4mm); CS-C6c-R100-1H3WF ♣

Please refer to section 2 of this report which indicates which model was

actually tested and which were electrically identical.

Trade Mark: EZVIZ

Standard(s): 47 CFR Part 15, Subpart C 15.247

**Date of Receipt:** 2022-09-01

**Date of Test:** 2022-09-03 to 2022-09-08

**Date of Issue:** 2022-09-08

Test Result: Pass\*

Eric Lin Laboratory Manager

Fra Lin



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 <a href="http://www.sgs.com/en/Terms-and-Conditions.aspx">http://www.sgs.com/en/Terms-and-Conditions.aspx</a> and, for electronic format documents, subject to Terms and Conditions for Electronic Documents at <a href="http://www.sgs.com/en/Terms-and-Conditions/Terms-e-Document.aspx">http://www.sgs.com/en/Terms-and-Conditions/Terms-e-Document.aspx</a>. Attention is drawn to the limitation of liability, indemnification and jurisdiction issued 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@dsc.com.

No.10, Weiye Road, Innovation Park, Kunshan, Jiangsu, China 215300 (186-512)57355888 (186-512)57370818 www.sggroup.com.cn 中国・江苏・昆山市留学生创业园伟业路10号 邮编 215300 (186-512)57355888 (186-512)57370818 sgs.china@sgs.com

<sup>\*</sup> In the configuration tested, the EUT complied with the standards specified above.



Report No.: KSCR220800158701

Page: 2 of 108

Revision Record					
Version	Description	Date	Remark		
00	Original	2022-09-08	/		

Authorized for issue by:		
	Paun. Liu	
	Pawn.Liu/Project Engineer	-
	Eric fri	
	Eric Lin /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 <a href="http://www.sgs.com/en/Terms-and-Conditions.aspx">http://www.sgs.com/en/Terms-and-Conditions/Terms



Report No.: KSCR220800158701

Page: 3 of 108

## 2 Test Summary

Radio Spectrum Technical Requirement					
Item Standard Method Requirement Re					
Antenna Requirement	47 CFR Part 15, Subpart C 15.247	N/A	47 CFR Part 15, Subpart C 15.203 & 15.247(b)(4)	Pass	

Radio Spectrum Matter Part					
Item	Standard	Method	Requirement	Result	
Conducted Emissions at AC Power Line (150kHz-30MHz)		ANSI C63.10 (2013) Section 6.2	47 CFR Part 15, Subpart C 15.207	Pass	
Conducted Average Output Power		ANSI C63.10 (2013) Section 11.9.2	47 CFR Part 15, Subpart C 15.247(b)(3)	Pass	
Minimum 6dB Bandwidth		ANSI C63.10 (2013) Section 11.8.1	47 CFR Part 15, Subpart C 15.247a(2)	Pass	
Power Spectrum Density		ANSI C63.10 (2013) Section 11.10.2	47 CFR Part 15, Subpart C 15.247(e)	Pass	
Conducted Band Edges Measurement	47 CFR Part 15, Subpart C 15.247	ANSI C63.10 (2013) Section 11.13.3.2	47 CFR Part 15, Subpart C 15.247(d)	Pass	
Conducted Spurious Emissions		ANSI C63.10 (2013) Section 11.11	47 CFR Part 15, Subpart C 15.247(d)	Pass	
Radiated Emissions which fall in the restricted bands		ANSI C63.10 (2013) Section 6.10.5	47 CFR Part 15, Subpart C 15.205 & 15.209	Pass	
Radiated Spurious Emissions Below 1GHz		ANSI C63.10 (2013) Section 6.4,6.5	47 CFR Part 15, Subpart C 15.205 & 15.209	Pass	
Radiated Spurious Emissions Above 1GHz		ANSI C63.10 (2013) Section 6.6	47 CFR Part 15, Subpart C 15.205 & 15.209	Pass	

Note: There are series models mentioned in this report and they are identical on circuitry design, PCB layout, electrical components used, internal wiring and functions. Only the model CS-C6c (3WF,4mm) was tested since their differences are model number.



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 <a href="http://www.sgs.com/en/Terms-and-Conditions.aspx">http://www.sgs.com/en/Terms-and-Conditions/Terms-a-Documents, subject to Terms and Conditions for Electronic Documents at <a href="http://www.sgs.com/en/Terms-and-Conditions/Terms-a-Document.aspx">http://www.sgs.com/en/Terms-and-Conditions/Terms-a-Document.aspx</a>. 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: (86-75) 83071443, or email: CN.Doccheck@sas.com

No.10, Weiye Road, Innovation Park, Kunshan, Jiangsu, China 215300 中国・江苏・昆山市留学生创业园伟业路10号 邮编 215300



Report No.: KSCR220800158701

Page: 4 of 108

### 3 Contents

			age
1	COV	/ER PAGE	1
2	TES	T SUMMARY	3
3	CON	ITENTS	2
4	GEN	IERAL INFORMATION	
	4.1	DETAILS OF E.U.T.	
	4.2	POWER LEVEL SETTING USING IN TEST:	
	4.3	ENVIRONMENT PARAMETER	
	4.4	DESCRIPTION OF SUPPORT UNITS	
	4.5	MEASUREMENT UNCERTAINTY	
	4.6	TEST LOCATION	
	4.7 4.8	TEST FACILITY  DEVIATION FROM STANDARDS	
	4.0 4.9	ABNORMALITIES FROM STANDARD CONDITIONS	
5	EQU	IIPMENT LIST	9
_	DAD	NO SPECTRUM TECUNICAL PEQUIPEMENT	41
6	KAD	NO SPECTRUM TECHNICAL REQUIREMENT	
	6.1	ANTENNA REQUIREMENT	
	6.1.1		
	6.1.2	2 Conclusion	10
7	RAD	NO SPECTRUM MATTER TEST RESULTS	11
	7.1	CONDUCTED EMISSIONS AT AC POWER LINE (150kHz-30MHz)	11
	7.1.1		
	7.1.2	·	
	7.1.3	·	
	7.1.4		
	7.2	CONDUCTED AVERAGE OUTPUT POWER	
	7.2.1		
	7.2.2	? Test Mode Description	15
	7.2.3		
	7.2.4		
	7.3	MINIMUM 6DB BANDWIDTH	
	7.3.1	•	
	7.3.2	•	
	7.3.3	, •	
	7.3.4		
	7.4	POWER SPECTRUM DENSITY	
	7.4.1		
	7.4.2	•	
	7.4.3	3 Test Setup Diagram	78



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 <a href="http://www.sgs.com/en/Terms-and-Conditions.aspx">http://www.sgs.com/en/Terms-and-Conditions/Terms



Report No.: KSCR220800158701

Page: 5 of 108

7.4.4	Measurement Procedure and Data	18
7.5	CONDUCTED BAND EDGES MEASUREMENT	19
7.5.1	E.U.T. Operation	19
7.5.2	Test Mode Description	19
7.5.3	Test Setup Diagram	20
7.5.4	Measurement Procedure and Data	20
7.6	CONDUCTED SPURIOUS EMISSIONS	21
7.6.1	E.U.T. Operation	21
7.6.2	Test Mode Description	21
7.6.3	Test Setup Diagram	22
7.6.4	Measurement Procedure and Data	22
7.7	RADIATED EMISSIONS WHICH FALL IN THE RESTRICTED BANDS	23
7.7.1	E.U.T. Operation	23
7.7.2	Test Mode Description	23
7.7.3	Test Setup Diagram	
7.7.4	Measurement Procedure and Data	
7.8	RADIATED SPURIOUS EMISSIONS BELOW 1GHz	
7.8.1	E.U.T. Operation	
7.8.2	Test Mode Description	
7.8.3	Test Setup Diagram	
7.8.4	Measurement Procedure and Data	
7.9	RADIATED SPURIOUS EMISSIONS ABOVE 1GHz	
7.9.1	E.U.T. Operation	
7.9.2	Test Mode Description	
7.9.3	Test Setup Diagram	
7.9.4	Measurement Procedure and Data	44
8 TEST	SETUP PHOTO	63
9 EUT (	CONSTRUCTIONAL DETAILS (EUT PHOTOS)	63
10 APPE	ENDIX	64



8

9

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 <a href="http://www.sgs.com/en/Terms-and-Conditions.aspx">http://www.sgs.com/en/Terms-and-Conditions/Terms



Report No.: KSCR220800158701

Page: 6 of 108

### **General Information**

#### 4.1 Details of E.U.T.

Power supply:	DC 5V,1A,5W MAX
Operation Frequency:	802.11b/g/n(HT20): 2412MHz to 2462MHz
Modulation Type:	802.11b: DSSS (CCK, DQPSK, DBPSK);802.11g/n: OFDM (64QAM, 16QAM, QPSK, BPSK)
Number of Channels:	802.11b/g/n(HT20):11
Channel Spacing:	5MHz
Antenna Type:	PCB Antenna
Antenna Gain:	3.83dBi (Provided by the manufacturer)
Test Voltage:	AC 120V/60Hz

4.2 Power level setting using in test:

<u> </u>					
Oh ammal	802.11b	802.11g	802.11n(HT20)		
Channel	Ant 1	Ant 1	Ant 1		
1	Default	Default	Default		
6	Default	Default	Default		
11	Default	Default	Default		

### 4.3 Environment Parameter

Environment Parameter		Selected \	/alues During Te	sts
Relative Humidity		Ambient		
Value		Temperature(°C) Voltage(V)		Voltage(V)
NTNV		25		AC 120
Note:				
NV:Normal Voltage	LV:Low Extreme Test Vo	ltage	HV:High Extren	ne Test Voltage
NT:Normal Temperature LT:Low Extreme Test Te		mperature HT:High Extreme Test Temperatu		ne Test Temperature

### 4.4 Description of Support Units

Description	Manufacturer	Manufacturer Model No.	
Notebook	LENOVO	LENOVO K27	
SecureCRT	VanDyke	V 6.2.0	1
Serial port adapter plate	1	Test Plate 3	1
Adapter	Mingxin	MX15U-050300UU	1



Unless otherwise agreed in writing, this document is issued by the Company subject to its General Conditions of Service printed overleaf, available on request or accessible at <a href="http://www.sgs.com/en/Terms-and-Conditions.aspx">http://www.sgs.com/en/Terms-and-Conditions/Terms

No.10, Weiye Road, Innovation Park, Kunshan, Jiangsu, China 215300 t(86-512)57355888 f(86-512)57370818 www.sgsgroup.com.cn

中国・江苏・昆山市留学生创业园伟业路10号 邮编 215300

t(86-512)57355888 f(86-512)57370818 sgs.china@sgs.com



Report No.: KSCR220800158701

Page: 7 of 108

### 4.5 Measurement Uncertainty

No.	Item	Measurement Uncertainty
1	Radio Frequency	8.4 x 10 <sup>-8</sup>
2	Timeout	2s
3	Duty Cycle	0.37%
4	Occupied Bandwidth	3%
5	RF Conducted Power	0.6dB
6	RF Power Density	2.9dB
7	Conducted Spurious Emissions	0.75dB
8	RF Radiated Power	5.2dB (Below 1GHz)
0	Kr Kadialed Fowel	5.9dB (Above 1GHz)
		4.2dB (Below 30MHz)
9	Radiated Spurious Emission Test	4.5dB (30MHz-1GHz)
9		5.1dB (1GHz-18GHz)
		5.4dB (Above 18GHz)
10	Temperature Test	1°C
11	Humidity Test	3%
12	Supply Voltages	1.5%
13	Time	3%

Note: The measurement uncertainty represents an expanded uncertainty expressed at approximately the 95% confidence level using a coverage factor of k=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 <a href="http://www.sgs.com/en/Terms-and-Conditions.aspx">http://www.sgs.com/en/Terms-and-Conditions/Terms

No.10, Weiye Road, Innovation Park, Kunshan, Jiangsu, China 215300 中国・江苏・昆山市留学生创业园伟业路10号 邮编 215300



Report No.: KSCR220800158701

Page: 8 of 108

#### 4.6 Test Location

All tests were performed at:

Compliance Certification Services (Kunshan) Inc.

No.10 Weiye Rd, Innovation park, Eco&Tec, Development Zone, Kunshan City, Jiangsu, China.

Tel: +86 512 5735 5888 Fax: +86 512 5737 0818

No tests were sub-contracted.

Note:

- 1. SGS is not responsible for wrong test results due to incorrect information (e.g., max. internal working frequency, antenna gain, cable loss, etc) is provided by the applicant. (If applicable).
- 2. SGS is not responsible for the authenticity, integrity and the validity of the conclusion based on results of the data provided by applicant. (If applicable).

### 4.7 Test Facility

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

#### CNAS

Compliance Certification Services (Kunshan) Inc. is accredited by the China National Accreditation Service for Conformity Assessment (CNAS). Registration No. CNAS L4354

#### A2LA

Compliance Certification Services (Kunshan) Inc. is accredited by the American Association for Laboratory Accreditation (A2LA). Certificate No. 2541.01.

#### • FCC

Compliance Certification Services (Kunshan) Inc. has been recognized as an accredited testing laboratory. Designation Number: CN1172.

#### • ISED

Compliance Certification Services (Kunshan) Inc. has been recognized by Innovation, Science and Economic Development Canada (ISED) as an accredited testing laboratory. Company Number: 2324E

#### VCCI

The 3m and 10m Semi-anechoic chamber and Shielded Room of Compliance Certification Services (Kunshan) Inc. has been registered in accordance with the Regulations for Voluntary Control Measures with Registration No.: R-20134, R-11600, C-11707, T-11499, G-10216 respectively.

#### 4.8 Deviation from Standards

None

#### 4.9 Abnormalities from Standard Conditions

None



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 <a href="http://www.sgs.com/en/Terms-and-Conditions.aspx">http://www.sgs.com/en/Terms-and-Conditions.aspx</a> and, for electronic format documents, subject to Terms and Conditions for Electronic Documents at <a href="http://www.sgs.com/en/Terms-and-Conditions/Terms-e-Document.aspx">http://www.sgs.com/en/Terms-and-Conditions/Terms-e-Document.aspx</a>. Attention is drawn to the limitation of liability, indemnification and jurisdiction issues defined therein. Any holder of this document is advised that information contained hereon reflects the Company's findings at the time of its intervention only and within the limits of Client's instructions, if any. The Company's sole responsibility is to its Client and this document does not exonerate parties to a transaction from exercising all their rights and obligations under the transaction document. 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.

No.10, Weiye Road, Innovation Park, Kunshan, Jiangsu, China 215300 中国・江苏・昆山市留学生创业园伟业路10号 邮编 215300



Report No.: KSCR220800158701

Page: 9 of 108

# 5 Equipment List

Item	Equipment	Manufacturer	Model	Inventory No	Cal Date	Cal. Due Date	
Condu	Conducted Emission at Mains Terminals (150kHz-30MHz)						
1	EMI Test Receive	R&S	ESCI	KS301101	01/22/2022	01/21/2023	
2	LISN	R&S	ENV216	KS301197	01/22/2022	01/21/2023	
3	LISN	Schwarzbeck	NNLK 8129	KS301091	01/22/2022	01/21/2023	
4	Pulse Limiter	R&S	ESH3-Z2	KUS1902E001	01/22/2022	01/21/2023	
5	CE test Cable	Thermax	1	CZ301102	11/14/2021	11/13/2022	
6	Test Software	Farad	EZ-EMC	/	N.C.R	N.C.R	
RF Co	nducted Test						
1	Spectrum Analyzer	Keysight	N9020A	KUS1911E004-2	08/22/2022	08/21/2023	
2	Spectrum Analyzer	Keysight	N9020A	KUS2001M001-2	08/22/2022	08/21/2023	
3	Spectrum Analyzer	Keysight	N9030B	KSEM021-1	01/22/2022	01/21/2023	
4	Signal Generator	R&S	SMW200A	KSEM020-1	08/22/2022	08/21/2023	
5	Signal Generator	Agilent	N5182A	KUS2001M001-1	08/22/2022	08/21/2023	
6	Radio Communication Test Station	Anritsu	MT8000A	KSEM001-1	08/22/2022	08/21/2023	
7	Radio Communication Analyzer	Anritsu	MT8821C	KSEM002-1	04/01/2022	03/31/2023	
8	Universal Radio Communication Tester	R&S	CMW500	KUS1911E004-1	08/22/2022	08/21/2023	
9	Switcher	CCSRF	FY562	KUS2001M001-3	08/22/2022	08/21/2023	
10	AC Power Source	EXTECH	6605	KS301178	N.C.R	N.C.R	
11	DC Power Supply	Aglient	E3632A	KS301180	N.C.R	N.C.R	
12	Conducted Test Cable	Thermax	RF01-RF04	CZ301111- CZ301120	01/16/2022	01/15/2023	
13	Temp. / Humidity Chamber	TERCHY	MHK-120AK	KS301190	04/01/2021	03/31/2023	
14	Temperature & Humidity Recorder	Renke Control	RS-WS-N01-6J	KSEM024-5	04/14/2022	04/13/2023	
15	Software	BST	TST-PASS	1	N/A	N/A	
RF Ra	diated Test						
1	Spectrum Analyzer	R&S	FSV40	KUS1806E003	08/22/2022	08/21/2023	
2	Universal Radio Communication Tester	R&S	CMW500	KSEM009-1	04/01/2022	03/31/2023	
3	Signal Generator	Agilent	E8257C	KS301066	08/22/2022	08/21/2023	
4	Loop Antenna	COM-POWER	AL-130R	KUS1806E001	04/13/2021	04/12/2023	
5	Bilog Antenna	TESEQ	CBL 6112D	KUS1806E005	06/29/2021	06/28/2023	
6	Bilog Antenna	SCHWARZBECK	VULB9160	CZ301016	04/13/2021	04/12/2024	
7	Horn-antenna(1-18GHz)	Schwarzbeck	BBHA9120D	KS301079	04/02/2022	04/01/2024	
8	Horn-antenna(1-18GHz)	ETS-LINDGREN	3117	KS301186	02/22/2021	02/21/2023	
9	Horn Antenna(18-40GHz)	Schwarzbeck	BBHA9170	CZ301058	03/17/2022	03/16/2023	
10	Amplifier(30MHz~18GHz)	PANSHAN TECHNOLOGY	LNA:1~18G	KSEM010-1	01/22/2022	01/21/2023	
11	Amplifier(18~40GHz)	COM-POWER	PAM-840A	KUS1710E001	01/22/2022	01/21/2023	
12	RE Test Cable	REBES MICROWAVE	1	CZ301097	11/14/2021	11/13/2022	
13	Temperature & Humidity Recorder	Renke Control	RS-WS-N01-6J	KSEM024-4	01/04/2022	31/03/2023	
14	Software	Faratronic	EZ_EMC-v 3A1	/	N/A	N/A	



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 <a href="http://www.sgs.com/en/Terms-and-Conditions.aspx">http://www.sgs.com/en/Terms-and-Conditions/Terms

No.10, Weiye Road, Innovation Park, Kunshan, Jiangsu, China 215300 中国・江苏・昆山市留学生创业园伟业路10号 邮编 215300



Report No.: KSCR220800158701

Page: 10 of 108

## 6 Radio Spectrum Technical Requirement

### 6.1 Antenna Requirement

### 6.1.1 Test Requirement:

47 CFR Part 15, Subpart C 15.203 & 15.247(b)(4)

#### 6.1.2 Conclusion

#### Standard Requirement:

An intentional radiator shall be designed to ensure that no antenna other than that furnished by the responsible party shall be used with the device. The use of a permanently attached antenna or of an antenna that uses a unique coupling to the intentional radiator, the manufacturer may design the unit so that a broken antenna can be replaced by the user, but the use of a standard antenna jack or electrical connector is prohibited.

#### 15.247(b) (4) requirement:

The conducted output power limit specified in paragraph (b) of this section is based on the use of antennas with directional gains that do not exceed 6 dBi. Except as shown in paragraph (c) of this section, if transmitting antennas of directional gain greater than 6 dBi are used, the conducted output power from the intentional radiator shall be reduced below the stated values in paragraphs (b)(1), (b)(2), and (b)(3) of this section, as appropriate, by the amount in dB that the directional gain of the antenna exceeds 6 dBi.

#### EUT Antenna:

The antenna is PCB Antenna on the main PCB and no consideration of replacement. The best case gain of the antenna is 3.83 dBi.

Antenna location: Refer to internal photo.



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 <a href="http://www.sgs.com/en/Terms-and-Conditions.aspx">http://www.sgs.com/en/Terms-and-Conditions/Terms

No.10, Weiye Road, Innovation Park, Kunshan, Jiangsu, China 215300 中国・江苏・昆山市留学生创业园伟业路10号 邮编 215300



Report No.: KSCR220800158701

Page: 11 of 108

## 7 Radio Spectrum Matter Test Results

### 7.1 Conducted Emissions at AC Power Line (150kHz-30MHz)

Test Requirement 47 CFR Part 15, Subpart C 15.207 Test Method: ANSI C63.10 (2013) Section 6.2

#### Limit:

Frequency of	Conducted limit(dBμV)				
emission(MHz)	Quasi-peak	Average			
0.15-0.5	66 to 56*	56 to 46*			
0.5-5	56	46			
5-30	60	50			
*Decreases with the logarithm of the frequency.					
Detector: Peak for pre-scan (9k	Hz resolution bandwidth) 0.15M	to 30MHz			

### 7.1.1 E.U.T. Operation

Operating Environment:

Temperature: 24.3 °C Humidity: 41.8 % RH Atmospheric Pressure: 1010 mbar

#### 7.1.2 Test Mode Description

Pre-scan / Final test	Mode Code	Description
Final test	00	TX mode_Keep the EUT in continuously transmitting mode with all modulation types. All data rates for each modulation type have been tested and found the data rate @ 1Mbps is the worst case of IEEE 802.11b; data rate @ 6Mbps is the worst case of IEEE 802.11g; data rate @ 6.5Mbps is the worst case of IEEE 802.11n(HT20); final test modes are considering the modulation and worse data rates. Only the data of worst case is recorded in the 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 <a href="http://www.sgs.com/en/Terms-and-Conditions.aspx">http://www.sgs.com/en/Terms-and-Conditions/Terms-a-Documents, subject to Terms and Conditions for Electronic Documents at <a href="http://www.sgs.com/en/Terms-and-Conditions/Terms-a-Document.aspx">http://www.sgs.com/en/Terms-and-Conditions/Terms-a-Document.aspx</a>. 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.

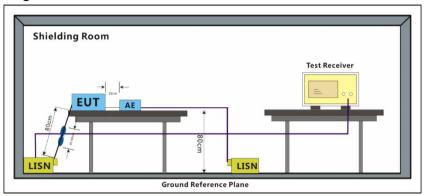
Attention: To check the authenticity of testing /inspection report & certificate, please contact us at telephone: (86-75) 83071443, or email: CN.Doccheck@sas.com



Report No.: KSCR220800158701

Page: 12 of 108

#### 7.1.3 Test Setup Diagram



#### 7.1.4 Measurement Procedure and Data

- 1) The mains terminal disturbance voltage test was conducted in a shielded room.
- 2) The EUT was connected to AC power source through a LISN 1 (Line Impedance Stabilization Network) which provides a  $50 \text{ohm}/50 \mu\text{H} + 5 \text{ohm}$  linear impedance. The power cables of all other units of the EUT were connected to a second LISN 2, which was bonded to the ground reference plane in the same way as the LISN 1 for the unit being measured. A multiple socket outlet strip was used to connect multiple power cables to a single LISN provided the rating of the LISN was not exceeded.
- 3) The tabletop EUT was placed upon a non-metallic table 0.8m above the ground reference plane. And for floor-standing arrangement, the EUT was placed on the horizontal ground reference plane.
- 4) The test was performed with a vertical ground reference plane. The rear of the EUT shall be 0.4 m from the vertical ground reference plane. The vertical ground reference plane was bonded to the horizontal ground reference plane. The LISN 1 was placed 0.8 m from the boundary of the unit under test and bonded to a ground reference plane for LISNs mounted on top of the ground reference plane. This distance was between the closest points of the LISN 1 and the EUT. All other units of the EUT and associated equipment was at least 0.8 m from the LISN 2.
- 5) In order to find the maximum emission, the relative positions of equipment and all of the interface cables must be changed according to ANSI C63.10 on conducted measurement.

Remark: Level=Read Level+ Cable Loss+ LISN Factor



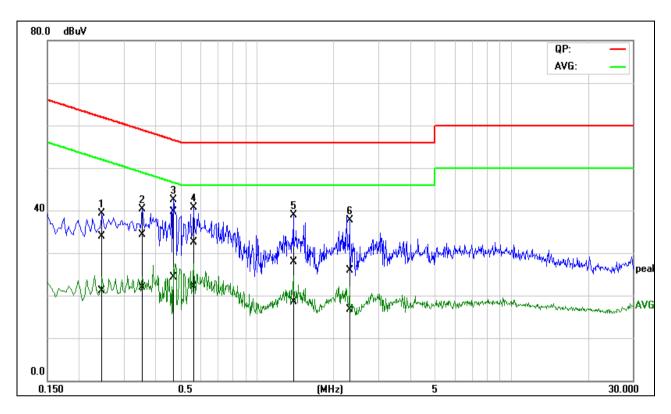
Unless otherwise agreed in writing, this document is issued by the Company subject to its General Conditions of Service printed overleaf, available on request or accessible at <a href="http://www.sgs.com/en/Terms-and-Conditions.aspx">http://www.sgs.com/en/Terms-and-Conditions/Terms



Report No.: KSCR220800158701

Page: 13 of 108

Test Mode: 00; Line: Live line



No.	Frequency	QuasiPeak	Average	Correction	QuasiPeak	Average	QuasiPeak	Average	QuasiPeak	Average	Remark
		reading	reading	factor	result	result	limit	limit	margin	margin	
	(MHz)	(dBuV)	(dBuV)	(dB)	(dBuV)	(dBuV)	(dBuV)	(dBuV)	(dB)	(dB)	
1	0.2473	14.42	1.55	19.50	33.92	21.05	61.85	51.85	-27.93	-30.80	Pass
2	0.3547	14.85	2.32	19.52	34.37	21.84	58.85	48.85	-24.48	-27.01	Pass
3*	0.4691	20.06	4.71	19.55	39.61	24.26	56.53	46.53	-16.92	-22.27	Pass
4	0.5589	12.95	2.46	19.56	32.51	22.02	56.00	46.00	-23.49	-23.98	Pass
5	1.3757	8.35	-1.17	19.62	27.97	18.45	56.00	46.00	-28.03	-27.55	Pass
6	2.2848	6.30	-2.88	19.67	25.97	16.79	56.00	46.00	-30.03	-29.21	Pass



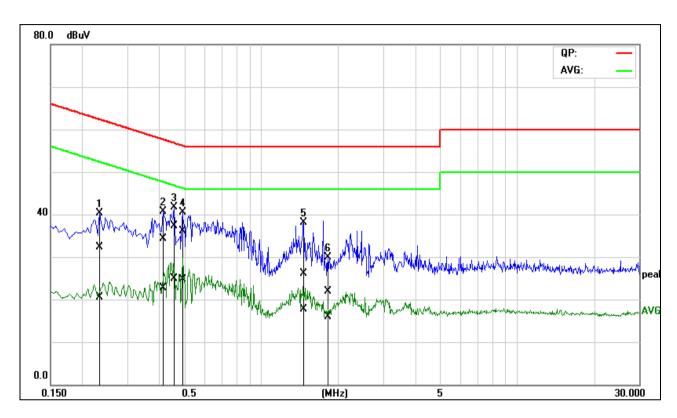
Unless otherwise agreed in writing, this document is issued by the Company subject to its General Conditions of Service printed overleaf, available on request or accessible at <a href="http://www.sgs.com/en/Terms-and-Conditions.aspx">http://www.sgs.com/en/Terms-and-Conditions/Terms

No.10, Weiye Road, Innovation Park, Kunshan, Jiangsu, China 215300 中国・江苏・昆山市留学生创业园伟业路10号 邮编 215300



Report No.: KSCR220800158701

Page: 14 of 108



No.	Frequency	QuasiPeak	Average	Correction	QuasiPeak	Average	QuasiPeak	Average	QuasiPeak	Average	Remark
		reading	reading	factor	result	result	limit	limit	margin	margin	
	(MHz)	(dBuV)	(dBuV)	(dB)	(dBuV)	(dBuV)	(dBuV)	(dBuV)	(dB)	(dB)	
1	0.2347	12.75	1.04	19.49	32.24	20.53	62.28	52.28	-30.04	-31.75	Pass
2	0.4108	14.84	3.21	19.54	34.38	22.75	57.63	47.63	-23.25	-24.88	Pass
3*	0.4576	17.75	5.34	19.55	37.30	24.89	56.74	46.74	-19.44	-21.85	Pass
4	0.4968	16.55	5.07	19.56	36.11	24.63	56.05	46.05	-19.94	-21.42	Pass
5	1.4417	6.50	-2.01	19.62	26.12	17.61	56.00	46.00	-29.88	-28.39	Pass
6	1.7952	2.27	-3.70	19.64	21.91	15.94	56.00	46.00	-34.09	-30.06	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 <a href="http://www.sgs.com/en/Terms-and-Conditions.aspx">http://www.sgs.com/en/Terms-and-Conditions/Terms

No.10, Weiye Road, Innovation Park, Kunshan, Jiangsu, China 215300 中国・江苏・昆山市留学生创业园伟业路10号 邮编 215300



Report No.: KSCR220800158701

Page: 15 of 108

### 7.2 Conducted Average Output Power

Test Requirement 47 CFR Part 15, Subpart C 15.247(b)(3)
Test Method: ANSI C63.10 (2013) Section 11.9.2

Limit:

Frequency range(MHz)	Output power of the intentional radiator(watt)
	1 for ≥50 hopping channels
902-928	0.25 for 25≤ hopping channels <50
	1 for digital modulation
	1 for ≥75 non-overlapping hopping channels
2400-2483.5	0.125 for all other frequency hopping systems
	1 for digital modulation
5725-5850	1 for frequency hopping systems and digital modulation

### 7.2.1 E.U.T. Operation

Operating Environment:

Temperature: 24.2 °C Humidity: 41.7 % RH Atmospheric Pressure: 1010 mbar

### 7.2.2 Test Mode Description

Pre-scan / Final test	Mode Code	Description				
Final test	00	TX mode_Keep the EUT in continuously transmitting mode with all modulation types. All data rates for each modulation type have been tested and found the data rate @ 1Mbps is the worst case of IEEE 802.11b; data rate @ 6Mbps is the worst case of IEEE 802.11g; data rate @ 6.5Mbps is the worst case of IEEE 802.11n(HT20); final test modes are considering the modulation and worse data rates. Only the data of worst case is recorded in the report.				



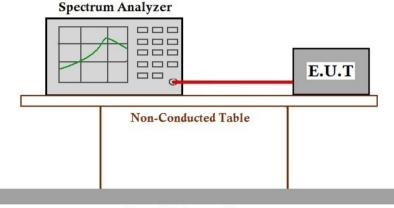
Unless otherwise agreed in writing, this document is issued by the Company subject to its General Conditions of Service printed overleaf, available on request or accessible at <a href="http://www.sgs.com/en/Terms-and-Conditions.aspx">http://www.sgs.com/en/Terms-and-Conditions/Terms



Report No.: KSCR220800158701

Page: 16 of 108

#### 7.2.3 Test Setup Diagram



**Ground Reference Plane** 

#### 7.2.4 Measurement Procedure and Data

Note: Since the verify power the same operating range bandwidth and smaller power can be covered by the higher power.

Please Refer to Appendix for Details



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 <a href="http://www.sgs.com/en/Terms-and-Conditions.aspx">http://www.sgs.com/en/Terms-and-Conditions/Terms



Report No.: KSCR220800158701

Page: 17 of 108

#### 7.3 Minimum 6dB Bandwidth

Test Requirement 47 CFR Part 15, Subpart C 15.247a(2)
Test Method: ANSI C63.10 (2013) Section 11.8.1

Limit:

≥500 kHz

### 7.3.1 E.U.T. Operation

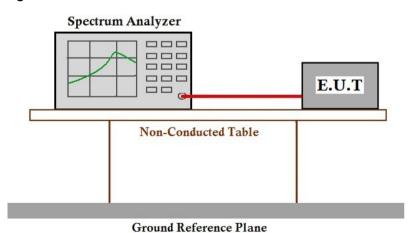
Operating Environment:

Temperature: 24.3 °C Humidity: 41.8 % RH Atmospheric Pressure: 1010 mbar

#### 7.3.2 Test Mode Description

Pre-scan / Final test	Mode Code	Description
Final test	00	TX mode_Keep the EUT in continuously transmitting mode with all modulation types. All data rates for each modulation type have been tested and found the data rate @ 1Mbps is the worst case of IEEE 802.11b; data rate @ 6Mbps is the worst case of IEEE 802.11g; data rate @ 6.5Mbps is the worst case of IEEE 802.11n(HT20); final test modes are considering the modulation and worse data rates. Only the data of worst case is recorded in the report.

#### 7.3.3 Test Setup Diagram



#### 7.3.4 Measurement Procedure and Data

Please Refer to Appendix for Details



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 <a href="http://www.sgs.com/en/Terms-and-Conditions.aspx">http://www.sgs.com/en/Terms-and-Conditions/Terms-a-Documents, subject to Terms and Conditions for Electronic Documents at <a href="http://www.sgs.com/en/Terms-and-Conditions/Terms-a-Document.aspx">http://www.sgs.com/en/Terms-and-Conditions/Terms-a-Document.aspx</a>. 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: (86-75) 83071443, or email: CN.Doccheck@sas.com

No.10, Weiye Road, Innovation Park, Kunshan, Jiangsu, China 215300 中国・江苏・昆山市留学生创业园伟业路10号 邮编 215300



Report No.: KSCR220800158701

Page: 18 of 108

### 7.4 Power Spectrum Density

Test Requirement 47 CFR Part 15, Subpart C 15.247(e)
Test Method: ANSI C63.10 (2013) Section 11.10.2

Limit:

≤8dBm in any 3 kHz band during any time interval of continuous transmission

#### 7.4.1 E.U.T. Operation

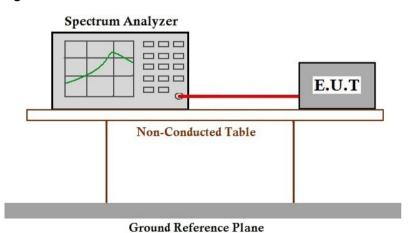
Operating Environment:

Temperature: 24.3 °C Humidity: 41.7 % RH Atmospheric Pressure: 1010 mbar

#### 7.4.2 Test Mode Description

Pre-scan / Final test	Mode Code	Description
Final test	00	TX mode_Keep the EUT in continuously transmitting mode with all modulation types. All data rates for each modulation type have been tested and found the data rate @ 1Mbps is the worst case of IEEE 802.11b; data rate @ 6Mbps is the worst case of IEEE 802.11g; data rate @ 6.5Mbps is the worst case of IEEE 802.11n(HT20); final test modes are considering the modulation and worse data rates. Only the data of worst case is recorded in the report.

#### 7.4.3 Test Setup Diagram



#### 7.4.4 Measurement Procedure and Data

Please Refer to Appendix for Details



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 <a href="http://www.sgs.com/en/Terms-and-Conditions.aspx">http://www.sgs.com/en/Terms-and-Conditions/Terms-a-Documents, subject to Terms and Conditions for Electronic Documents at <a href="http://www.sgs.com/en/Terms-and-Conditions/Terms-a-Document.aspx">http://www.sgs.com/en/Terms-and-Conditions/Terms-a-Document.aspx</a>. 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: (86-75) 83071443, or email: CN.Doccheck@sas.com

No.10, Weiye Road, Innovation Park, Kunshan, Jiangsu, China 215300 中国・江苏・昆山市留学生创业园伟业路10号 邮编 215300



Report No.: KSCR220800158701

Page: 19 of 108

### 7.5 Conducted Band Edges Measurement

Test Requirement 47 CFR Part 15, Subpart C 15.247(d)
Test Method: ANSI C63.10 (2013) Section 11.13.3.2

#### Limit:

In any 100 kHz bandwidth outside the frequency band in which the spread spectrum or digitally modulated intentional radiator is operating, the radio frequency power that is produced by the intentional radiator shall be at least 20 dB below that in the 100 kHz bandwidth within the band that contains the highest level of the desired power, based on either an RF conducted or a radiated measurement, provided the transmitter demonstrates compliance with the peak conducted power limits. If the transmitter complies with the conducted power limits based on the use of RMS averaging over a time interval, as permitted under paragraph (b)(3) of this section, the attenuation required under this paragraph shall be 30 dB instead of 20 dB. Attenuation below the general limits specified in §15.209(a) is not required. In addition, radiated emissions which fall in the restricted bands, as defined in §15.205(a), must also comply with the radiated emission limits specified in §15.209(a) (see §15.205(c).

### 7.5.1 E.U.T. Operation

Operating Environment:

Temperature: 24.3 °C Humidity: 41.7 % RH Atmospheric Pressure: 1010 mbar

#### 7.5.2 Test Mode Description

Pre-scan / Final test	Mode Code	Description					
Final test	00	TX mode_Keep the EUT in continuously transmitting mode with all modulation types. All data rates for each modulation type have been tested and found the data rate @ 1Mbps is the worst case of IEEE 802.11b; data rate @ 6Mbps is the worst case of IEEE 802.11g; data rate @ 6.5Mbps is the worst case of IEEE 802.11n(HT20); final test modes are considering the modulation and worse data rates. Only the data of worst case is recorded in the report.					



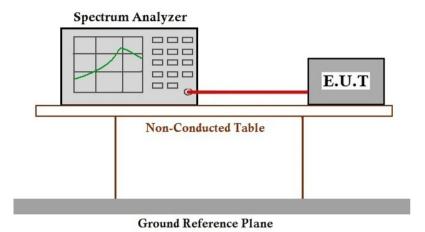
Unless otherwise agreed in writing, this document is issued by the Company subject to its General Conditions of Service printed overleaf, available on request or accessible at <a href="http://www.sgs.com/en/Terms-and-Conditions.aspx">http://www.sgs.com/en/Terms-and-Conditions/Terms



Report No.: KSCR220800158701

Page: 20 of 108

#### 7.5.3 Test Setup Diagram



#### 7.5.4 Measurement Procedure and Data

Please Refer to Appendix for Details



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 <a href="http://www.sgs.com/en/Terms-and-Conditions.aspx">http://www.sgs.com/en/Terms-and-Conditions/Terms



Report No.: KSCR220800158701

Page: 21 of 108

### 7.6 Conducted Spurious Emissions

Test Requirement 47 CFR Part 15, Subpart C 15.247(d)
Test Method: ANSI C63.10 (2013) Section 11.11

#### Limit:

In any 100 kHz bandwidth outside the frequency band in which the spread spectrum or digitally modulated intentional radiator is operating, the radio frequency power that is produced by the intentional radiator shall be at least 20 dB below that in the 100 kHz bandwidth within the band that contains the highest level of the desired power, based on either an RF conducted or a radiated measurement, provided the transmitter demonstrates compliance with the peak conducted power limits. If the transmitter complies with the conducted power limits based on the use of RMS averaging over a time interval, as permitted under paragraph (b)(3) of this section, the attenuation required under this paragraph shall be 30 dB instead of 20 dB. Attenuation below the general limits specified in §15.209(a) is not required. In addition, radiated emissions which fall in the restricted bands, as defined in §15.205(a), must also comply with the radiated emission limits specified in §15.209(a) (see §15.205(c).

### 7.6.1 E.U.T. Operation

Operating Environment:

Temperature: 24.3 °C Humidity: 41.7 % RH Atmospheric Pressure: 1010 mbar

#### 7.6.2 Test Mode Description

Pre-scan / Final test	Mode Code	Description				
Final test	00	TX mode_Keep the EUT in continuously transmitting mode with all modulation types. All data rates for each modulation type have been tested and found the data rate @ 1Mbps is the worst case of IEEE 802.11b; data rate @ 6Mbps is the worst case of IEEE 802.11g; data rate @ 6.5Mbps is the worst case of IEEE 802.11n(HT20); final test modes are considering the modulation and worse data rates. Only the data of worst case is recorded in the 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 <a href="http://www.sgs.com/en/Terms-and-Conditions.aspx">http://www.sgs.com/en/Terms-and-Conditions/Terms

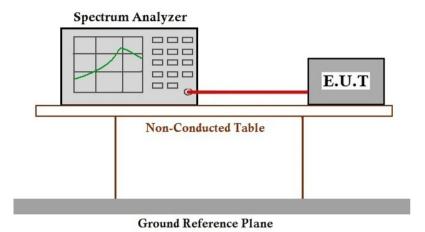
No.10, Weiye Road, Innovation Park, Kunshan, Jiangsu, China 215300 中国・江苏・昆山市留学生创业园伟业路10号 邮编 215300



Report No.: KSCR220800158701

Page: 22 of 108

#### 7.6.3 Test Setup Diagram



#### 7.6.4 Measurement Procedure and Data

Please Refer to Appendix for Details



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 <a href="http://www.sgs.com/en/Terms-and-Conditions.aspx">http://www.sgs.com/en/Terms-and-Conditions/Terms



Report No.: KSCR220800158701

Page: 23 of 108

#### 7.7 Radiated Emissions which fall in the restricted bands

Test Requirement 47 CFR Part 15, Subpart C 15.205 & 15.209

Test Method: ANSI C63.10 (2013) Section 6.10.5

#### Limit:

Frequency(MHz)	Field strength(microvolts/meter)	Measurement distance(meters)
0.009-0.490	2400/F(kHz)	300
0.490-1.705	24000/F(kHz)	30
1.705-30.0	30	30
30-88	100	3
88-216	150	3
216-960	200	3
Above 960	500	3

Remark: The emission limits shown in the above table are based on measurements employing a CISPR quasi-peak detector except for the frequency bands 9-90kHz, 110-490kHz and above 1000 MHz. Radiated emission limits in these three bands are based on measurements employing an average detector, the peak field strength of any emission shall not exceed the maximum permitted average limits specified above by more than 20 dB under any condition of modulation.

### 7.7.1 E.U.T. Operation

Operating Environment:

Temperature: 25 °C Humidity: 50 % RH Atmospheric Pressure: 1010 mbar

### 7.7.2 Test Mode Description

Pre-scan / Final test	Mode Code	Description					
Final test	00	TX mode_Keep the EUT in continuously transmitting mode with all modulation types. All data rates for each modulation type have been tested and found the data rate @ 1Mbps is the worst case of IEEE 802.11b; data rate @ 6Mbps is the worst case of IEEE 802.11g; data rate @ 6.5Mbps is the worst case of IEEE 802.11n(HT20); final test modes are considering the modulation and worse data rates. Only the data of worst case is recorded in the 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 <a href="http://www.sgs.com/en/Terms-and-Conditions.aspx">http://www.sgs.com/en/Terms-and-Conditions/Terms

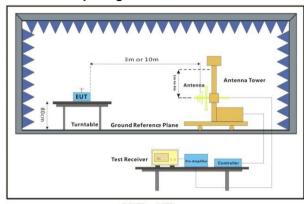
No.10, Weiye Road, Innovation Park, Kunshan, Jiangsu, China 215300 中国・江苏・昆山市留学生创业园伟业路10号 邮编 215300

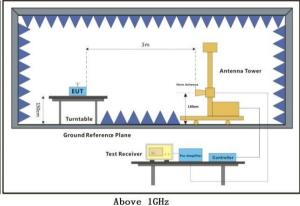


Report No.: KSCR220800158701

Page: 24 of 108

### 7.7.3 Test Setup Diagram





30MHz-1GHz





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 <a href="http://www.sgs.com/en/Terms-and-Conditions.aspx">http://www.sgs.com/en/Terms-and-Conditions/Terms



Report No.: KSCR220800158701

Page: 25 of 108

#### 7.7.4 Measurement Procedure and Data

- a. For below 1GHz, the EUT was placed on the top of a rotating table 0.8 meters above the ground at a 3 or 10 meter semi-anechoic chamber. The table was rotated 360 degrees to determine the position of the highest radiation.
- b. For above 1GHz, the EUT was placed on the top of a rotating table 1.5 meters above the ground at a 3 meter fully-anechoic chamber. The table was rotated 360 degrees to determine the position of the highest radiation.
- c. The EUT was set 3 or 10 meters away from the interference-receiving antenna, which was mounted on the top of a variable-height antenna tower.
- d. The antenna height is varied from one meter to four meters above the ground to determine the maximum value of the field strength. Both horizontal and vertical polarizations of the antenna are set to make the measurement.
- e. For each suspected emission, the EUT was arranged to its worst case and then the antenna was tuned to heights from 1 meter to 4 meters (for the test frequency of below 30MHz, the antenna was tuned to heights 1 meter) and the rotatable table was turned from 0 degrees to 360 degrees to find the maximum reading.
- f. The test-receiver system was set to Peak Detect Function and Specified Bandwidth with Maximum Hold Mode.
- g. If the emission level of the EUT in peak mode was 10dB lower than the limit specified, then testing could be stopped and the peak values of the EUT would be reported. Otherwise the emissions that did not have 10dB margin would be re-tested one by one using peak, quasi-peak or average method as specified and then reported in a data sheet.
- h. Test the EUT in the lowest channel, the middle channel, the Highest channel.
- i. The radiation measurements are performed in X, Y, Z axis positioning for Transmitting mode, and found the X axis positioning which it is the worst case.
- j. Repeat above procedures until all frequencies measured was complete.
- Remark 1: Level= Read Level+ Cable Loss+ Antenna Factor- Preamp Factor
- Remark 2: For frequencies above 1GHz, the field strength limits are based on average limits. However, the peak field strength of any emission shall not exceed the maximum permitted average limits specified above by more than 20 dB under any condition of modulation. For the emissions whose peak level is lower than the average limit, only the peak measurement is shown in the 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 <a href="http://www.sgs.com/en/Terms-and-Conditions.aspx">http://www.sgs.com/en/Terms-and-Conditions/Terms

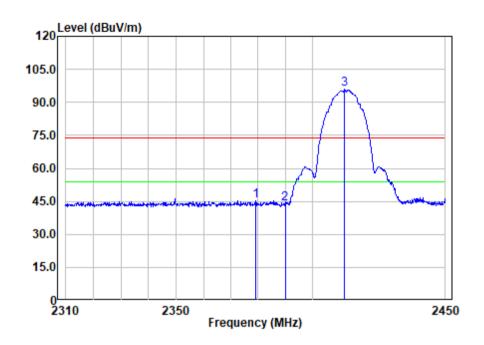
No.10, Weiye Road, Innovation Park, Kunshan, Jiangsu, China 215300 中国・江苏・昆山市留学生创业园伟业路10号 邮编 215300



Report No.: KSCR220800158701

Page: 26 of 108

Test Mode: 00; Polarity: Horizontal; Modulation:802.11b; Bandwidth:20MHz; Channel:Low



		Cable	Ant	Read		Limit	0ver	
	Freq	Loss	Factor	Level	Level	Line	Limit	Remark
	MHz	dB	dB/m	dBuV	dBuV/m	dBuV/m	dB	
1	2379.020	5.68	26.71	55.92	45.39	74.00	-28.61	Peak
2	2390.000	5.69	26.73	54.25	43.75	74.00	-30.25	Peak
3	2412.200	5.73	26.78	106.30	95.88	74.00	21.88	Peak



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 <a href="http://www.sgs.com/en/Terms-and-Conditions.aspx">http://www.sgs.com/en/Terms-and-Conditions/Terms

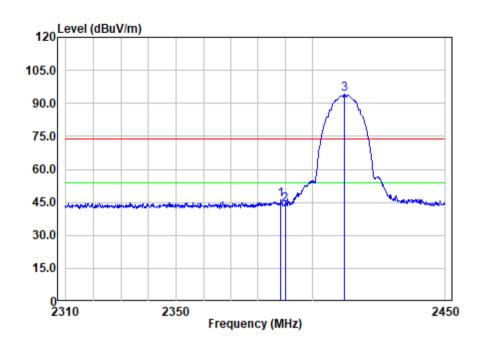
No.10, Weiye Road, Innovation Park, Kunshan, Jiangsu, China 215300 中国・江苏・昆山市留学生创业园伟业路10号 邮编 215300



Report No.: KSCR220800158701

Page: 27 of 108

Test Mode: 00; Polarity: Vertical; Modulation:802.11b; Bandwidth:20MHz; Channel:Low



	Cable	Ant	Read		Limit	0ver	
Freq	Loss	Factor	Level	Level	Line	Limit	Remark
-							
MHz	dB	dB/m	dBuV	dBuV/m	dBuV/m	dB	
2388.400	5.69	26.72	56.53	46.02	74.00	-27.98	Peak
2390.000	5.69	26.73	54.58	44.08	74.00	-29.92	Peak
2412.060	5.73	26.78	104.44	94.02	74.00	20.02	Peak
	MHz 2388.400 2390.000	Freq Loss  MHz dB 2388.400 5.69 2390.000 5.69	Hreq Loss Factor  MHz dB dB/m 2388.400 5.69 26.72 2390.000 5.69 26.73	Freq         Loss Factor         Level           MHz         dB         dB/m         dBuV           2388.400         5.69         26.72         56.53           2390.000         5.69         26.73         54.58	Freq         Loss Factor         Level         Level           MHz         dB         dB/m         dBuV dBuV/m           2388.400         5.69         26.72         56.53         46.02           2390.000         5.69         26.73         54.58         44.08	Freq         Loss Factor         Level         Level         Line           MHz         dB         dB/m         dBuV         dBuV/m         dBuV/m         dBuV/m           2388.400         5.69         26.72         56.53         46.02         74.00           2390.000         5.69         26.73         54.58         44.08         74.00	Cable   Ant   Read   Limit   Over



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 <a href="http://www.sgs.com/en/Terms-and-Conditions.aspx">http://www.sgs.com/en/Terms-and-Conditions/Terms

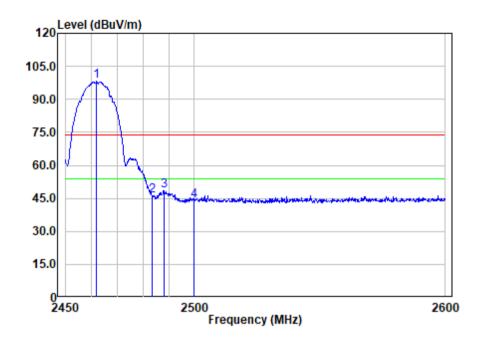
No.10, Weiye Road, Innovation Park, Kunshan, Jiangsu, China 215300 中国・江苏・昆山市留学生创业园伟业路10号 邮编 215300



Report No.: KSCR220800158701

Page: 28 of 108

Test Mode: 00; Polarity: Horizontal; Modulation:802.11b; Bandwidth:20MHz; Channel:High



		Cable	Ant	Read		Limit	0ver	
	Freq	Loss	Factor	Level	Level	Line	Limit	Remark
	MHZ	dB	dB/m	dBuV	dBuV/m	dBuV/m	dB	
1	2462.000	5.80	26.96	108.30	98.12	74.00	24.12	Peak
2	2483.500	5.83	27.04	56.42	46.35	74.00	-27.65	Peak
3	2488.250	5.83	27.06	58.42	48.37	74.00	-25.63	Peak
4	2500.000	5.85	27.10	54.13	44.14	74.00	-29.86	Peak



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 <a href="http://www.sgs.com/en/Terms-and-Conditions.aspx">http://www.sgs.com/en/Terms-and-Conditions/Terms

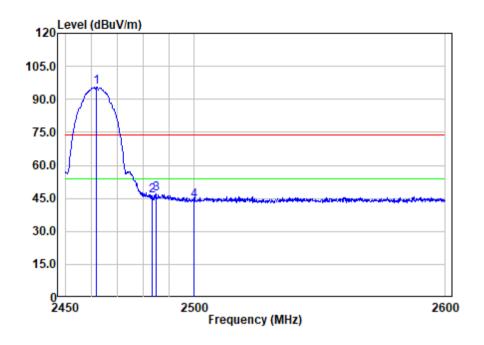
No.10, Weiye Road, Innovation Park, Kunshan, Jiangsu, China 215300 中国・江苏・昆山市留学生创业园伟业路10号 邮编 215300



Report No.: KSCR220800158701

Page: 29 of 108

Test Mode: 00; Polarity: Vertical; Modulation:802.11b; Bandwidth:20MHz; Channel:High



		Cable	Ant	Read		Limit	0ver	
	Freq	Loss	Factor	Level	Level	Line	Limit	Remark
	MHz	dB	dB/m	dBuV	dBuV/m	dBuV/m	——dB	
1	2462.150	5.80	26.96	105.92	95.74	74.00	21.74	Peak
2	2483.500	5.83	27.04	56.21	46.14	74.00	-27.86	Peak
3	2484.950	5.83	27.05	57.15	47.09	74.00	-26.91	Peak
4	2500.000	5.85	27.10	54.04	44.05	74.00	-29.95	Peak



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 <a href="http://www.sgs.com/en/Terms-and-Conditions.aspx">http://www.sgs.com/en/Terms-and-Conditions/Terms

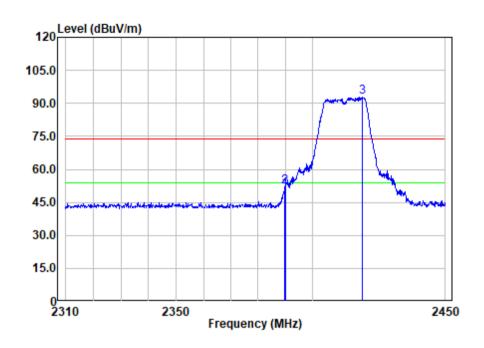
No.10, Weiye Road, Innovation Park, Kunshan, Jiangsu, China 215300 中国・江苏・昆山市留学生创业园伟业路10号 邮编 215300



Report No.: KSCR220800158701

Page: 30 of 108

Test Mode: 00; Polarity: Horizontal; Modulation:802.11g; Bandwidth:20MHz; Channel:Low



		Cable	Ant	Read		Limit	0ver	
	Freq	Loss	Factor	Level	Level	Line	Limit	Remark
	MHz	dB	dB/m	dBuV	dBuV/m	dBuV/m	dB	
1	2389.660	5.69	26.73	61.30	50.80	74.00	-23.20	Peak
2	2390.000	5.69	26.73	62.51	52.01	74.00	-21.99	Peak
3	2418.780	5.74	26.81	103.07	92.69	74.00	18.69	Peak



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 <a href="http://www.sgs.com/en/Terms-and-Conditions.aspx">http://www.sgs.com/en/Terms-and-Conditions/Terms

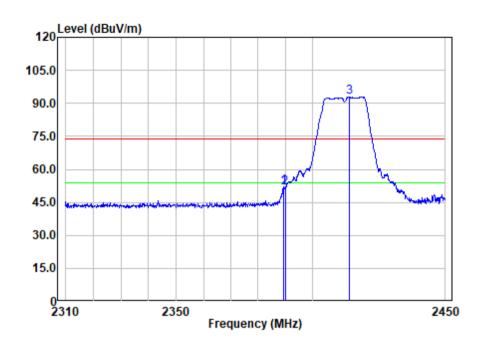
No.10, Weiye Road, Innovation Park, Kunshan, Jiangsu, China 215300 中国・江苏・昆山市留学生创业园伟业路10号 邮编 215300



Report No.: KSCR220800158701

Page: 31 of 108

Test Mode: 00; Polarity: Vertical; Modulation:802.11g; Bandwidth:20MHz; Channel:Low



	Cable	Ant	Read		Limit	0ver	
Freq	Loss	Factor	Level	Level	Line	Limit	Remark
_							
MHz	dB	dB/m	dBuV	dBuV/m	dBuV/m	dB	
2389.380	5.69	26.73	62.36	51.86	74.00	-22.14	Peak
2390.000	5.69	26.73	62.30	51.80	74.00	-22.20	Peak
2413.740	5.73	26.79	103.30	92.89	74.00	18.89	Peak
	MHz 2389.380 2390.000	Freq Loss  MHz dB 2389.380 5.69 2390.000 5.69	Hreq Loss Factor  MHz dB dB/m 2389.380 5.69 26.73 2390.000 5.69 26.73	Freq         Loss Factor         Level           MHz         dB         dB/m         dBuV           2389.380         5.69         26.73         62.36           2390.000         5.69         26.73         62.30	Freq         Loss Factor         Level         Level           MHz         dB         dB/m         dBuV dBuV/m           2389.380         5.69         26.73         62.36         51.86           2390.000         5.69         26.73         62.30         51.80	Freq         Loss Factor         Level         Level         Line           MHz         dB         dB/m         dBuV dBuV/m         dBuV/m         dBuV/m         dBuV/m         dBuV/m         2389.380         5.69         26.73         62.36         51.86         74.00	Cable   Ant   Read   Limit   Over



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 <a href="http://www.sgs.com/en/Terms-and-Conditions.aspx">http://www.sgs.com/en/Terms-and-Conditions/Terms

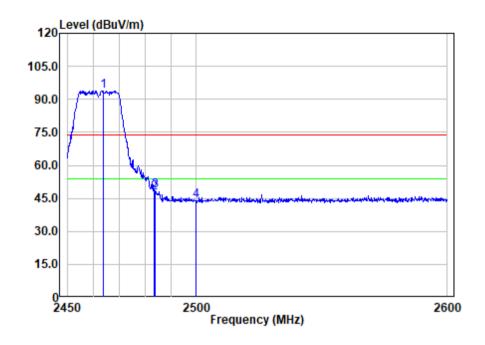
No.10, Weiye Road, Innovation Park, Kunshan, Jiangsu, China 215300 中国・江苏・昆山市留学生创业园伟业路10号 邮编 215300



Report No.: KSCR220800158701

Page: 32 of 108

Test Mode: 00; Polarity: Horizontal; Modulation:802.11g; Bandwidth:20MHz; Channel:High



		Cable	Ant	Read		Limit	0ver	
	Freq	Loss	Factor	Level	Level	Line	Limit	Remark
-					JD: 3//	JD: A//		
	MHZ	ав	aB/m	abuv	dBuV/m	aBuv/m	ав	
1	2463.950	5.80	26.97	104.06	93.89	74.00	19.89	Peak
2	2483.500	5.83	27.04	57.82	47.75	74.00	-26.25	Peak
3	2484.050	5.83	27.04	58.74	48.67	74.00	-25.33	Peak
4	2500.000	5.85	27.10	54.02	44.03	74.00	-29.97	Peak



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 <a href="http://www.sgs.com/en/Terms-and-Conditions.aspx">http://www.sgs.com/en/Terms-and-Conditions/Terms

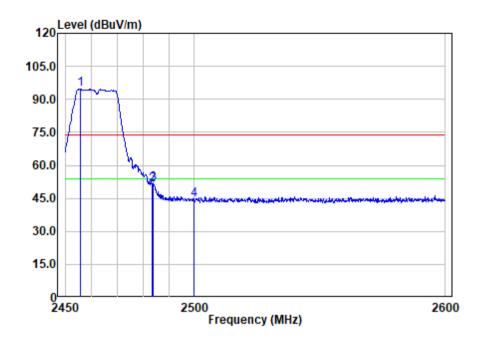
No.10, Weiye Road, Innovation Park, Kunshan, Jiangsu, China 215300 中国・江苏・昆山市留学生创业园伟业路10号 邮编 215300



Report No.: KSCR220800158701

Page: 33 of 108

Test Mode: 00; Polarity: Vertical; Modulation:802.11g; Bandwidth:20MHz; Channel:High



		Cable	Ant	Read		Limit	0ver	
	Freq	Loss	Factor	Level	Level	Line	Limit	Remark
	MHz	dB	dB/m	dBuV	dBuV/m	dBuV/m	dB	
1	2455.850	5.79	26.94	104.78	94.57	74.00	20.57	Peak
2	2483.500	5.83	27.04	61.38	51.31	74.00	-22.69	Peak
3	2483.900	5.83	27.04	61.85	51.78	74.00	-22.22	Peak
4	2500.000	5.85	27.10	54.41	44.42	74.00	-29.58	Peak



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 <a href="http://www.sgs.com/en/Terms-and-Conditions.aspx">http://www.sgs.com/en/Terms-and-Conditions/Terms

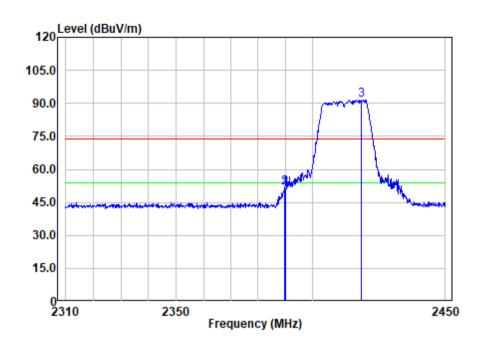
No.10, Weiye Road, Innovation Park, Kunshan, Jiangsu, China 215300 中国・江苏・昆山市留学生创业园伟业路10号 邮编 215300



Report No.: KSCR220800158701

Page: 34 of 108

Test Mode: 00; Polarity: Horizontal; Modulation:802.11n; Bandwidth:20MHz; Channel:Low



	Cable	Ant	Read		Limit	0ver	
Freq	Loss	Factor	Level	Level	Line	Limit	Remark
_							
MHz	dB	dB/m	dBuV	dBuV/m	dBuV/m	dB	
2389.660	5.69	26.73	61.77	51.27	74.00	-22.73	Peak
2390.000	5.69	26.73	62.00	51.50	74.00	-22.50	Peak
2418.500	5.73	26.81	101.96	91.57	74.00	17.57	Peak
	MHz 2389.660 2390.000	Freq Loss  MHz dB 2389.660 5.69 2390.000 5.69	MHz dB dB/m 2389.660 5.69 26.73 2390.000 5.69 26.73	Freq         Loss Factor         Level           MHz         dB         dB/m         dBuV           2389.660         5.69         26.73         61.77           2390.000         5.69         26.73         62.00	Freq         Loss Factor         Level         Level           MHz         dB         dB/m         dBuV dBuV/m           2389.660         5.69         26.73         61.77         51.27           2390.000         5.69         26.73         62.00         51.50	Freq         Loss Factor         Level         Level         Line           MHz         dB         dB/m         dBuV dBuV/m         dBuV/m           2389.660         5.69         26.73         61.77         51.27         74.00           2390.000         5.69         26.73         62.00         51.50         74.00	Cable   Ant   Read   Limit   Over



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 <a href="http://www.sgs.com/en/Terms-and-Conditions.aspx">http://www.sgs.com/en/Terms-and-Conditions/Terms

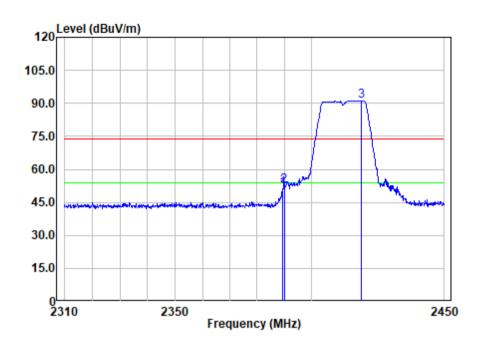
No.10, Weiye Road, Innovation Park, Kunshan, Jiangsu, China 215300 中国・江苏・昆山市留学生创业园伟业路10号 邮编 215300



Report No.: KSCR220800158701

Page: 35 of 108

Test Mode: 00; Polarity: Vertical; Modulation:802.11n; Bandwidth:20MHz; Channel:Low



	Cable	Ant	Read		Limit	0ver	
Freq	Loss	Factor	Level	Level	Line	Limit	Remark
_							
MHz	dB	dB/m	dBuV	dBuV/m	dBuV/m	dB	
2389.380	5.69	26.73	61.89	51.39	74.00	-22.61	Peak
2390.000	5.69	26.73	63.21	52.71	74.00	-21.29	Peak
2418.640	5.73	26.81	101.56	91.17	74.00	17.17	Peak
	MHz 2389.380 2390.000	Freq Loss  MHz dB 2389.380 5.69 2390.000 5.69	MHz dB dB/m 2389.380 5.69 26.73 2390.000 5.69 26.73	Freq         Loss Factor         Level           MHz         dB         dB/m         dBuV           2389.380         5.69         26.73         61.89           2390.000         5.69         26.73         63.21	Freq         Loss Factor         Level         Level           MHz         dB         dB/m         dBuV/m           2389.380         5.69         26.73         61.89         51.39           2390.000         5.69         26.73         63.21         52.71	Freq         Loss Factor         Level         Level         Line           MHz         dB         dB/m         dBuV         dBuV/m         dBuV/m         dBuV/m           2389.380         5.69         26.73         61.89         51.39         74.00           2390.000         5.69         26.73         63.21         52.71         74.00	Cable Ant Read Limit Over Loss Factor Level Level Line Limit           MHz         dB         dB/m         dBuV dBuV/m         dBuV/m         dB dB/m         dB dB/m <t< td=""></t<>



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 <a href="http://www.sgs.com/en/Terms-and-Conditions.aspx">http://www.sgs.com/en/Terms-and-Conditions/Terms

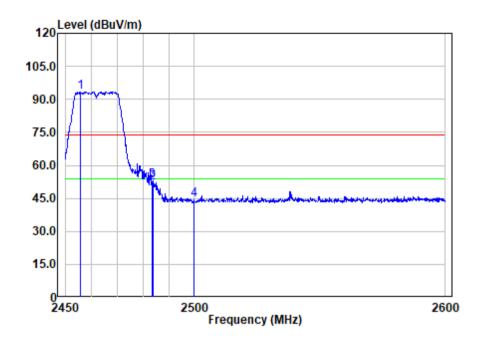
No.10, Weiye Road, Innovation Park, Kunshan, Jiangsu, China 215300 中国・江苏・昆山市留学生创业园伟业路10号 邮编 215300



Report No.: KSCR220800158701

Page: 36 of 108

Test Mode: 00; Polarity: Horizontal; Modulation:802.11n; Bandwidth:20MHz; Channel:High



		Cable	Ant	Read		Limit	0ver	
	Freq	Loss	Factor	Level	Level	Line	Limit	Remark
	MHz	dB	dB/m	dBuV	dBuV/m	dBuV/m	dB	
1	2456.000	5.79	26.94	103.65	93.44	74.00	19.44	Peak
2	2483.450	5.83	27.04	62.20	52.13	74.00	-21.87	Peak
3	2483.750	5.83	27.04	62.89	52.82	74.00	-21.18	Peak
4	2500.000	5.85	27.10	54.19	44.20	74.00	-29.80	Peak



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 <a href="http://www.sgs.com/en/Terms-and-Conditions.aspx">http://www.sgs.com/en/Terms-and-Conditions/Terms

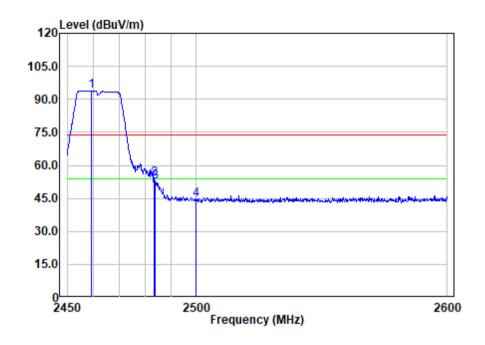
No.10, Weiye Road, Innovation Park, Kunshan, Jiangsu, China 215300 中国・江苏・昆山市留学生创业园伟业路10号 邮编 215300



Report No.: KSCR220800158701

Page: 37 of 108

Test Mode: 00; Polarity: Vertical; Modulation:802.11n; Bandwidth:20MHz; Channel:High



		Cable	Ant	Read		Limit	0ver	
	Freq	Loss	Factor	Level	Level	Line	Limit	Remark
	MHz	dB	dB/m	dBuV	dBuV/m	dBuV/m	——dB	
1	2459.150	5.79	26.95	104.15	93.95	74.00	19.95	Peak
2	2483.500	5.83	27.04	63.97	53.90	74.00	-20.10	Peak
3	2484.050	5.83	27.04	62.78	52.71	74.00	-21.29	Peak
4	2500.000	5.85	27.10	54.32	44.33	74.00	-29.67	Peak



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 <a href="http://www.sgs.com/en/Terms-and-Conditions.aspx">http://www.sgs.com/en/Terms-and-Conditions/Terms

No.10, Weiye Road, Innovation Park, Kunshan, Jiangsu, China 215300 中国・江苏・昆山市留学生创业园伟业路10号 邮编 215300



Report No.: KSCR220800158701

Page: 38 of 108

#### 7.8 Radiated Spurious Emissions Below 1GHz

Test Requirement 47 CFR Part 15, Subpart C 15.205 & 15.209

Test Method: ANSI C63.10 (2013) Section 6.4,6.5

#### Limit:

Frequency(MHz)	Field strength(microvolts/meter)	Measurement distance(meters)
0.009-0.490	2400/F(kHz)	300
0.490-1.705	24000/F(kHz)	30
1.705-30.0	30	30
30-88	100	3
88-216	150	3
216-960	200	3
960-1000	500	3

#### 7.8.1 E.U.T. Operation

Operating Environment:

Temperature: 25 °C Humidity: 50 % RH Atmospheric Pressure: 1010 mbar

#### 7.8.2 Test Mode Description

1.0.2 Test mode Description									
Pre-scan / Final test	Mode Code	Description							
Final test	00	TX mode_Keep the EUT in continuously transmitting mode with all modulation types. All data rates for each modulation type have been tested and found the data rate @ 1Mbps is the worst case of IEEE 802.11b; data rate @ 6Mbps is the worst case of IEEE 802.11g; data rate @ 6.5Mbps is the worst case of IEEE 802.11n(HT20); final test modes are considering the modulation and worse data rates. Only the data of worst case is recorded in the 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 <a href="http://www.sgs.com/en/Terms-and-Conditions.aspx">http://www.sgs.com/en/Terms-and-Conditions/Terms-a-Documents, subject to Terms and Conditions for Electronic Documents at <a href="http://www.sgs.com/en/Terms-and-Conditions/Terms-a-Document.aspx">http://www.sgs.com/en/Terms-and-Conditions/Terms-a-Document.aspx</a>. 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: (86-75) 83071443, or email: CN.Doccheck@sas.com

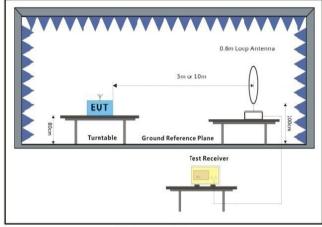
No.10, Weiye Road, Innovation Park, Kunshan, Jiangsu, China 215300 中国・江苏・昆山市留学生创业园伟业路10号 邮编 215300

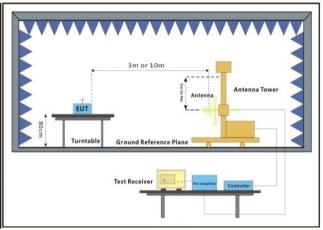


Report No.: KSCR220800158701

Page: 39 of 108

#### 7.8.3 Test Setup Diagram





Below 30MHz 30MHz-1GHz



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 <a href="http://www.sgs.com/en/Terms-and-Conditions.aspx">http://www.sgs.com/en/Terms-and-Conditions/Terms

No.10, Weiye Road, Innovation Park, Kunshan, Jiangsu, China 215300 中国・江苏・昆山市留学生创业园伟业路10号 邮编 215300



Report No.: KSCR220800158701

Page: 40 of 108

#### 7.8.4 Measurement Procedure and Data

- a. For below 1GHz, the EUT was placed on the top of a rotating table 0.8 meters above the ground at a 3 or 10 meter semi-anechoic chamber. The table was rotated 360 degrees to determine the position of the highest radiation.
- b. The EUT was set 3 or 10 meters away from the interference-receiving antenna, which was mounted on the top of a variable-height antenna tower.
- c. The antenna height is varied from one meter to four meters above the ground to determine the maximum value of the field strength. Both horizontal and vertical polarizations of the antenna are set to make the measurement.
- d. For each suspected emission, the EUT was arranged to its worst case and then the antenna was tuned to heights from 1 meter to 4 meters (for the test frequency of below 30MHz, the antenna was tuned to heights 1 meter) and the rotatable table was turned from 0 degrees to 360 degrees to find the maximum reading.
- e. The test-receiver system was set to Peak Detect Function and Specified Bandwidth with Maximum Hold Mode.
- f. If the emission level of the EUT in peak mode was 10dB lower than the limit specified, then testing could be stopped and the peak values of the EUT would be reported. Otherwise the emissions that did not have 10dB margin would be re-tested one by one using quasi-peak method as specified and then reported in a data sheet.
- g. Test the EUT in the lowest channel, the middle channel, the Highest channel.
- h. The radiation measurements are performed in X, Y, Z axis positioning for Transmitting mode, and found the X axis positioning which it is the worst case.
- i. Repeat above procedures until all frequencies measured was complete. Remark:
- 1. Level= Read Level+ Cable Loss+ Antenna Factor- Preamp Factor
- 2. Scan from 9kHz to 30MHz, the disturbance below 30MHz was very low. The points marked on above plots are the highest emissions could be found when testing, so only above points 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. The disturbance below 1GHz was very low and the harmonics were the highest point could be found when testing, so only the above harmonics had been displayed.



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 <a href="http://www.sgs.com/en/Terms-and-Conditions.aspx">http://www.sgs.com/en/Terms-and-Conditions/Terms

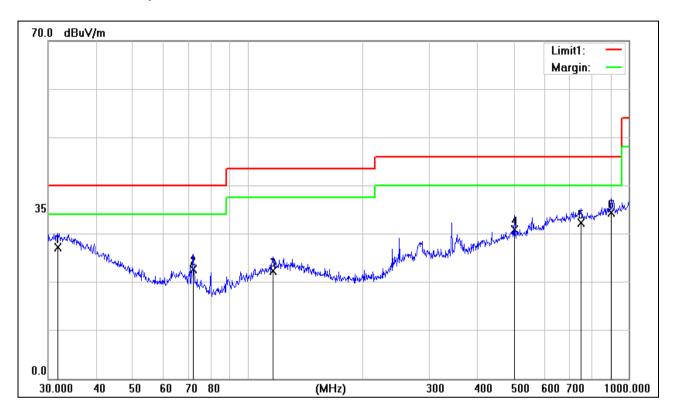
No.10, Weiye Road, Innovation Park, Kunshan, Jiangsu, China 215300 中国・江苏・昆山市留学生创业园伟业路10号 邮编 215300



Report No.: KSCR220800158701

Page: 41 of 108

Test Mode: 00; Polarity: Horizontal



No.	Frequency	Reading	Correct	Result	Limit	Margin	Height	Degree	Remark
	(MHz)	(dBuV)	Factor(dB/m)	(dBuV/m)	(dBuV/m)	(dB)	(cm)	(deg.)	
1	31.8427	2.02	25.16	27.18	40.00	-12.82	200	329	QP
2	72.0843	7.13	15.62	22.75	40.00	-17.25	200	0	QP
3	116.5401	3.20	19.16	22.36	43.50	-21.14	200	259	QP
4	501.1790	5.12	25.75	30.87	46.00	-15.13	100	264	QP
5	750.1083	29.93	2.36	32.29	46.00	-13.71	200	2	QP
6	900.1474	31.89	2.45	34.34	46.00	-11.66	200	191	QP



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 <a href="http://www.sgs.com/en/Terms-and-Conditions.aspx">http://www.sgs.com/en/Terms-and-Conditions/Terms

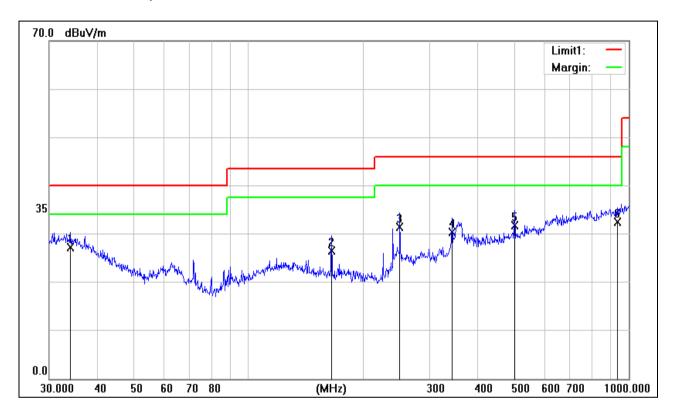
No.10, Weiye Road, Innovation Park, Kunshan, Jiangsu, China 215300 中国•江苏•昆山市留学生创业园伟业路10号 邮编 215300



Report No.: KSCR220800158701

Page: 42 of 108

Test Mode: 00; Polarity: Vertical



No.	Frequency	Reading	Correct	Result	Limit	Margin	Height	Degree	Remark
	(MHz)	(dBuV)	Factor(dB/m)	(dBuV/m)	(dBuV/m)	(dB)	(cm)	(deg.)	
1	34.0365	2.38	24.90	27.28	40.00	-12.72	100	155	QP
2	165.4867	9.38	17.21	26.59	43.50	-16.91	200	0	QP
3	250.3012	11.60	19.79	31.39	46.00	-14.61	200	68	QP
4	343.1800	8.75	21.61	30.36	46.00	-15.64	100	360	QP
5	501.1790	6.09	25.75	31.84	46.00	-14.16	200	8	QP
6	932.2715	3.32	29.06	32.38	46.00	-13.62	200	332	QP



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 <a href="http://www.sgs.com/en/Terms-and-Conditions.aspx">http://www.sgs.com/en/Terms-and-Conditions/Terms

No.10, Weiye Road, Innovation Park, Kunshan, Jiangsu, China 215300 中国・江苏・昆山市留学生创业园伟业路10号 邮编 215300



Report No.: KSCR220800158701

Page: 43 of 108

#### 7.9 Radiated Spurious Emissions Above 1GHz

Test Requirement 47 CFR Part 15, Subpart C 15.205 & 15.209

Test Method: ANSI C63.10 (2013) Section 6.6

#### Limit:

Frequency(MHz)	Field strength(microvolts/meter)	Measurement distance(meters)		
Above 1000	500	3		

#### 7.9.1 E.U.T. Operation

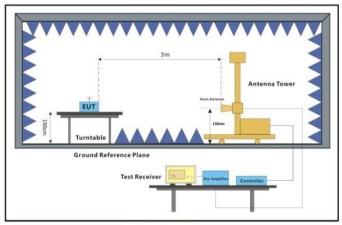
Operating Environment:

Temperature: 25 °C Humidity: 50 % RH Atmospheric Pressure: 1010 mbar

#### 7.9.2 Test Mode Description

Pre-scan / Final test	Mode Code	Description
Final test	00	TX mode_Keep the EUT in continuously transmitting mode with all modulation types. All data rates for each modulation type have been tested and found the data rate @ 1Mbps is the worst case of IEEE 802.11b; data rate @ 6Mbps is the worst case of IEEE 802.11g; data rate @ 6.5Mbps is the worst case of IEEE 802.11n(HT20); final test modes are considering the modulation and worse data rates. Only the data of worst case is recorded in the report.

#### 7.9.3 Test Setup Diagram



Above 1GHz



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 <a href="http://www.sgs.com/en/Terms-and-Conditions.aspx">http://www.sgs.com/en/Terms-and-Conditions/Terms

No.10, Weiye Road, Innovation Park, Kunshan, Jiangsu, China 215300 中国・江苏・昆山市留学生创业园伟业路10号 邮编 215300



Report No.: KSCR220800158701

Page: 44 of 108

#### 7.9.4 Measurement Procedure and Data

- a. For above 1GHz, the EUT was placed on the top of a rotating table 1.5 meters above the ground at a 3 meter fully-anechoic chamber. The table was rotated 360 degrees to determine the position of the highest radiation.
- b. The EUT was set 3 meters away from the interference-receiving antenna, which was mounted on the top of a variable-height antenna tower.
- c. The antenna height is varied from one meter to four meters above the ground to determine the maximum value of the field strength. Both horizontal and vertical polarizations of the antenna are set to make the measurement.
- d. For each suspected emission, the EUT was arranged to its worst case and then the antenna was tuned to heights from 1 meter to 4 meters (for the test frequency of below 30MHz, the antenna was tuned to heights 1 meter) and the rotatable table was turned from 0 degrees to 360 degrees to find the maximum reading.
- e. The test-receiver system was set to Peak Detect Function and Specified Bandwidth with Maximum Hold Mode.
- f. If the emission level of the EUT in peak mode was 10dB lower than the limit specified, then testing could be stopped and the peak values of the EUT would be reported. Otherwise the emissions that did not have 10dB margin would be re-tested one by one using peak or average method as specified and then reported in a data sheet.
- g. Test the EUT in the lowest channel, the middle channel, the Highest channel.
- h. The radiation measurements are performed in X, Y, Z axis positioning for Transmitting mode, and found the X axis positioning which it is the worst case.
- i. Repeat above procedures until all frequencies measured was complete. Remark:
- 1. Level= Read Level+ Cable Loss+ Antenna Factor- Preamp Factor
- 2. Scan from 1GHz to 25GHz, the disturbance above 18GHz was very low. The points marked on above plots are the highest emissions could be found when testing, so only above points 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. As shown in this section, for frequencies above 1GHz, the field strength limits are based on average limits. However, the peak field strength of any emission shall not exceed the maximum permitted average limits specified above by more than 20 dB under any condition of modulation. For the emissions whose peak level is lower than the average limit, only the peak measurement is shown in the 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 <a href="http://www.sgs.com/en/Terms-and-Conditions.aspx">http://www.sgs.com/en/Terms-and-Conditions/Terms

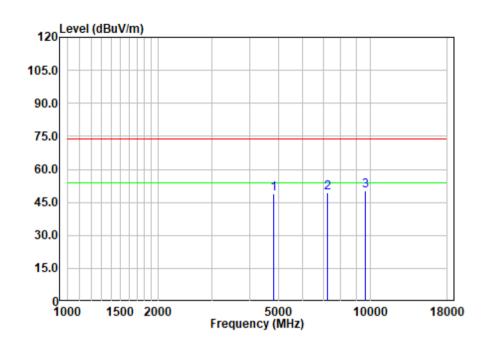
No.10, Weiye Road, Innovation Park, Kunshan, Jiangsu, China 215300 中国・江苏・昆山市留学生创业园伟业路10号 邮编 215300



Report No.: KSCR220800158701

Page: 45 of 108

Test Mode: 00; Polarity: Horizontal; Modulation:802.11b; Bandwidth:20MHz; Channel:Low



	Cable	Ant	Read		Limit	0ver	
Freq	Loss	Factor	Level	Level	Line	Limit	Remark
_							
MHz	dB	dB/m	dBuV	dBuV/m	dBuV/m	dB	
4824.000	8.13	34.18	48.72	48.79	74.00	-25.21	Peak
7236.000	10.37	35.44	46.36	49.56	74.00	-24.44	Peak
9648.000	12.32	36.96	43.18	50.14	74.00	-23.86	Peak
	MHz 4824.000 7236.000	Freq Loss  MHz dB  4824.000 8.13 7236.000 10.37	Freq         Loss Factor           MHz         dB         dB/m           4824.000         8.13         34.18           7236.000         10.37         35.44	Freq         Loss Factor         Level           MHz         dB         dB/m         dBuV           4824.000         8.13         34.18         48.72           7236.000         10.37         35.44         46.36	Freq         Loss Factor         Level         Level           MHz         dB         dB/m         dBuV dBuV/m           4824.000         8.13         34.18         48.72         48.79           7236.000         10.37         35.44         46.36         49.56	Freq         Loss Factor         Level         Level         Line           MHz         dB         dB/m         dBuV dBuV/m         dBuV/m           4824.000         8.13         34.18         48.72         48.79         74.00           7236.000         10.37         35.44         46.36         49.56         74.00	MHz         dB         Limit         Over Limit           4824.000         8.13         34.18         48.72         48.79         74.00         -25.21           7236.000         10.37         35.44         46.36         49.56         74.00         -24.44           9648.000         12.32         36.96         43.18         50.14         74.00         -23.86



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 <a href="http://www.sgs.com/en/Terms-and-Conditions.aspx">http://www.sgs.com/en/Terms-and-Conditions/Terms

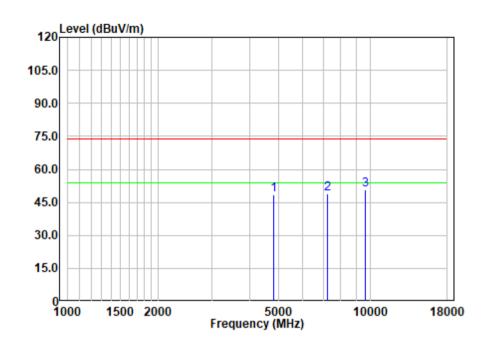
No.10, Weiye Road, Innovation Park, Kunshan, Jiangsu, China 215300 中国・江苏・昆山市留学生创业园伟业路10号 邮编 215300  $\begin{array}{lll} \mbox{t(86-512)57355888} & \mbox{f(86-512)57370818} & \mbox{www.sgsgroup.com.cn} \\ \mbox{t(86-512)57355888} & \mbox{f(86-512)57370818} & \mbox{sgs.china@sgs.com} \end{array}$ 



Report No.: KSCR220800158701

Page: 46 of 108

Test Mode: 00; Polarity: Vertical; Modulation:802.11b; Bandwidth:20MHz; Channel:Low



	Cable	Ant	Read		Limit	0ver	
Freq	Loss	Factor	Level	Level	Line	Limit	Remark
MHz	dB	dB/m	dBuV	dBuV/m	dBuV/m	dB	
4824.000	8.13	34.18	48.35	48.42	74.00	-25.58	Peak
7236.000	10.37	35.44	45.83	49.03	74.00	-24.97	Peak
9648.000	12.32	36.96	43.96	50.92	74.00	-23.08	Peak
	MHz 4824.000 7236.000	Freq Loss  MHz dB  4824.000 8.13 7236.000 10.37	Freq         Loss Factor           MHz         dB         dB/m           4824.000         8.13         34.18           7236.000         10.37         35.44	Freq         Loss Factor         Level           MHz         dB         dB/m         dBuV           4824.000         8.13         34.18         48.35           7236.000         10.37         35.44         45.83	Freq         Loss Factor         Level         Level           MHz         dB         dB/m         dBuV dBuV/m           4824.000         8.13         34.18         48.35         48.42           7236.000         10.37         35.44         45.83         49.03	Freq         Loss Factor         Level         Level         Line           MHz         dB         dB/m         dBuV dBuV/m         dBuV/m           4824.000         8.13         34.18         48.35         48.42         74.00           7236.000         10.37         35.44         45.83         49.03         74.00	MHz         dB         Limit         Over Limit           4824.000         8.13         34.18         48.35         48.42         74.00         -25.58           7236.000         10.37         35.44         45.83         49.03         74.00         -24.97           9648.000         12.32         36.96         43.96         50.92         74.00         -23.08



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 <a href="http://www.sgs.com/en/Terms-and-Conditions.aspx">http://www.sgs.com/en/Terms-and-Conditions/Terms

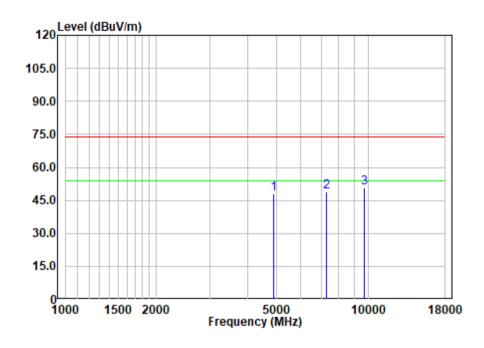
No.10, Weiye Road, Innovation Park, Kunshan, Jiangsu, China 215300 中国・江苏・昆山市留学生创业园伟业路10号 邮编 215300



Report No.: KSCR220800158701

Page: 47 of 108

Test Mode: 00; Polarity: Horizontal; Modulation:802.11b; Bandwidth:20MHz; Channel:middle



	Cable	Ant	Read		Limit	0ver	
Freq	Loss	Factor	Level	Level	Line	Limit	Remark
MHz	dB	dB/m	dBuV	dBuV/m	dBuV/m	dB	
4874.000	8.16	34.18	47.78	48.20	74.00	-25.80	Peak
7311.000	10.44	35.46	45.68	49.08	74.00	-24.92	Peak
9748.000	12.40	37.04	43.75	50.58	74.00	-23.42	Peak
	MHz 4874.000 7311.000	Freq Loss  MHz dB 4874.000 8.16 7311.000 10.44	Freq         Loss Factor           MHz         dB         dB/m           4874.000         8.16         34.18           7311.000         10.44         35.46	Freq         Loss Factor         Level           MHz         dB         dB/m         dBuV           4874.000         8.16         34.18         47.78           7311.000         10.44         35.46         45.68	Freq         Loss Factor         Level         Level           MHz         dB         dB/m         dBuV dBuV/m           4874.000         8.16         34.18         47.78         48.20           7311.000         10.44         35.46         45.68         49.08	Freq         Loss Factor         Level         Level         Line           MHz         dB         dB/m         dBuV dBuV/m         dBuV/m         dBuV/m         dBuV/m         dBuV/m         dBuV/m         4874.000         74.00         7311.000         10.44         35.46         45.68         49.08         74.00	Cable   Ant   Read   Limit   Over   Loss   Factor   Level   Level   Line   Limit



Unless otherwise agreed in writing, this document is issued by the Company subject to its General Conditions of Service printed overleaf, available on request or accessible at <a href="http://www.sgs.com/en/Terms-and-Conditions.aspx">http://www.sgs.com/en/Terms-and-Conditions/Terms

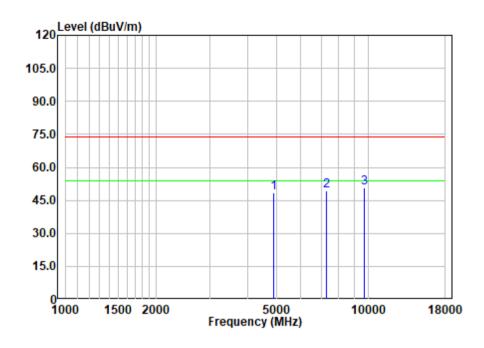
No.10, Weiye Road, Innovation Park, Kunshan, Jiangsu, China 215300 中国・江苏・昆山市留学生创业园伟业路10号 邮编 215300



Report No.: KSCR220800158701

Page: 48 of 108

Test Mode: 00; Polarity: Vertical; Modulation:802.11b; Bandwidth:20MHz; Channel:middle



	Fred		Ant Factor					Remark
	MHz	dB	dB/m	dBuV	dBuV/m	dBuV/m	dB	
1	4874.000	8.16	34.18	48.10	48.52	74.00	-25.48	Peak
2	7311.000	10.44	35.46	46.14	49.54	74.00	-24.46	Peak
3	9748.000	12.40	37.04	43.70	50.53	74.00	-23.47	Peak



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 <a href="http://www.sgs.com/en/Terms-and-Conditions.aspx">http://www.sgs.com/en/Terms-and-Conditions/Terms

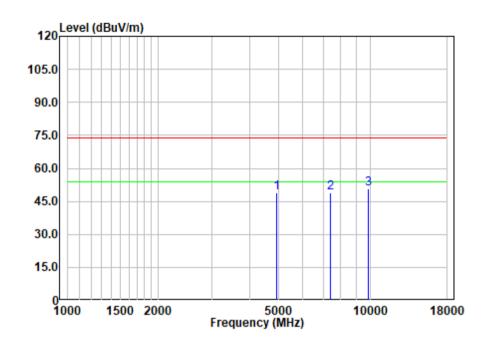
No.10, Weiye Road, Innovation Park, Kunshan, Jiangsu, China 215300 中国・江苏・昆山市留学生创业园伟业路10号 邮编 215300



Report No.: KSCR220800158701

Page: 49 of 108

Test Mode: 00; Polarity: Horizontal; Modulation:802.11b; Bandwidth:20MHz; Channel:High



		Cable	Ant	Read		Limit	0ver	
	Freq	Loss	Factor	Level	Level	Line	Limit	Remark
	MHz	dB	dB/m	dBuV	dBuV/m	dBuV/m	dB	
1	4924.000	8.19	34.17	48.32	48.99	74.00	-25.01	Peak
2	7386.000	10.52	35.49	45.52	49.09	74.00	-24.91	Peak
3	9848.000	12.49	37.12	43.69	50.87	74.00	-23.13	Peak



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 <a href="http://www.sgs.com/en/Terms-and-Conditions.aspx">http://www.sgs.com/en/Terms-and-Conditions/Terms

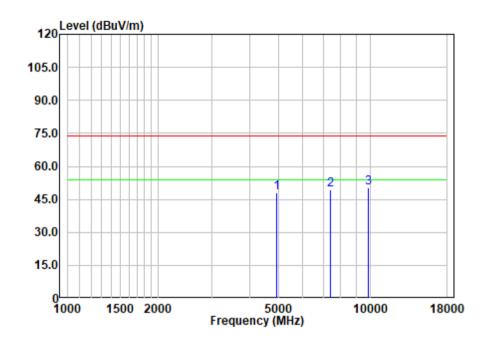
No.10, Weiye Road, Innovation Park, Kunshan, Jiangsu, China 215300 中国・江苏・昆山市留学生创业园伟业路10号 邮编 215300



Report No.: KSCR220800158701

Page: 50 of 108

Test Mode: 00; Polarity: Vertical; Modulation:802.11b; Bandwidth:20MHz; Channel:High



	Cable	Ant	Read		Limit	0ver	
Freq	Loss	Factor	Level	Level	Line	Limit	Remark
MHz	dB	dB/m	dBuV	dBuV/m	dBuV/m	dB	
4924.000	8.19	34.17	47.38	48.05	74.00	-25.95	Peak
7386.000	10.52	35.49	45.68	49.25	74.00	-24.75	Peak
9848.000	12.49	37.12	42.93	50.11	74.00	-23.89	Peak
	MHz 4924.000 7386.000	Freq Loss  MHz dB 4924.000 8.19 7386.000 10.52	Freq         Loss Factor           MHz         dB         dB/m           4924.000         8.19         34.17           7386.000         10.52         35.49	Freq         Loss Factor         Level           MHz         dB         dB/m         dBuV           4924.000         8.19         34.17         47.38           7386.000         10.52         35.49         45.68	Freq         Loss Factor         Level         Level           MHz         dB         dB/m         dBuV dBuV/m           4924.000         8.19         34.17         47.38         48.05           7386.000         10.52         35.49         45.68         49.25	Freq         Loss Factor         Level         Level         Line           MHz         dB         dB/m         dBuV dBuV/m         dBuV/m         dBuV/m         dBuV/m         dBuV/m         dBuV/m         dBuV/m         4924.000         4924.000         8.19         34.17         47.38         48.05         74.00         74.00         7386.000         10.52         35.49         45.68         49.25         74.00	MHz         dB         Limit         Over Limit           4924.000         8.19         34.17         47.38         48.05         74.00         -25.95           7386.000         10.52         35.49         45.68         49.25         74.00         -24.75           9848.000         12.49         37.12         42.93         50.11         74.00         -23.89



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 <a href="http://www.sgs.com/en/Terms-and-Conditions.aspx">http://www.sgs.com/en/Terms-and-Conditions/Terms

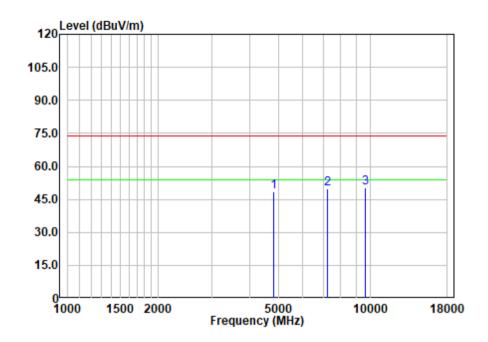
No.10, Weiye Road, Innovation Park, Kunshan, Jiangsu, China 215300 中国・江苏・昆山市留学生创业园伟业路10号 邮编 215300



Report No.: KSCR220800158701

Page: 51 of 108

Test Mode: 00; Polarity: Horizontal; Modulation:802.11g; Bandwidth:20MHz; Channel:Low



	Cable	Ant	Read		Limit	0ver	
Freq	Loss	Factor	Level	Level	Line	Limit	Remark
MHz	dB	dB/m	dBuV	dBuV/m	dBuV/m	dB	
4824.000	8.13	34.18	48.31	48.38	74.00	-25.62	Peak
7236.000	10.37	35.44	46.51	49.71	74.00	-24.29	Peak
9648.000	12.32	36.96	43.33	50.29	74.00	-23.71	Peak
	MHz 4824.000 7236.000	Freq Loss  MHz dB  4824.000 8.13 7236.000 10.37	Freq         Loss Factor           MHz         dB         dB/m           4824.000         8.13         34.18           7236.000         10.37         35.44	Freq         Loss Factor         Level           MHz         dB         dB/m         dBuV           4824.000         8.13         34.18         48.31           7236.000         10.37         35.44         46.51	Freq         Loss Factor         Level         Level           MHz         dB         dB/m         dBuV dBuV/m           4824.000         8.13         34.18         48.31         48.38           7236.000         10.37         35.44         46.51         49.71	Freq         Loss Factor         Level         Level         Line           MHz         dB         dB/m         dBuV dBuV/m         dBuV/m           4824.000         8.13         34.18         48.31         48.38         74.00           7236.000         10.37         35.44         46.51         49.71         74.00	MHz         dB         Level         Level         Limit         Over           4824.000         8.13         34.18         48.31         48.38         74.00         -25.62           7236.000         10.37         35.44         46.51         49.71         74.00         -24.29           9648.000         12.32         36.96         43.33         50.29         74.00         -23.71



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 <a href="http://www.sgs.com/en/Terms-and-Conditions.aspx">http://www.sgs.com/en/Terms-and-Conditions/Terms

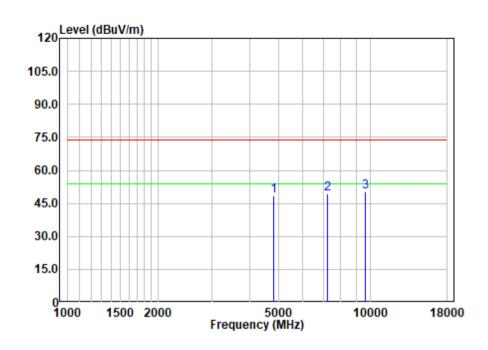
No.10, Weiye Road, Innovation Park, Kunshan, Jiangsu, China 215300 中国・江苏・昆山市留学生创业园伟业路10号 邮编 215300



Report No.: KSCR220800158701

Page: 52 of 108

Test Mode: 00; Polarity: Vertical; Modulation:802.11g; Bandwidth:20MHz; Channel:Low



	Cable	Ant	Read		Limit	0ver	
Freq	Loss	Factor	Level	Level	Line	Limit	Remark
_							
MHz	dB	dB/m	dBuV	dBuV/m	dBuV/m	dB	
4824.000	8.13	34.18	48.24	48.31	74.00	-25.69	Peak
7236.000	10.37	35.44	46.12	49.32	74.00	-24.68	Peak
9648.000	12.32	36.96	43.32	50.28	74.00	-23.72	Peak
	MHz 4824.000 7236.000	Freq Loss  MHz dB  4824.000 8.13 7236.000 10.37	Freq         Loss Factor           MHz         dB         dB/m           4824.000         8.13         34.18           7236.000         10.37         35.44	Freq         Loss Factor         Level           MHz         dB         dB/m         dBuV           4824.000         8.13         34.18         48.24           7236.000         10.37         35.44         46.12	Freq         Loss Factor         Level         Level           MHz         dB         dB/m         dBuV dBuV/m           4824.000         8.13         34.18         48.24         48.31           7236.000         10.37         35.44         46.12         49.32	Freq         Loss Factor         Level         Level         Line           MHz         dB         dB/m         dBuV dBuV/m         dBuV/m           4824.000         8.13         34.18         48.24         48.31         74.00           7236.000         10.37         35.44         46.12         49.32         74.00	Cable   Ant   Read   Limit   Over   Loss   Factor   Level   Level   Line   Limit



Unless otherwise agreed in writing, this document is issued by the Company subject to its General Conditions of Service printed overleaf, available on request or accessible at <a href="http://www.sgs.com/en/Terms-and-Conditions.aspx">http://www.sgs.com/en/Terms-and-Conditions/Terms

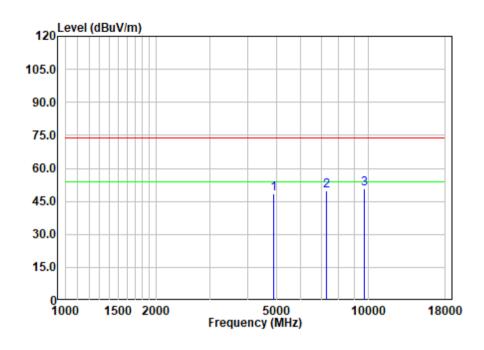
No.10, Weiye Road, Innovation Park, Kunshan, Jiangsu, China 215300 中国・江苏・昆山市留学生创业园伟业路10号 邮编 215300



Report No.: KSCR220800158701

Page: 53 of 108

Test Mode: 00; Polarity: Horizontal; Modulation:802.11g; Bandwidth:20MHz; Channel:middle



	Cable	Ant	Read		Limit	0ver	
Freq	Loss	Factor	Level	Level	Line	Limit	Remark
MHz	dB	dB/m	dBuV	dBuV/m	dBuV/m	dB	
4874.000	8.16	34.18	48.08	48.50	74.00	-25.50	Peak
7311.000	10.44	35.46	46.19	49.59	74.00	-24.41	Peak
9748.000	12.40	37.04	44.10	50.93	74.00	-23.07	Peak
	MHz 4874.000 7311.000	Freq Loss  MHz dB 4874.000 8.16 7311.000 10.44	Freq         Loss Factor           MHz         dB         dB/m           4874.000         8.16         34.18           7311.000         10.44         35.46	Freq         Loss Factor         Level           MHz         dB         dB/m         dBuV           4874.000         8.16         34.18         48.08           7311.000         10.44         35.46         46.19	Freq         Loss Factor         Level         Level           MHz         dB         dB/m         dBuV dBuV/m           4874.000         8.16         34.18         48.08         48.50           7311.000         10.44         35.46         46.19         49.59	Freq         Loss Factor         Level         Level         Line           MHz         dB         dB/m         dBuV dBuV/m         dBuV/m           4874.000         8.16         34.18         48.08         48.50         74.00           7311.000         10.44         35.46         46.19         49.59         74.00	MHz         dB         Limit         Over Limit           4874.000         8.16         34.18         48.08         48.50         74.00         -25.50           7311.000         10.44         35.46         46.19         49.59         74.00         -24.41           9748.000         12.40         37.04         44.10         50.93         74.00         -23.07



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 <a href="http://www.sgs.com/en/Terms-and-Conditions.aspx">http://www.sgs.com/en/Terms-and-Conditions/Terms

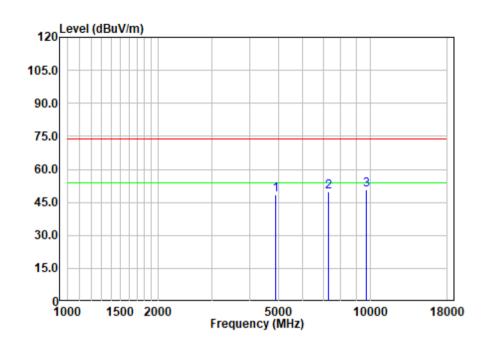
No.10, Weiye Road, Innovation Park, Kunshan, Jiangsu, China 215300 中国・江苏・昆山市留学生创业园伟业路10号 邮编 215300



Report No.: KSCR220800158701

Page: 54 of 108

Test Mode: 00; Polarity: Vertical; Modulation:802.11g; Bandwidth:20MHz; Channel:middle



	Cable	Ant	Read		Limit	0ver	
Freq	Loss	Factor	Level	Level	Line	Limit	Remark
MHz	dB	dB/m	dBuV	dBuV/m	dBuV/m	dB	
4874.000	8.16	34.18	48.16	48.58	74.00	-25.42	Peak
7311.000	10.44	35.46	46.39	49.79	74.00	-24.21	Peak
9748.000	12.40	37.04	43.80	50.63	74.00	-23.37	Peak
	MHz 4874.000 7311.000	Freq Loss  MHz dB 4874.000 8.16 7311.000 10.44	Freq         Loss Factor           MHz         dB         dB/m           4874.000         8.16         34.18           7311.000         10.44         35.46	Freq         Loss Factor         Level           MHz         dB         dB/m         dBuV           4874.000         8.16         34.18         48.16           7311.000         10.44         35.46         46.39	Freq         Loss Factor         Level         Level           MHz         dB         dB/m         dBuV dBuV/m           4874.000         8.16         34.18         48.16         48.58           7311.000         10.44         35.46         46.39         49.79	Freq         Loss Factor         Level         Level         Line           MHz         dB         dB/m         dBuV dBuV/m         dBuV/m           4874.000         8.16         34.18         48.16         48.58         74.00           7311.000         10.44         35.46         46.39         49.79         74.00	Cable Ant Read Limit Over Loss Factor           MHz         dB         dB/m         dBuV dBuV/m         <



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 <a href="http://www.sgs.com/en/Terms-and-Conditions.aspx">http://www.sgs.com/en/Terms-and-Conditions/Terms

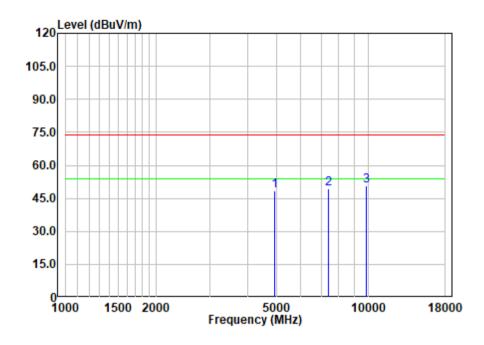
No.10, Weiye Road, Innovation Park, Kunshan, Jiangsu, China 215300 中国・江苏・昆山市留学生创业园伟业路10号 邮编 215300



Report No.: KSCR220800158701

Page: 55 of 108

Test Mode: 00; Polarity: Horizontal; Modulation:802.11g; Bandwidth:20MHz; Channel:High



		Cable	Ant	Read		Limit	0ver	
	Freq	Loss	Factor	Level	Level	Line	Limit	Remark
	MHz	dB	dB/m	dBuV	dBuV/m	dBuV/m	dB	
1	4924.000	8.19	34.17	47.95	48.62	74.00	-25.38	Peak
2	7386.000	10.52	35.49	45.90	49.47	74.00	-24.53	Peak
3	9848.000	12.49	37.12	43.59	50.77	74.00	-23.23	Peak



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 <a href="http://www.sgs.com/en/Terms-and-Conditions.aspx">http://www.sgs.com/en/Terms-and-Conditions/Terms

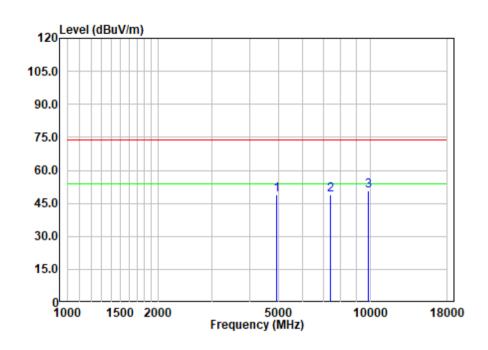
No.10, Weiye Road, Innovation Park, Kunshan, Jiangsu, China 215300 中国・江苏・昆山市留学生创业园伟业路10号 邮编 215300



Report No.: KSCR220800158701

Page: 56 of 108

Test Mode: 00; Polarity: Vertical; Modulation:802.11g; Bandwidth:20MHz; Channel:High



	Cable	Ant	Read		Limit	0ver	
Freq	Loss	Factor	Level	Level	Line	Limit	Remark
MHz	dB	dB/m	dBuV	dBuV/m	dBuV/m	dB	
4924.000	8.19	34.17	48.22	48.89	74.00	-25.11	Peak
7386.000	10.52	35.49	45.50	49.07	74.00	-24.93	Peak
9848.000	12.49	37.12	43.37	50.55	74.00	-23.45	Peak
	MHz 4924.000 7386.000	Freq Loss  MHz dB 4924.000 8.19 7386.000 10.52	MHz dB dB/m 4924.000 8.19 34.17 7386.000 10.52 35.49	Freq         Loss Factor         Level           MHz         dB         dB/m         dBuV           4924.000         8.19         34.17         48.22           7386.000         10.52         35.49         45.50	Freq         Loss Factor         Level         Level           MHz         dB         dB/m         dBuV dBuV/m           4924.000         8.19         34.17         48.22         48.89           7386.000         10.52         35.49         45.50         49.07	Freq         Loss Factor         Level         Level         Line           MHz         dB         dB/m         dBuV dBuV/m         dBuV/m         dBuV/m         dBuV/m         dBuV/m         dBuV/m         dBuV/m         4924.000         48.22         48.89         74.00         7386.000         10.52         35.49         45.50         49.07         74.00	MHz         dB         Limit         Over Limit           4924.000         8.19         34.17         48.22         48.89         74.00         -25.11           7386.000         10.52         35.49         45.50         49.07         74.00         -24.93           9848.000         12.49         37.12         43.37         50.55         74.00         -23.45



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 <a href="http://www.sgs.com/en/Terms-and-Conditions.aspx">http://www.sgs.com/en/Terms-and-Conditions/Terms

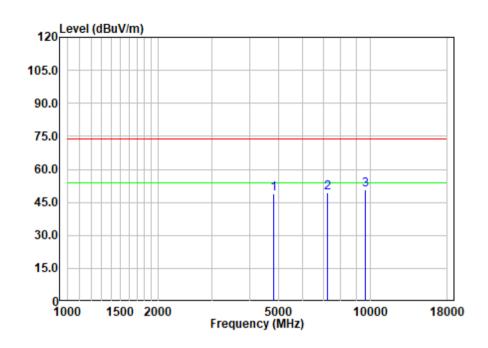
No.10, Weiye Road, Innovation Park, Kunshan, Jiangsu, China 215300 中国・江苏・昆山市留学生创业园伟业路10号 邮编 215300



Report No.: KSCR220800158701

Page: 57 of 108

Test Mode: 00; Polarity: Horizontal; Modulation:802.11n; Bandwidth:20MHz; Channel:Low



	Cable	Ant	Read		Limit	0ver	
Freq	Loss	Factor	Level	Level	Line	Limit	Remark
_							
MHz	dB	dB/m	dBuV	dBuV/m	dBuV/m	dB	
4824.000	8.13	34.18	48.61	48.68	74.00	-25.32	Peak
7236.000	10.37	35.44	46.29	49.49	74.00	-24.51	Peak
9648.000	12.32	36.96	43.64	50.60	74.00	-23.40	Peak
	MHz 4824.000 7236.000	Freq Loss  MHz dB  4824.000 8.13 7236.000 10.37	Freq         Loss Factor           MHz         dB         dB/m           4824.000         8.13         34.18           7236.000         10.37         35.44	Freq         Loss Factor         Level           MHz         dB         dB/m         dBuV           4824.000         8.13         34.18         48.61           7236.000         10.37         35.44         46.29	Freq         Loss Factor         Level         Level           MHz         dB         dB/m         dBuV dBuV/m           4824.000         8.13         34.18         48.61         48.68           7236.000         10.37         35.44         46.29         49.49	Freq         Loss Factor         Level         Level         Line           MHz         dB         dB/m         dBuV dBuV/m         dBuV/m           4824.000         8.13         34.18         48.61         48.68         74.00           7236.000         10.37         35.44         46.29         49.49         74.00	MHz         dB         Limit         Over Limit           4824.000         8.13         34.18         48.61         48.68         74.00         -25.32           7236.000         10.37         35.44         46.29         49.49         74.00         -24.51           9648.000         12.32         36.96         43.64         50.60         74.00         -23.40



Unless otherwise agreed in writing, this document is issued by the Company subject to its General Conditions of Service printed overleaf, available on request or accessible at <a href="http://www.sgs.com/en/Terms-and-Conditions.aspx">http://www.sgs.com/en/Terms-and-Conditions/Terms

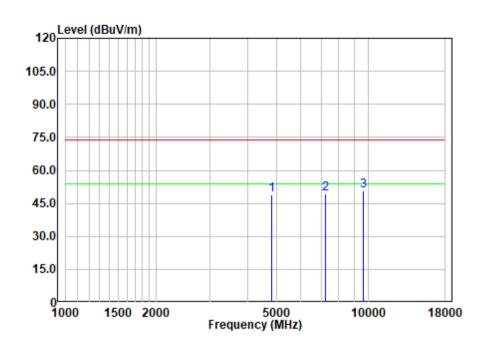
No.10, Weiye Road, Innovation Park, Kunshan, Jiangsu, China 215300 中国・江苏・昆山市留学生创业园伟业路10号 邮编 215300



Report No.: KSCR220800158701

Page: 58 of 108

Test Mode: 00; Polarity: Vertical; Modulation:802.11n; Bandwidth:20MHz; Channel:Low



	Cable	Ant	Read		Limit	0ver	
Freq	Loss	Factor	Level	Level	Line	Limit	Remark
MHz	dB	dB/m	dBuV	dBuV/m	dBuV/m	dB	
4824.000	8.13	34.18	48.64	48.71	74.00	-25.29	Peak
7236.000	10.37	35.44	46.15	49.35	74.00	-24.65	Peak
9648.000	12.32	36.96	43.56	50.52	74.00	-23.48	Peak
	MHz 4824.000 7236.000	Freq Loss  MHz dB  4824.000 8.13 7236.000 10.37	Freq         Loss Factor           MHz         dB         dB/m           4824.000         8.13         34.18           7236.000         10.37         35.44	Freq         Loss Factor         Level           MHz         dB         dB/m         dBuV           4824.000         8.13         34.18         48.64           7236.000         10.37         35.44         46.15	Freq         Loss Factor         Level         Level           MHz         dB         dB/m         dBuV dBuV/m           4824.000         8.13         34.18         48.64         48.71           7236.000         10.37         35.44         46.15         49.35	Freq         Loss Factor         Level         Level         Line           MHz         dB         dB/m         dBuV dBuV/m         dBuV/m           4824.000         8.13         34.18         48.64         48.71         74.00           7236.000         10.37         35.44         46.15         49.35         74.00	MHz         dB         Limit         Over           4824.000         8.13         34.18         48.64         48.71         74.00         -25.29           7236.000         10.37         35.44         46.15         49.35         74.00         -24.65           9648.000         12.32         36.96         43.56         50.52         74.00         -23.48



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 <a href="http://www.sgs.com/en/Terms-and-Conditions.aspx">http://www.sgs.com/en/Terms-and-Conditions/Terms

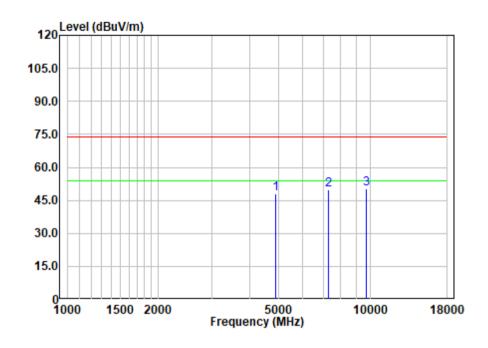
No.10, Weiye Road, Innovation Park, Kunshan, Jiangsu, China 215300 中国・江苏・昆山市留学生创业园伟业路10号 邮编 215300



Report No.: KSCR220800158701

Page: 59 of 108

Test Mode: 00; Polarity: Horizontal; Modulation:802.11n; Bandwidth:20MHz; Channel:middle



	Cable	Ant	Read		Limit	0ver	
Freq	Loss	Factor	Level	Level	Line	Limit	Remark
MHz	dB	dB/m	dBuV	dBuV/m	dBuV/m	dB	
4874.000	8.16	34.18	47.77	48.19	74.00	-25.81	Peak
7311.000	10.44	35.46	46.40	49.80	74.00	-24.20	Peak
9748.000	12.40	37.04	43.28	50.11	74.00	-23.89	Peak
	MHz 4874.000 7311.000	Freq Loss  MHz dB 4874.000 8.16 7311.000 10.44	Freq         Loss Factor           MHz         dB         dB/m           4874.000         8.16         34.18           7311.000         10.44         35.46	Freq         Loss Factor         Level           MHz         dB         dB/m         dBuV           4874.000         8.16         34.18         47.77           7311.000         10.44         35.46         46.40	Freq         Loss Factor         Level         Level           MHz         dB         dB/m         dBuV dBuV/m           4874.000         8.16         34.18         47.77         48.19           7311.000         10.44         35.46         46.40         49.80	Freq         Loss Factor         Level         Level         Line           MHz         dB         dB/m         dBuV dBuV/m         dBuV/m         dBuV/m         dBuV/m         dBuV/m         dBuV/m         4874.000         74.00         7311.000         10.44         35.46         46.40         49.80         74.00	Cable Ant Read Limit Over Loss Factor           Freq         Loss Factor         Level Level Level Line Limit           MHz         dB         dB/m         dBuV dBuV/m         dBuV/m         dB           4874.000         8.16         34.18         47.77         48.19         74.00         -25.81           7311.000         10.44         35.46         46.40         49.80         74.00         -24.20           9748.000         12.40         37.04         43.28         50.11         74.00         -23.89



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 <a href="http://www.sgs.com/en/Terms-and-Conditions.aspx">http://www.sgs.com/en/Terms-and-Conditions/Terms

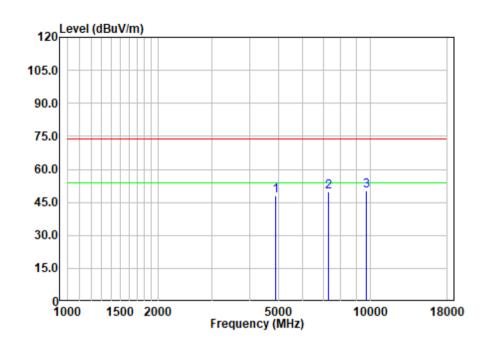
No.10, Weiye Road, Innovation Park, Kunshan, Jiangsu, China 215300 中国・江苏・昆山市留学生创业园伟业路10号 邮编 215300



Report No.: KSCR220800158701

Page: 60 of 108

Test Mode: 00; Polarity: Vertical; Modulation:802.11n; Bandwidth:20MHz; Channel:middle



		Cable	Ant	Read		Limit	0ver	
	Freq	Loss	Factor	Level	Level	Line	Limit	Remark
	MHz	dB	dB/m	dBuV	dBuV/m	dBuV/m	dB	
1	4874.000	8.16	34.18	47.67	48.09	74.00	-25.91	Peak
2	7311.000	10.44	35.46	46.19	49.59	74.00	-24.41	Peak
3	9748.000	12.40	37.04	43.49	50.32	74.00	-23.68	Peak



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 <a href="http://www.sgs.com/en/Terms-and-Conditions.aspx">http://www.sgs.com/en/Terms-and-Conditions/Terms

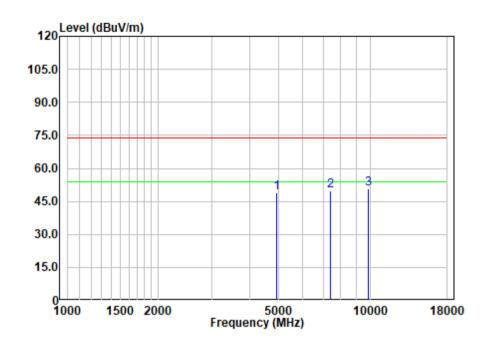
No.10, Weiye Road, Innovation Park, Kunshan, Jiangsu, China 215300 中国・江苏・昆山市留学生创业园伟业路10号 邮编 215300



Report No.: KSCR220800158701

Page: 61 of 108

Test Mode: 00; Polarity: Horizontal; Modulation:802.11n; Bandwidth:20MHz; Channel:High



	Cable	Ant	Read		Limit	0ver	
Freq	Loss	Factor	Level	Level	Line	Limit	Remark
MHz	dB	dB/m	dBuV	dBuV/m	dBuV/m	dB	
4924.000	8.19	34.17	48.24	48.91	74.00	-25.09	Peak
7386.000	10.52	35.49	46.15	49.72	74.00	-24.28	Peak
9848.000	12.49	37.12	43.59	50.77	74.00	-23.23	Peak
	MHz 4924.000 7386.000	Freq Loss  MHz dB 4924.000 8.19 7386.000 10.52	MHz dB dB/m 4924.000 8.19 34.17 7386.000 10.52 35.49	Freq         Loss Factor         Level           MHz         dB         dB/m         dBuV           4924.000         8.19         34.17         48.24           7386.000         10.52         35.49         46.15	Freq         Loss Factor         Level         Level           MHz         dB         dB/m         dBuV dBuV/m           4924.000         8.19         34.17         48.24         48.91           7386.000         10.52         35.49         46.15         49.72	Freq         Loss Factor         Level         Level         Line           MHz         dB         dB/m         dBuV dBuV/m         dBuV/m         dBuV/m         dBuV/m         dBuV/m         dBuV/m         dBuV/m         4924.000         34.17         48.24         48.91         74.00         7386.000         10.52         35.49         46.15         49.72         74.00	MHz         dB         Limit         Over Limit           4924.000         8.19         34.17         48.24         48.91         74.00         -25.09           7386.000         10.52         35.49         46.15         49.72         74.00         -24.28           9848.000         12.49         37.12         43.59         50.77         74.00         -23.23



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 <a href="http://www.sgs.com/en/Terms-and-Conditions.aspx">http://www.sgs.com/en/Terms-and-Conditions/Terms

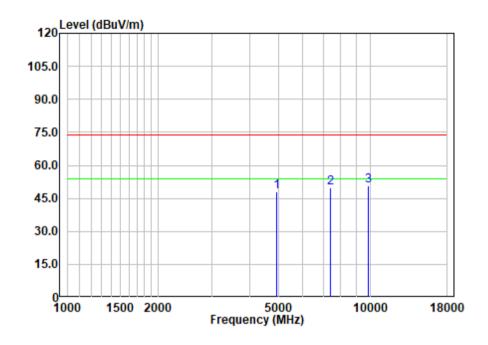
No.10, Weiye Road, Innovation Park, Kunshan, Jiangsu, China 215300 中国・江苏・昆山市留学生创业园伟业路10号 邮编 215300



Report No.: KSCR220800158701

Page: 62 of 108

Test Mode: 00; Polarity: Vertical; Modulation:802.11n; Bandwidth:20MHz; Channel:High



		Cable	Ant	Read		Limit	0ver	
	Freq	Loss	Factor	Level	Level	Line	Limit	Remark
	MHz	dB	dB/m	dBuV	dBuV/m	dBuV/m	dB	
1	4924.000	8.19	34.17	47.51	48.18	74.00	-25.82	Peak
2	7386.000	10.52	35.49	46.39	49.96	74.00	-24.04	Peak
3	9848.000	12.49	37.12	43.36	50.54	74.00	-23.46	Peak



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 <a href="http://www.sgs.com/en/Terms-and-Conditions.aspx">http://www.sgs.com/en/Terms-and-Conditions/Terms

No.10, Weiye Road, Innovation Park, Kunshan, Jiangsu, China 215300 中国・江苏・昆山市留学生创业园伟业路10号 邮编 215300



Report No.: KSCR220800158701

Page: 63 of 108

### 8 Test Setup Photo

Refer to Appendix - Test Setup Photo for KSCR2208001587AT

### 9 EUT Constructional Details (EUT Photos)

Refer to Appendix - Photographs of EUT Constructional Details for KSCR2208001587AT



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 <a href="http://www.sgs.com/en/Terms-and-Conditions.aspx">http://www.sgs.com/en/Terms-and-Conditions/Terms-a-Documents, subject to Terms and Conditions for Electronic Documents at <a href="http://www.sgs.com/en/Terms-and-Conditions/Terms-a-Document.aspx">http://www.sgs.com/en/Terms-and-Conditions/Terms-a-Document.aspx</a>. 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: (86-75) 83071443, or email: CN.Doccheck@sas.com

No.10, Weiye Road, Innovation Park, Kunshan, Jiangsu, China 215300 中国・江苏・昆山市留学生创业园伟业路10号 邮编 215300



Report No.: KSCR220800158701

Page: 64 of 108

# 10 Appendix

### Appendix for KSCR2208001587AT-FCC-2.4G

- 1. Duty Cycle
- 1.1 Ant1

#### 1.1.1 Test Result

Ant1								
Mode	TX Type	Frequency (MHz)	T_on (ms)	Period (ms)	Duty Cycle (%)	Duty Cycle Correction Factor (dB)	Max. DC Variation (%)	
	SISO	2412	8.383	8.430	99.44	0.02	0.00	
802.11b		2437	8.384	8.430	99.45	0.02	0.04	
		2462	8.383	8.430	99.44	0.02	0.04	
	SISO	2412	1.395	1.446	96.47	0.16	0.03	
802.11g		2437	1.395	1.447	96.41	0.16	0.03	
		2462	1.394	1.446	96.40	0.16	0.03	
000.44	SISO	2412	1.302	1.354	96.16	0.17	0.03	
802.11n (HT20)		2437	1.302	1.353	96.23	0.17	0.03	
(11120)		2462	1.303	1.354	96.23	0.17	0.03	



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 <a href="http://www.sgs.com/en/Terms-and-Conditions.aspx">http://www.sgs.com/en/Terms-and-Conditions/Terms

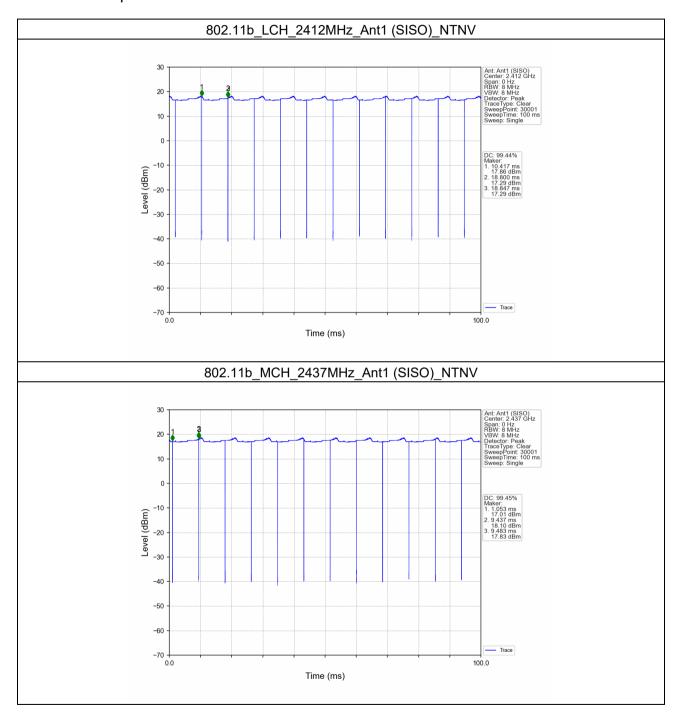
No.10, Weiye Road, Innovation Park, Kunshan, Jiangsu, China 215300 中国•江苏•昆山市留学生创业园伟业路10号 邮编 215300



Report No.: KSCR220800158701

Page: 65 of 108

#### 1.1.2 Test Graph





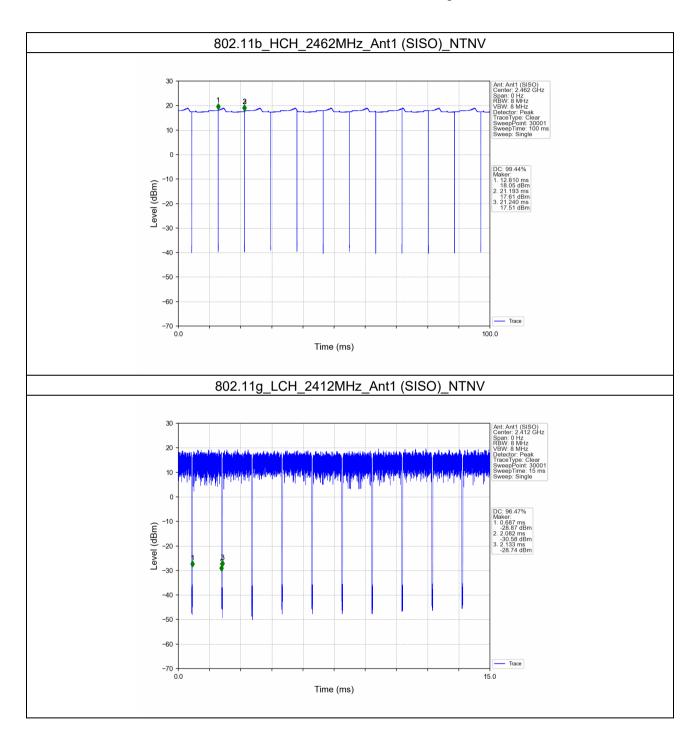
Unless otherwise agreed in writing, this document is issued by the Company subject to its General Conditions of Service printed overleaf, available on request or accessible at <a href="http://www.sgs.com/en/Terms-and-Conditions.aspx">http://www.sgs.com/en/Terms-and-Conditions/Terms

No.10, Weiye Road, Innovation Park, Kunshan, Jiangsu, China 215300 中国・江苏・昆山市留学生创业园伟业路10号 邮编 215300



Report No.: KSCR220800158701

Page: 66 of 108





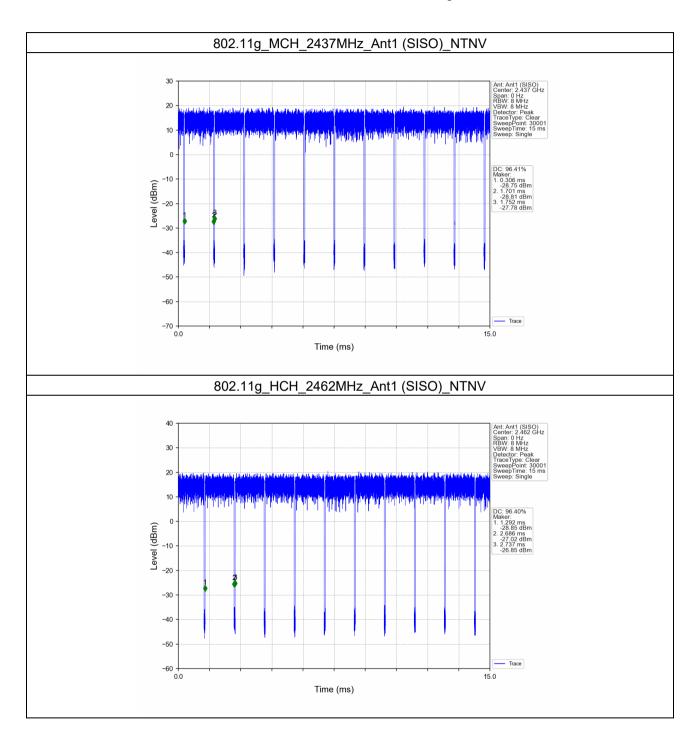
Unless otherwise agreed in writing, this document is issued by the Company subject to its General Conditions of Service printed overleaf, available on request or accessible at <a href="http://www.sgs.com/en/Terms-and-Conditions.aspx">http://www.sgs.com/en/Terms-and-Conditions/Terms

No.10, Weiye Road, Innovation Park, Kunshan, Jiangsu, China 215300 中国・江苏・昆山市留学生创业园伟业路10号 邮编 215300



Report No.: KSCR220800158701

Page: 67 of 108





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 <a href="http://www.sgs.com/en/Terms-and-Conditions.aspx">http://www.sgs.com/en/Terms-and-Conditions/Terms-a-Documents, subject to Terms and Conditions for Electronic Documents at <a href="http://www.sgs.com/en/Terms-and-Conditions/Terms-a-Document.aspx">http://www.sgs.com/en/Terms-and-Conditions/Terms-a-Document.aspx</a>. 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.

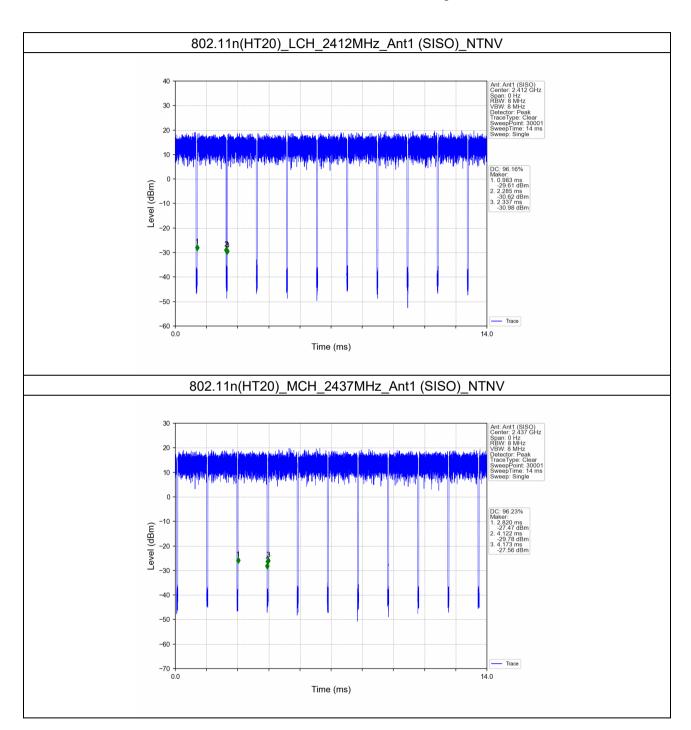
Attention: To check the authenticity of testing /inspection report & certificate, please contact us at telephone: (86-75) 83071443, or email: CN.Doccheck@sas.com

No.10, Weiye Road, Innovation Park, Kunshan, Jiangsu, China 215300 中国・江苏・昆山市留学生创业园伟业路10号 邮编 215300



Report No.: KSCR220800158701

Page: 68 of 108





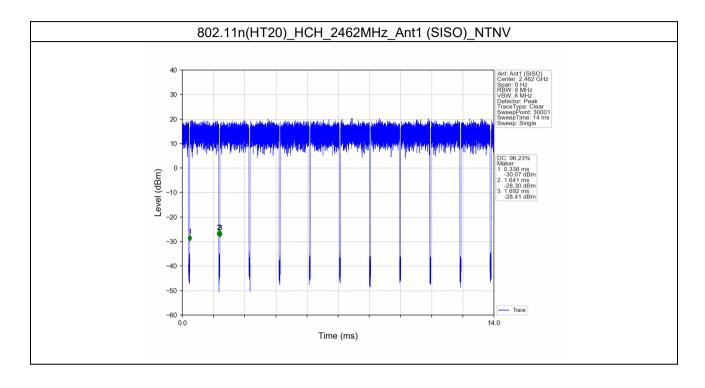
Unless otherwise agreed in writing, this document is issued by the Company subject to its General Conditions of Service printed overleaf, available on request or accessible at <a href="http://www.sgs.com/en/Terms-and-Conditions.aspx">http://www.sgs.com/en/Terms-and-Conditions/Terms

No.10, Weiye Road, Innovation Park, Kunshan, Jiangsu, China 215300 中国・江苏・昆山市留学生创业园伟业路10号 邮编 215300



Report No.: KSCR220800158701

Page: 69 of 108





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 <a href="http://www.sgs.com/en/Terms-and-Conditions.aspx">http://www.sgs.com/en/Terms-and-Conditions/Terms

No.10, Weiye Road, Innovation Park, Kunshan, Jiangsu, China 215300 中国•江苏•昆山市留学生创业园伟业路10号 邮编 215300



Report No.: KSCR220800158701

Page: 70 of 108

#### 2. Bandwidth

#### 2.1 OBW

#### 2.1.1 Test Result

Mode	TX Type	Frequency (MHz)	ANIT	99% Occupied Bandwidth (MHz)	Verdict
lviode			ANT	Result	
	SISO	2412	1	13.419	Pass
802.11b		2437	1 13.382		Pass
		2462	1	13.406	Pass
	SISO	2412	1	17.325	Pass
802.11g		2437	1	17.361	Pass
		2462	1	17.283	Pass
200.44	SISO	2412	1	18.107	Pass
802.11n (HT20)		2437	1	18.178	Pass
(11120)		2462	1	18.090	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 <a href="http://www.sgs.com/en/Terms-and-Conditions.aspx">http://www.sgs.com/en/Terms-and-Conditions/Terms

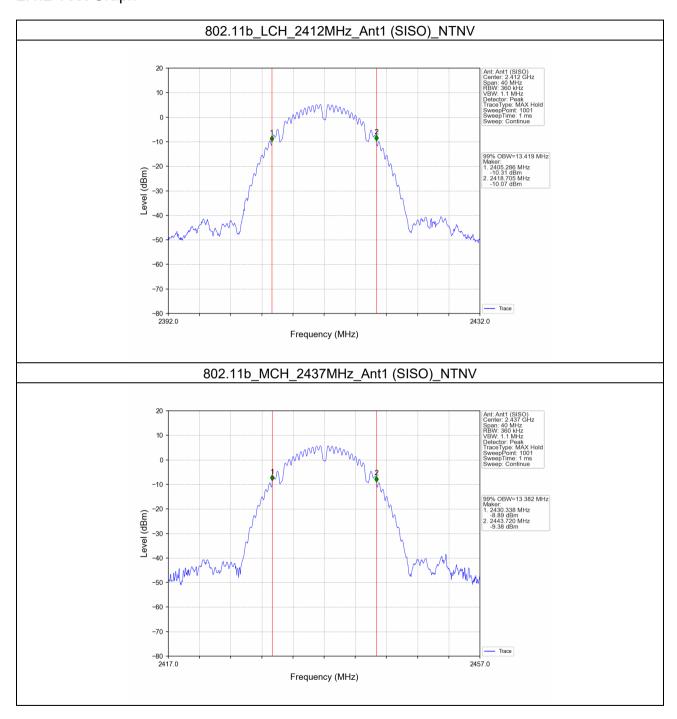
No.10, Weiye Road, Innovation Park, Kunshan, Jiangsu, China 215300 中国•江苏•昆山市留学生创业园伟业路10号 邮编 215300



Report No.: KSCR220800158701

Page: 71 of 108

#### 2.1.2 Test Graph





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 <a href="http://www.sgs.com/en/Terms-and-Conditions.aspx">http://www.sgs.com/en/Terms-and-Conditions/Terms-a-Documents, subject to Terms and Conditions for Electronic Documents at <a href="http://www.sgs.com/en/Terms-and-Conditions/Terms-a-Document.aspx">http://www.sgs.com/en/Terms-and-Conditions/Terms-a-Document.aspx</a>. 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.

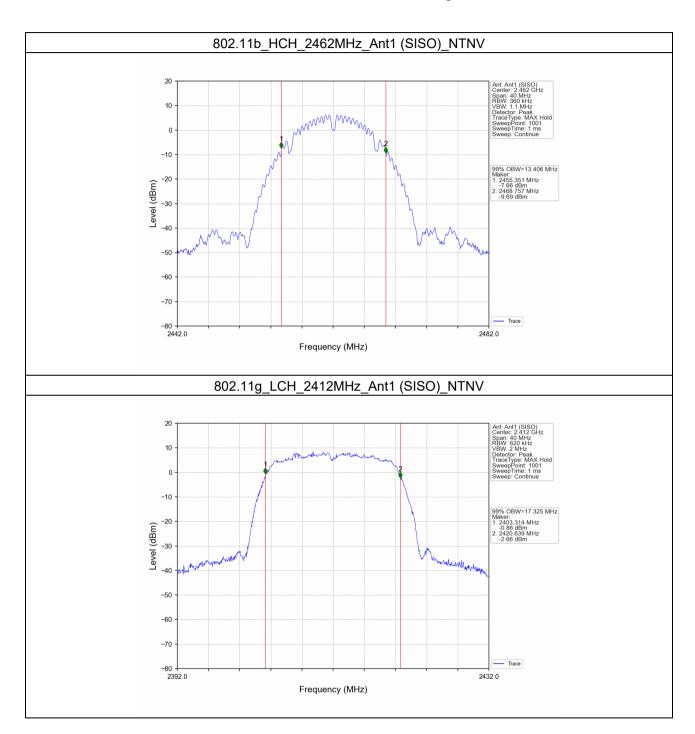
Attention: To check the authenticity of testing /inspection report & certificate, please contact us at telephone: (86-75) 83071443, or email: CN.Doccheck@sas.com

No.10, Weiye Road, Innovation Park, Kunshan, Jiangsu, China 215300 中国・江苏・昆山市留学生创业园伟业路10号 邮编 215300



Report No.: KSCR220800158701

Page: 72 of 108





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 <a href="http://www.sgs.com/en/Terms-and-Conditions.aspx">http://www.sgs.com/en/Terms-and-Conditions/Terms-a-Documents, subject to Terms and Conditions for Electronic Documents at <a href="http://www.sgs.com/en/Terms-and-Conditions/Terms-a-Document.aspx">http://www.sgs.com/en/Terms-and-Conditions/Terms-a-Document.aspx</a>. 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.

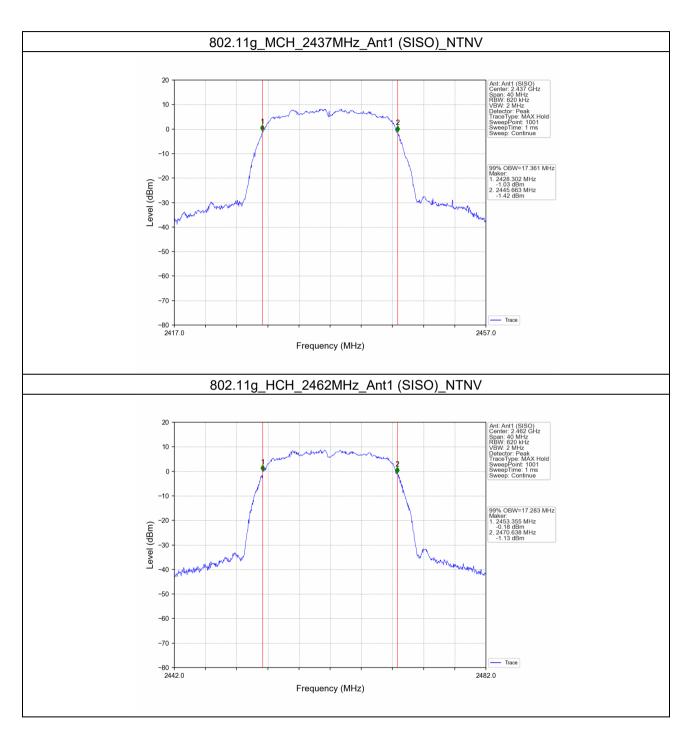
Attention: To check the authenticity of testing /inspection report & certificate, please contact us at telephone: (86-75) 83071443, or email: CN.Doccheck@sas.com

No.10, Weiye Road, Innovation Park, Kunshan, Jiangsu, China 215300 中国・江苏・昆山市留学生创业园伟业路10号 邮编 215300



Report No.: KSCR220800158701

Page: 73 of 108





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 <a href="http://www.sgs.com/en/Terms-and-Conditions.aspx">http://www.sgs.com/en/Terms-and-Conditions/Terms-a-Documents, subject to Terms and Conditions for Electronic Documents at <a href="http://www.sgs.com/en/Terms-and-Conditions/Terms-a-Document.aspx">http://www.sgs.com/en/Terms-and-Conditions/Terms-a-Document.aspx</a>. 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.

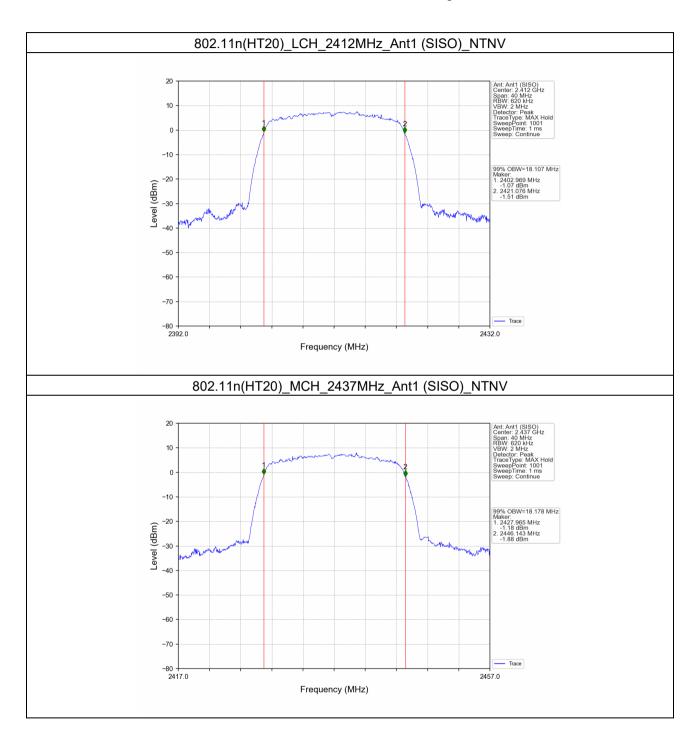
Attention: To check the authenticity of testing /inspection report & certificate, please contact us at telephone: (86-75) 83071443, or email: CN.Doccheck@sas.com

No.10, Weiye Road, Innovation Park, Kunshan, Jiangsu, China 215300 中国・江苏・昆山市留学生创业园伟业路10号 邮编 215300



Report No.: KSCR220800158701

Page: 74 of 108





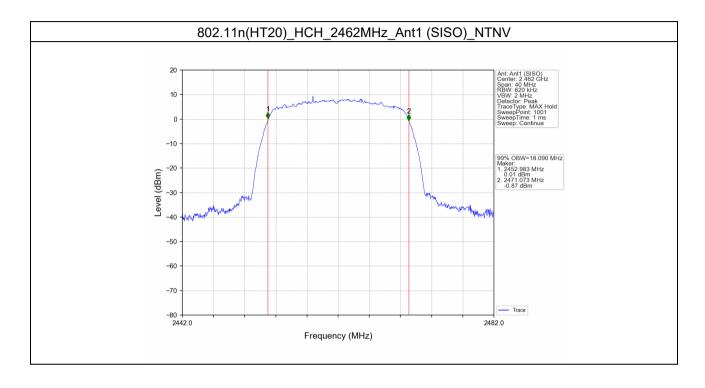
Unless otherwise agreed in writing, this document is issued by the Company subject to its General Conditions of Service printed overleaf, available on request or accessible at <a href="http://www.sgs.com/en/Terms-and-Conditions.aspx">http://www.sgs.com/en/Terms-and-Conditions/Terms

No.10, Weiye Road, Innovation Park, Kunshan, Jiangsu, China 215300 中国・江苏・昆山市留学生创业园伟业路10号 邮编 215300



Report No.: KSCR220800158701

Page: 75 of 108





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 <a href="http://www.sgs.com/en/Terms-and-Conditions.aspx">http://www.sgs.com/en/Terms-and-Conditions/Terms

No.10, Weiye Road, Innovation Park, Kunshan, Jiangsu, China 215300 中国・江苏・昆山市留学生创业园伟业路10号 邮编 215300



Report No.: KSCR220800158701

Page: 76 of 108

#### 2.2 6dB BW

#### 2.2.1 Test Result

Mode	TX Type	Frequency (MHz)	ANT	6dB Bandwidth (MHz)		) / a mali a t	
				Result	Limit	Verdict	
802.11b	SISO	2412	1	9.069	>=0.5	Pass	
		2437	1	8.137	>=0.5	Pass	
		2462	1	9.092	>=0.5	Pass	
	SISO	2412	1	15.154	>=0.5	Pass	
802.11g		2437	1	15.157	>=0.5	Pass	
		2462	1	15.161	>=0.5	Pass	
802.11n (HT20)			2412	1	15.140	>=0.5	Pass
	SISO	2437	1	15.169	>=0.5	Pass Pass Pass Pass	
		2462	1	15.145	>=0.5	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 <a href="http://www.sgs.com/en/Terms-and-Conditions.aspx">http://www.sgs.com/en/Terms-and-Conditions/Terms

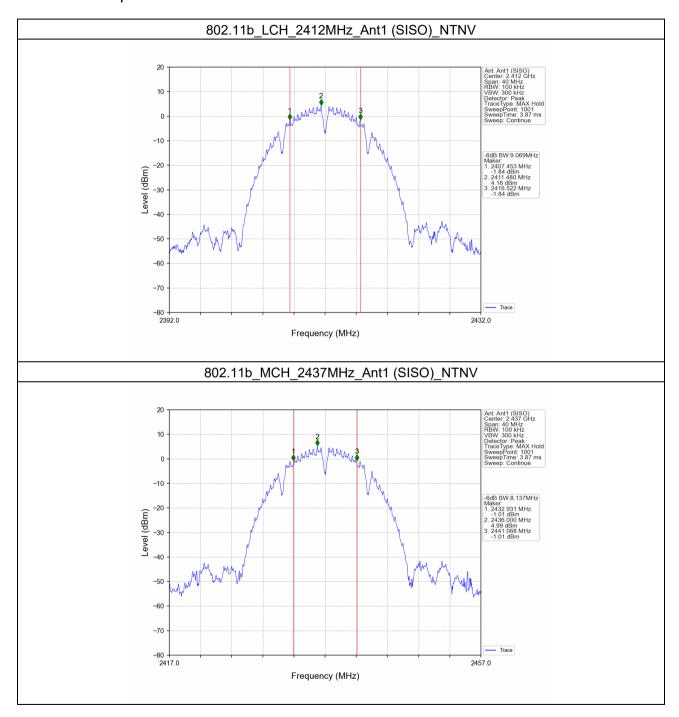
No.10, Weiye Road, Innovation Park, Kunshan, Jiangsu, China 215300 中国•江苏•昆山市留学生创业园伟业路10号 邮编 215300



Report No.: KSCR220800158701

Page: 77 of 108

#### 2.2.2 Test Graph





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 <a href="http://www.sgs.com/en/Terms-and-Conditions.aspx">http://www.sgs.com/en/Terms-and-Conditions/Terms-a-Documents, subject to Terms and Conditions for Electronic Documents at <a href="http://www.sgs.com/en/Terms-and-Conditions/Terms-a-Document.aspx">http://www.sgs.com/en/Terms-and-Conditions/Terms-a-Document.aspx</a>. 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.

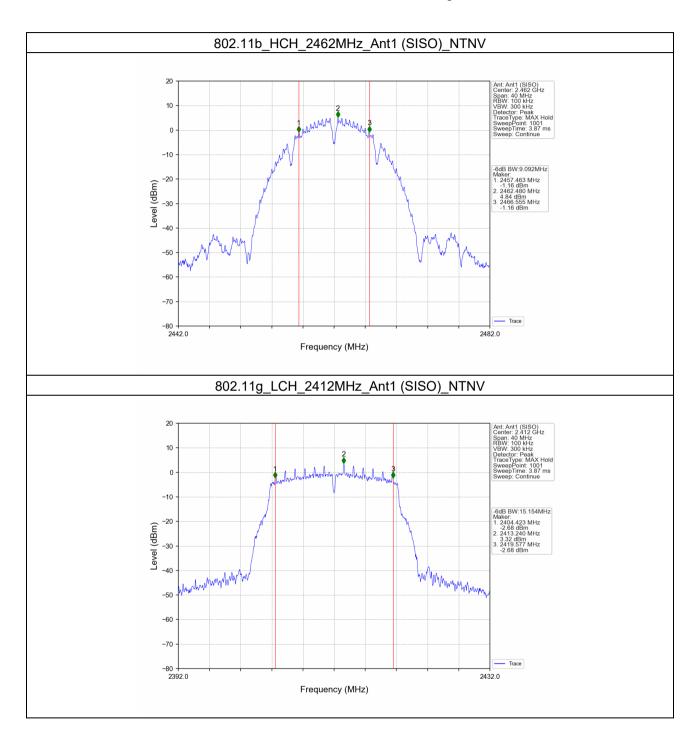
Attention: To check the authenticity of testing /inspection report & certificate, please contact us at telephone: (86-75) 83071443, or email: CN.Doccheck@sas.com

No.10, Weiye Road, Innovation Park, Kunshan, Jiangsu, China 215300 中国・江苏・昆山市留学生创业园伟业路10号 邮编 215300



Report No.: KSCR220800158701

Page: 78 of 108





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 <a href="http://www.sgs.com/en/Terms-and-Conditions.aspx">http://www.sgs.com/en/Terms-and-Conditions/Terms-a-Documents, subject to Terms and Conditions for Electronic Documents at <a href="http://www.sgs.com/en/Terms-and-Conditions/Terms-a-Document.aspx">http://www.sgs.com/en/Terms-and-Conditions/Terms-a-Document.aspx</a>. 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.

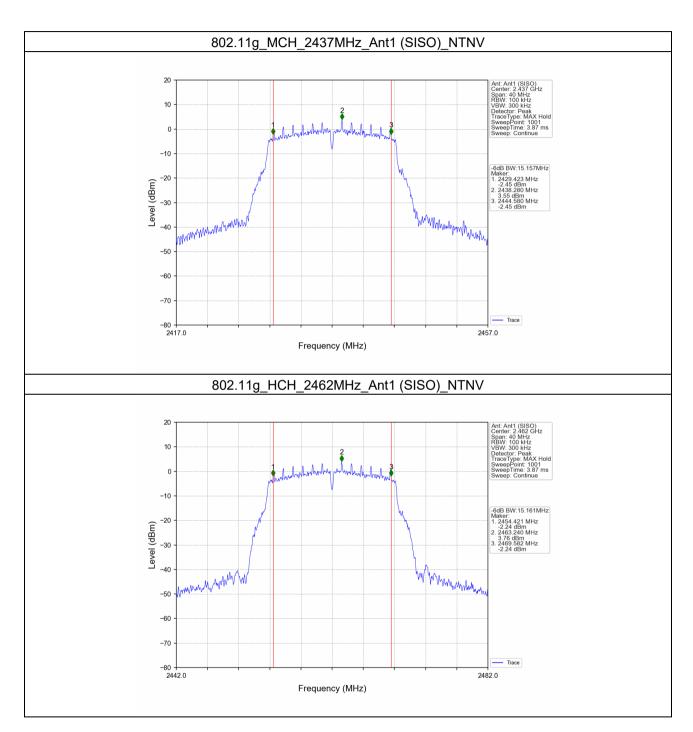
Attention: To check the authenticity of testing /inspection report & certificate, please contact us at telephone: (86-75) 83071443, or email: CN.Doccheck@sas.com

No.10, Weiye Road, Innovation Park, Kunshan, Jiangsu, China 215300 中国・江苏・昆山市留学生创业园伟业路10号 邮编 215300



Report No.: KSCR220800158701

Page: 79 of 108





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 <a href="http://www.sgs.com/en/Terms-and-Conditions.aspx">http://www.sgs.com/en/Terms-and-Conditions/Terms-a-Documents, subject to Terms and Conditions for Electronic Documents at <a href="http://www.sgs.com/en/Terms-and-Conditions/Terms-a-Document.aspx">http://www.sgs.com/en/Terms-and-Conditions/Terms-a-Document.aspx</a>. 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.

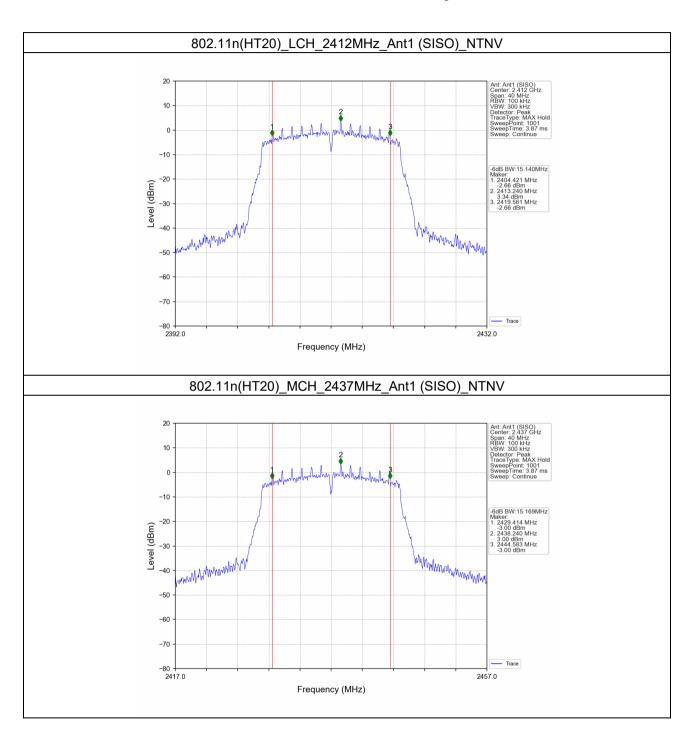
Attention: To check the authenticity of testing /inspection report & certificate, please contact us at telephone: (86-75) 83071443, or email: CN.Doccheck@sas.com

No.10, Weiye Road, Innovation Park, Kunshan, Jiangsu, China 215300 中国・江苏・昆山市留学生创业园伟业路10号 邮编 215300



Report No.: KSCR220800158701

Page: 80 of 108





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 <a href="http://www.sgs.com/en/Terms-and-Conditions.aspx">http://www.sgs.com/en/Terms-and-Conditions/Terms-a-Documents, subject to Terms and Conditions for Electronic Documents at <a href="http://www.sgs.com/en/Terms-and-Conditions/Terms-a-Document.aspx">http://www.sgs.com/en/Terms-and-Conditions/Terms-a-Document.aspx</a>. 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.

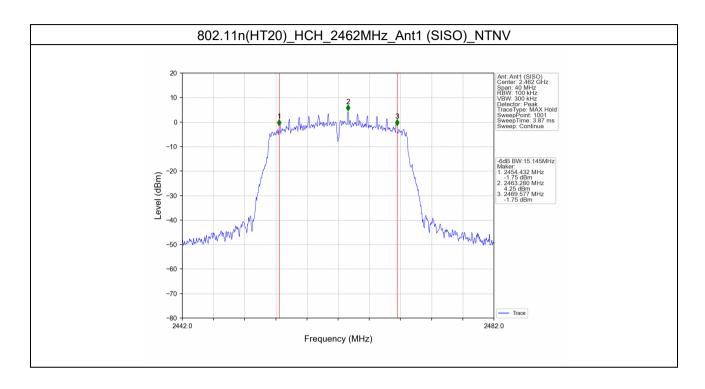
Attention: To check the authenticity of testing /inspection report & certificate, please contact us at telephone: (86-75) 83071443, or email: CN.Doccheck@sas.com

No.10, Weiye Road, Innovation Park, Kunshan, Jiangsu, China 215300 中国・江苏・昆山市留学生创业园伟业路10号 邮编 215300



Report No.: KSCR220800158701

Page: 81 of 108





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 <a href="http://www.sgs.com/en/Terms-and-Conditions.aspx">http://www.sgs.com/en/Terms-and-Conditions/Terms

No.10, Weiye Road, Innovation Park, Kunshan, Jiangsu, China 215300 中国•江苏•昆山市留学生创业园伟业路10号 邮编 215300



Report No.: KSCR220800158701

Page: 82 of 108

#### 3. Maximum Conducted Output Power

#### 3.1 Power

#### 3.1.1 Test Result

Mode	TX	Frequency	Maximum Average Condu	Verdict	
	Type	(MHz)	ANT1	Limit	Veruici
802.11b	SISO	2412	13.06	<=30	Pass
		2437	13.63	<=30	Pass
		2462	14.05	<=30	Pass
802.11g	SISO	2412	13.03	<=30	Pass
		2437	13.18	<=30	Pass
		2462	13.74	<=30	Pass
802.11n (HT20)	SISO	2412	12.94	<=30	Pass
		2437	13.01	<=30	Pass
		2462	13.67	<=30	Pass
Note1: Antenna Gain: Ant1: 3.83dBi;					



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 <a href="http://www.sgs.com/en/Terms-and-Conditions.aspx">http://www.sgs.com/en/Terms-and-Conditions/Terms

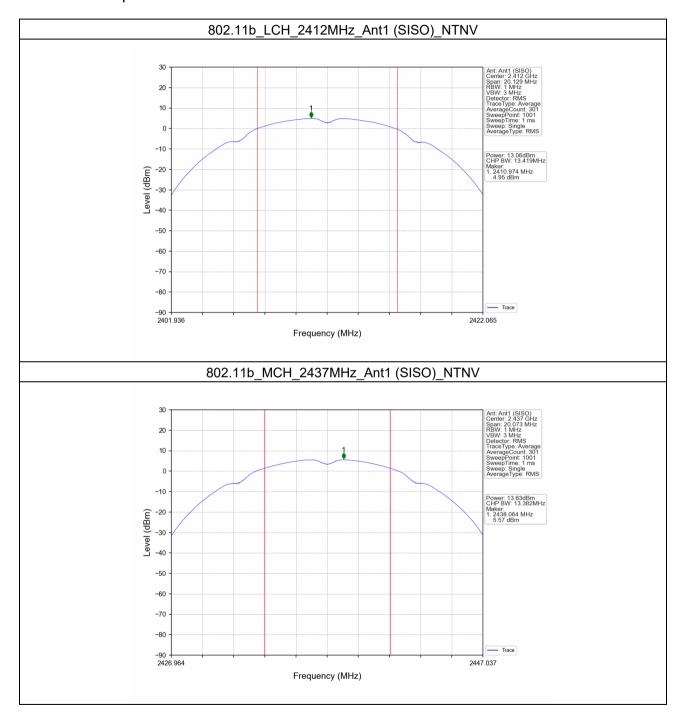
No.10, Weiye Road, Innovation Park, Kunshan, Jiangsu, China 215300 中国・江苏・昆山市留学生创业园伟业路10号 邮编 215300



Report No.: KSCR220800158701

Page: 83 of 108

#### 3.1.2 Test Graph





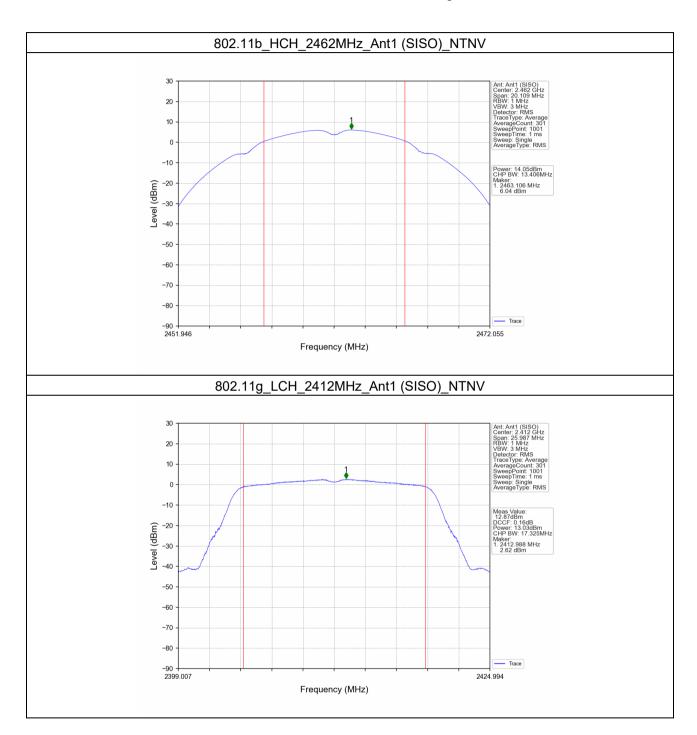
Unless otherwise agreed in writing, this document is issued by the Company subject to its General Conditions of Service printed overleaf, available on request or accessible at <a href="http://www.sgs.com/en/Terms-and-Conditions.aspx">http://www.sgs.com/en/Terms-and-Conditions/Terms

No.10, Weiye Road, Innovation Park, Kunshan, Jiangsu, China 215300 中国・江苏・昆山市留学生创业园伟业路10号 邮编 215300



Report No.: KSCR220800158701

Page: 84 of 108





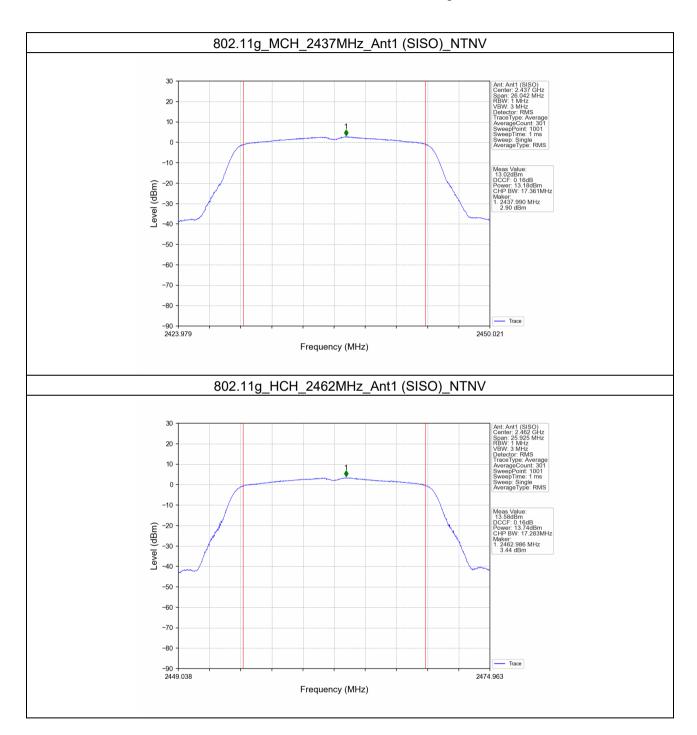
Unless otherwise agreed in writing, this document is issued by the Company subject to its General Conditions of Service printed overleaf, available on request or accessible at <a href="http://www.sgs.com/en/Terms-and-Conditions.aspx">http://www.sgs.com/en/Terms-and-Conditions/Terms

No.10, Weiye Road, Innovation Park, Kunshan, Jiangsu, China 215300 中国・江苏・昆山市留学生创业园伟业路10号 邮编 215300



Report No.: KSCR220800158701

Page: 85 of 108





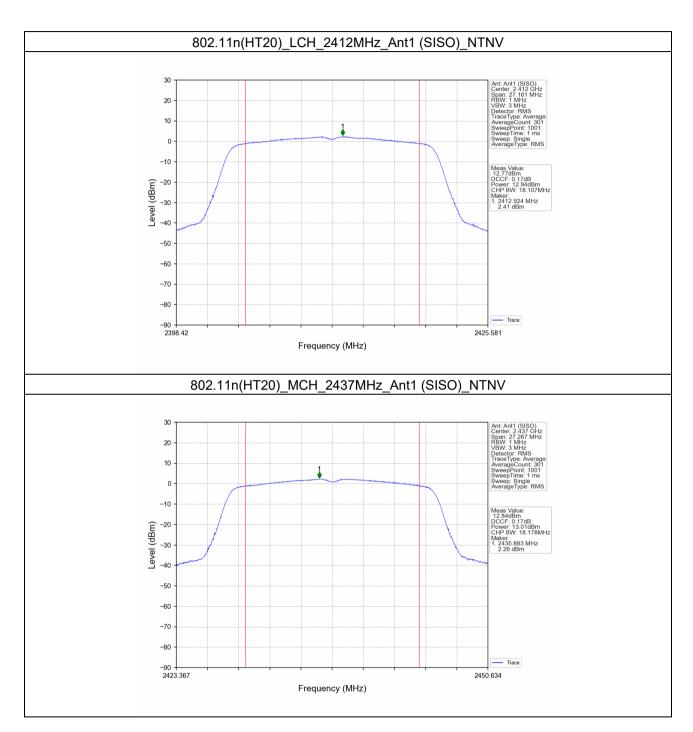
Unless otherwise agreed in writing, this document is issued by the Company subject to its General Conditions of Service printed overleaf, available on request or accessible at <a href="http://www.sgs.com/en/Terms-and-Conditions.aspx">http://www.sgs.com/en/Terms-and-Conditions/Terms

No.10, Weiye Road, Innovation Park, Kunshan, Jiangsu, China 215300 中国・江苏・昆山市留学生创业园伟业路10号 邮编 215300



Report No.: KSCR220800158701

Page: 86 of 108





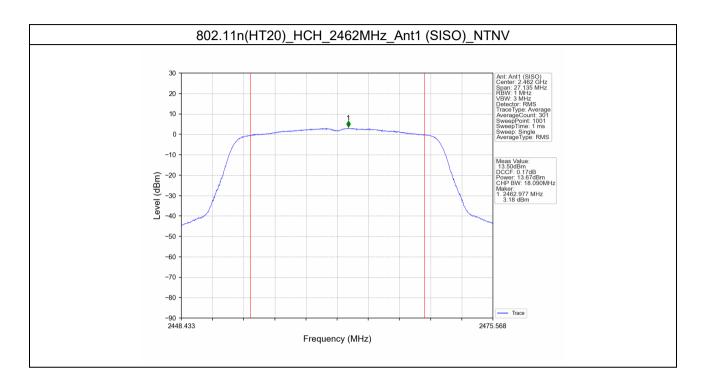
Unless otherwise agreed in writing, this document is issued by the Company subject to its General Conditions of Service printed overleaf, available on request or accessible at <a href="http://www.sgs.com/en/Terms-and-Conditions.aspx">http://www.sgs.com/en/Terms-and-Conditions/Terms

No.10, Weiye Road, Innovation Park, Kunshan, Jiangsu, China 215300 中国・江苏・昆山市留学生创业园伟业路10号 邮编 215300



Report No.: KSCR220800158701

Page: 87 of 108





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 <a href="http://www.sgs.com/en/Terms-and-Conditions.aspx">http://www.sgs.com/en/Terms-and-Conditions/Terms

No.10, Weiye Road, Innovation Park, Kunshan, Jiangsu, China 215300 中国•江苏•昆山市留学生创业园伟业路10号 邮编 215300



Report No.: KSCR220800158701

Page: 88 of 108

#### 4. Maximum Power Spectral Density

#### 4.1 PSD

#### 4.1.1 Test Result

Mode	TX Type	Frequency (MHz)	Maximum PS	\/amdiat	
			ANT1	Limit	Verdict
802.11b	SISO	2412	1.91	<=8	Pass
		2437	-2.90	<=8	Pass
		2462	1.94	<=8	Pass
802.11g	SISO	2412	-12.04	<=8	Pass
		2437	-13.28	<=8	Pass
		2462	-11.88	<=8	Pass
802.11n (HT20)		2412	-13.58	<=8	Pass
	SISO	2437	-14.22	<=8	Pass
		2462	-12.87	<=8	Pass
Note1: Antenna Gain: Ant1: 3.83dBi;					



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 <a href="http://www.sgs.com/en/Terms-and-Conditions.aspx">http://www.sgs.com/en/Terms-and-Conditions/Terms

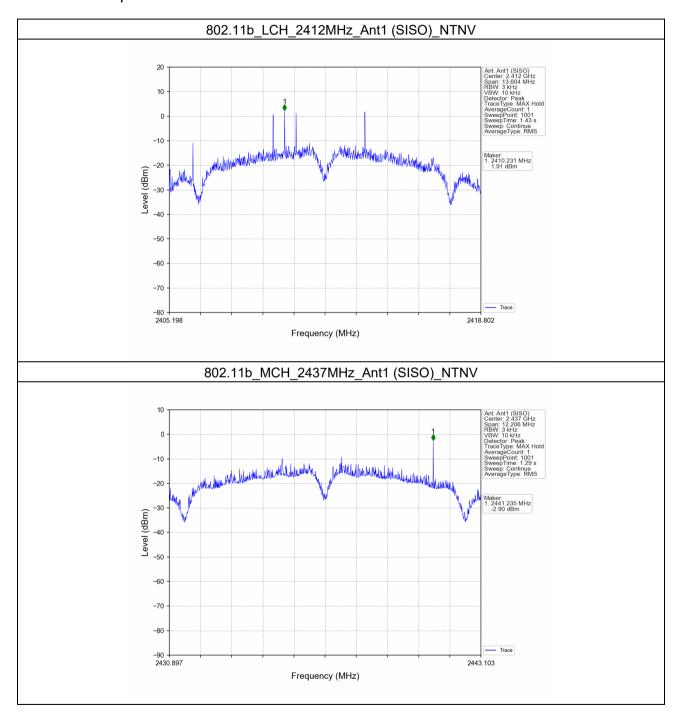
No.10, Weiye Road, Innovation Park, Kunshan, Jiangsu, China 215300 中国・江苏・昆山市留学生创业园伟业路10号 邮编 215300



Report No.: KSCR220800158701

Page: 89 of 108

#### 4.1.2 Test Graph





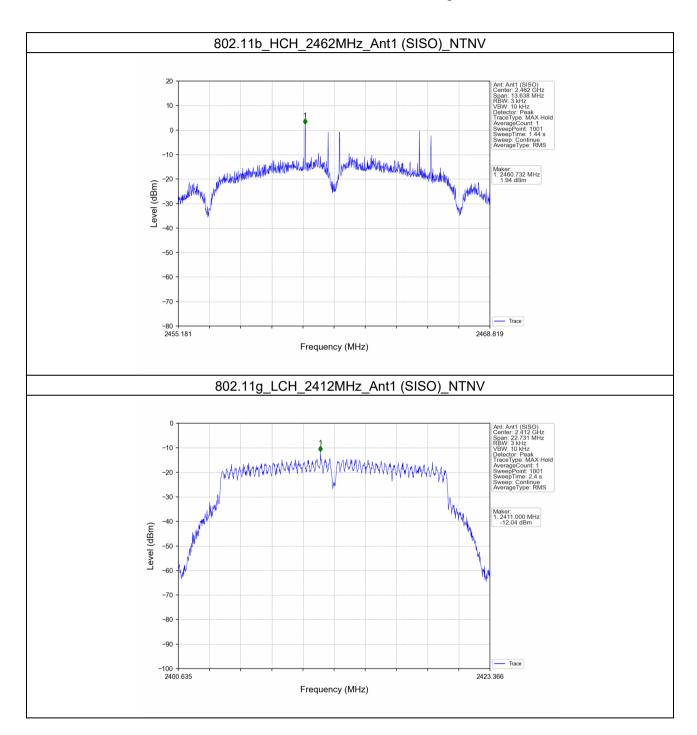
Unless otherwise agreed in writing, this document is issued by the Company subject to its General Conditions of Service printed overleaf, available on request or accessible at <a href="http://www.sgs.com/en/Terms-and-Conditions.aspx">http://www.sgs.com/en/Terms-and-Conditions/Terms

No.10, Weiye Road, Innovation Park, Kunshan, Jiangsu, China 215300 中国・江苏・昆山市留学生创业园伟业路10号 邮编 215300



Report No.: KSCR220800158701

Page: 90 of 108





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 <a href="http://www.sgs.com/en/Terms-and-Conditions.aspx">http://www.sgs.com/en/Terms-and-Conditions/Terms-a-Documents, subject to Terms and Conditions for Electronic Documents at <a href="http://www.sgs.com/en/Terms-and-Conditions/Terms-a-Document.aspx">http://www.sgs.com/en/Terms-and-Conditions/Terms-a-Document.aspx</a>. 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.

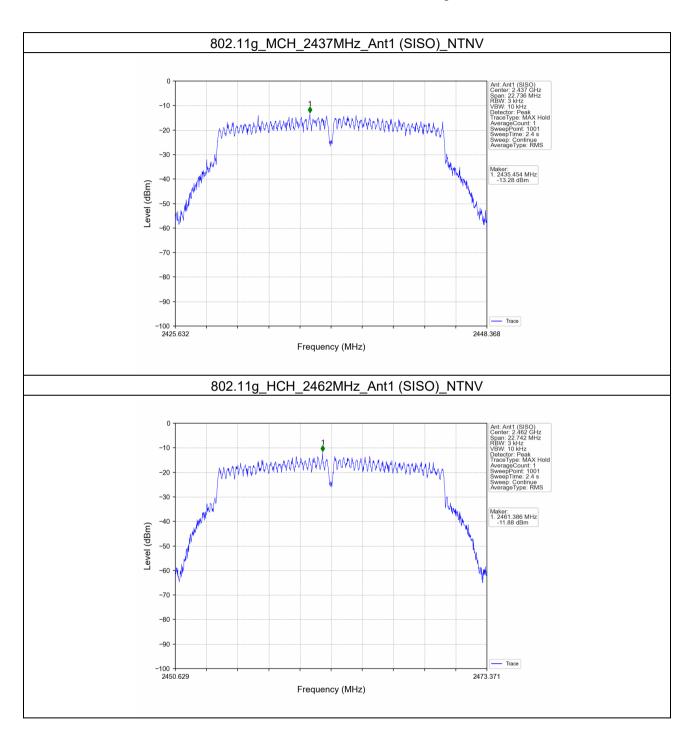
Attention: To check the authenticity of testing /inspection report & certificate, please contact us at telephone: (86-75) 83071443, or email: CN.Doccheck@sas.com

No.10, Weiye Road, Innovation Park, Kunshan, Jiangsu, China 215300 中国・江苏・昆山市留学生创业园伟业路10号 邮编 215300



Report No.: KSCR220800158701

Page: 91 of 108





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 <a href="http://www.sgs.com/en/Terms-and-Conditions.aspx">http://www.sgs.com/en/Terms-and-Conditions/Terms-a-Documents, subject to Terms and Conditions for Electronic Documents at <a href="http://www.sgs.com/en/Terms-and-Conditions/Terms-a-Document.aspx">http://www.sgs.com/en/Terms-and-Conditions/Terms-a-Document.aspx</a>. 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.

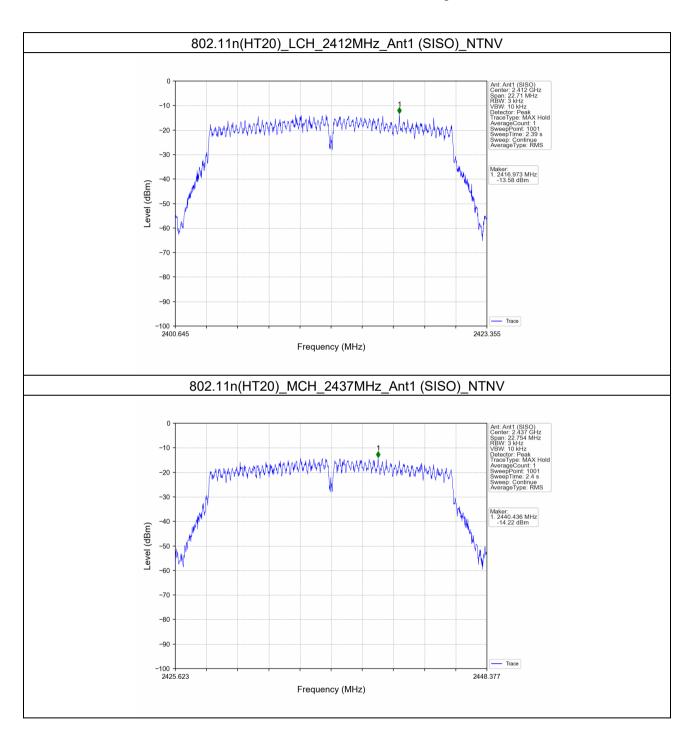
Attention: To check the authenticity of testing /inspection report & certificate, please contact us at telephone: (86-75) 83071443, or email: CN.Doccheck@sas.com

No.10, Weiye Road, Innovation Park, Kunshan, Jiangsu, China 215300 中国・江苏・昆山市留学生创业园伟业路10号 邮编 215300



Report No.: KSCR220800158701

Page: 92 of 108





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 <a href="http://www.sgs.com/en/Terms-and-Conditions.aspx">http://www.sgs.com/en/Terms-and-Conditions/Terms-a-Documents, subject to Terms and Conditions for Electronic Documents at <a href="http://www.sgs.com/en/Terms-and-Conditions/Terms-a-Document.aspx">http://www.sgs.com/en/Terms-and-Conditions/Terms-a-Document.aspx</a>. 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.

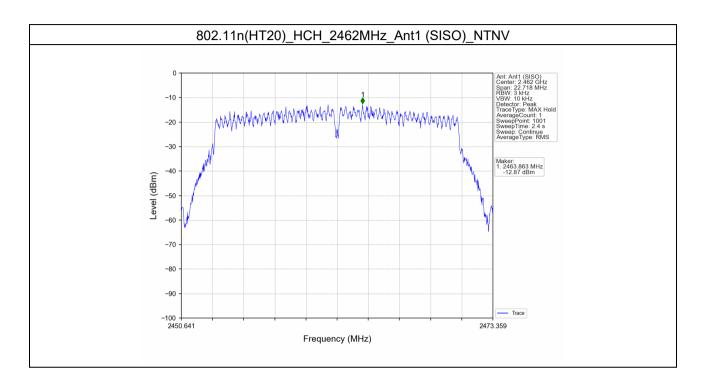
Attention: To check the authenticity of testing /inspection report & certificate, please contact us at telephone: (86-75) 83071443, or email: CN.Doccheck@sas.com

No.10, Weiye Road, Innovation Park, Kunshan, Jiangsu, China 215300 中国・江苏・昆山市留学生创业园伟业路10号 邮编 215300



Report No.: KSCR220800158701

Page: 93 of 108





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 <a href="http://www.sgs.com/en/Terms-and-Conditions.aspx">http://www.sgs.com/en/Terms-and-Conditions/Terms

No.10, Weiye Road, Innovation Park, Kunshan, Jiangsu, China 215300 中国・江苏・昆山市留学生创业园伟业路10号 邮编 215300



Report No.: KSCR220800158701

Page: 94 of 108

### 5. Unwanted Emissions InStandard Non-restricted Frequency Bands

#### 5.1 Ref

#### 5.1.1 Test Result

Mode	TX Type	Frequency (MHz)	ANT	Level of Reference (dBm)
802.11b	SISO	2412	1	4.04
		2437	1	4.44
		2462	1	4.81
	SISO	2412	1	3.28
802.11g		2437	1	3.44
002.11g		2462	1	4.25
802.11n (HT20)	SISO	2412	1	3.42
		2437	1	3.50
		2462	1	3.89

Note1: Refer to FCC Part 15.247 (d) and ANSI C63.10-2013, the channel contains the maximum PSD level was used to establish the reference level.



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 <a href="http://www.sgs.com/en/Terms-and-Conditions.aspx">http://www.sgs.com/en/Terms-and-Conditions/Terms-a-Documents, subject to Terms and Conditions for Electronic Documents at <a href="http://www.sgs.com/en/Terms-and-Conditions/Terms-a-Document.aspx">http://www.sgs.com/en/Terms-and-Conditions/Terms-a-Document.aspx</a>. 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: (86-75) 83071443, or email: CN.Doccheck@sas.com

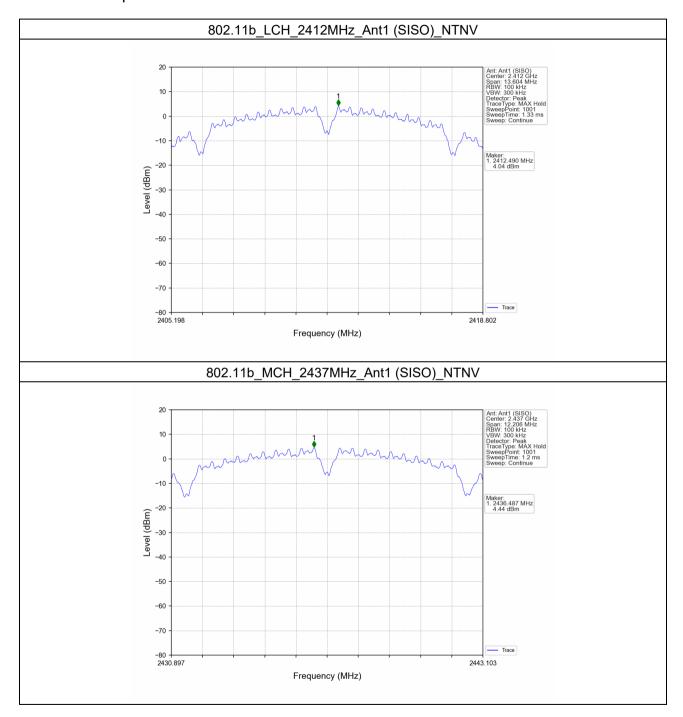
No.10, Weiye Road, Innovation Park, Kunshan, Jiangsu, China 215300 中国•江苏•昆山市留学生创业园伟业路10号 邮编 215300



Report No.: KSCR220800158701

Page: 95 of 108

#### 5.1.2 Test Graph





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 <a href="http://www.sgs.com/en/Terms-and-Conditions.aspx">http://www.sgs.com/en/Terms-and-Conditions/Terms-a-Documents, subject to Terms and Conditions for Electronic Documents at <a href="http://www.sgs.com/en/Terms-and-Conditions/Terms-a-Document.aspx">http://www.sgs.com/en/Terms-and-Conditions/Terms-a-Document.aspx</a>. 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.

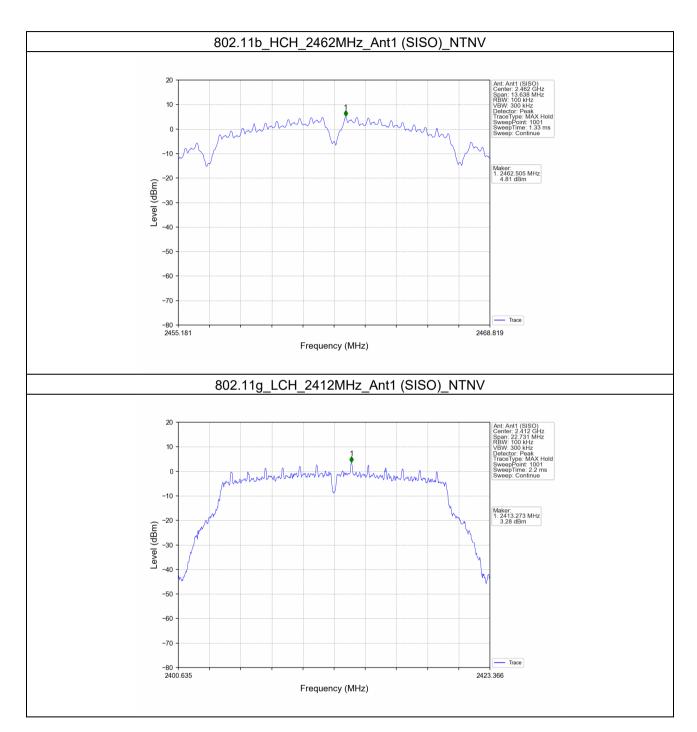
Attention: To check the authenticity of testing /inspection report & certificate, please contact us at telephone: (86-75) 83071443, or email: CN.Doccheck@sas.com

No.10, Weiye Road, Innovation Park, Kunshan, Jiangsu, China 215300 中国・江苏・昆山市留学生创业园伟业路10号 邮编 215300



Report No.: KSCR220800158701

Page: 96 of 108





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 <a href="http://www.sgs.com/en/Terms-and-Conditions.aspx">http://www.sgs.com/en/Terms-and-Conditions/Terms-a-Documents, subject to Terms and Conditions for Electronic Documents at <a href="http://www.sgs.com/en/Terms-and-Conditions/Terms-a-Document.aspx">http://www.sgs.com/en/Terms-and-Conditions/Terms-a-Document.aspx</a>. 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.

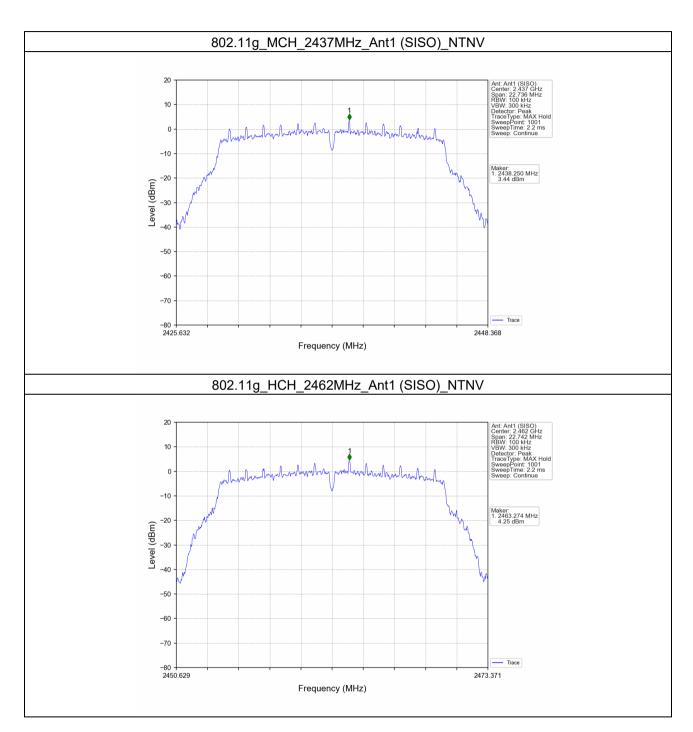
Attention: To check the authenticity of testing /inspection report & certificate, please contact us at telephone: (86-75) 83071443, or email: CN.Doccheck@sas.com

No.10, Weiye Road, Innovation Park, Kunshan, Jiangsu, China 215300 中国•江苏•昆山市留学生创业园伟业路10号 邮编 215300



Report No.: KSCR220800158701

Page: 97 of 108





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 <a href="http://www.sgs.com/en/Terms-and-Conditions.aspx">http://www.sgs.com/en/Terms-and-Conditions/Terms-a-Documents, subject to Terms and Conditions for Electronic Documents at <a href="http://www.sgs.com/en/Terms-and-Conditions/Terms-a-Document.aspx">http://www.sgs.com/en/Terms-and-Conditions/Terms-a-Document.aspx</a>. 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.

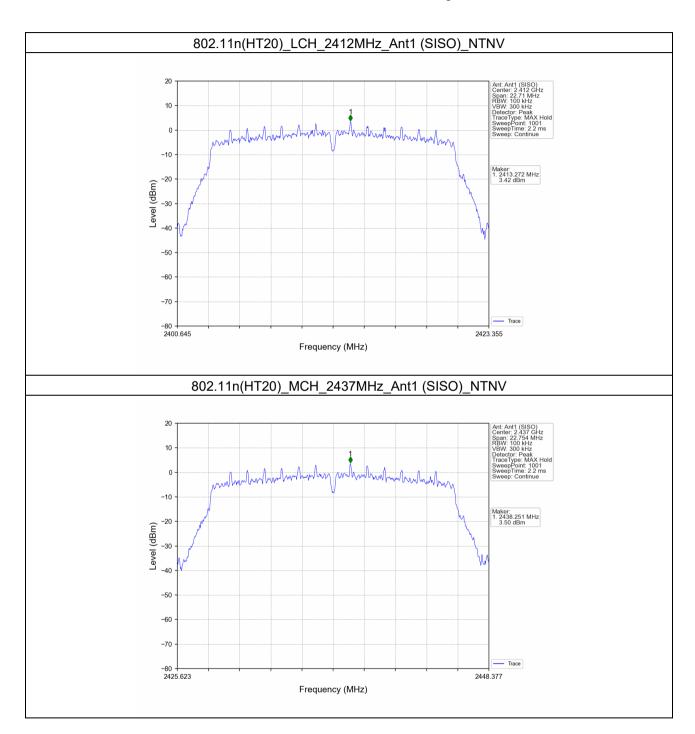
Attention: To check the authenticity of testing /inspection report & certificate, please contact us at telephone: (86-75) 83071443, or email: CN.Doccheck@sas.com

No.10, Weiye Road, Innovation Park, Kunshan, Jiangsu, China 215300 中国•江苏•昆山市留学生创业园伟业路10号 邮编 215300



Report No.: KSCR220800158701

Page: 98 of 108





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 <a href="http://www.sgs.com/en/Terms-and-Conditions.aspx">http://www.sgs.com/en/Terms-and-Conditions/Terms-a-Documents, subject to Terms and Conditions for Electronic Documents at <a href="http://www.sgs.com/en/Terms-and-Conditions/Terms-a-Document.aspx">http://www.sgs.com/en/Terms-and-Conditions/Terms-a-Document.aspx</a>. 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.

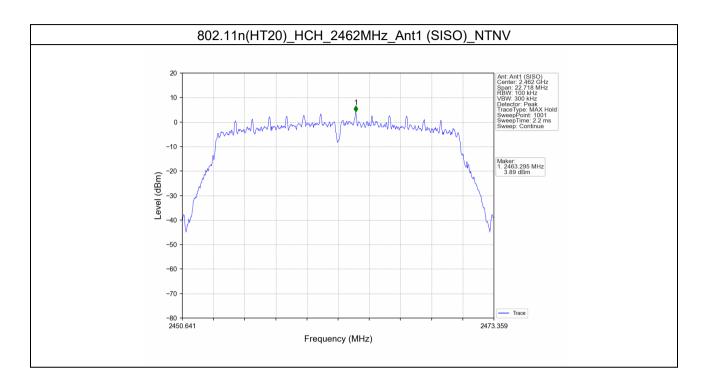
Attention: To check the authenticity of testing /inspection report & certificate, please contact us at telephone: (86-75) 83071443, or email: CN.Doccheck@sas.com

No.10, Weiye Road, Innovation Park, Kunshan, Jiangsu, China 215300 中国・江苏・昆山市留学生创业园伟业路10号 邮编 215300



Report No.: KSCR220800158701

Page: 99 of 108





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 <a href="http://www.sgs.com/en/Terms-and-Conditions.aspx">http://www.sgs.com/en/Terms-and-Conditions/Terms

No.10, Weiye Road, Innovation Park, Kunshan, Jiangsu, China 215300 中国・江苏・昆山市留学生创业园伟业路10号 邮编 215300



Report No.: KSCR220800158701

Page: 100 of 108

#### 5.2 CSE

#### 5.2.1 Test Result

Mode	TX Type	Frequency (MHz)	ANT	Level of Reference (dBm)	Limit (dBm)	Verdict
802.11b	SISO	2412	1	4.81	-25.19	Pass
		2437	1	4.81	-25.19	Pass
		2462	1	4.81	-25.19	Pass
802.11g	SISO	2412	1	4.25	-25.75	Pass
		2437	1	4.25	-25.75	Pass
		2462	1	4.25	-25.75	Pass
802.11n (HT20)		2412	1	3.89	-26.11	Pass
	SISO	2437	1	3.89	-26.11	Pass
		2462	1	3.89	-26.11	Pass

Note1: Refer to FCC Part 15.247 (d) and ANSI C63.10-2013, the channel contains the maximum PSD level was used to establish the reference level.



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 <a href="http://www.sgs.com/en/Terms-and-Conditions.aspx">http://www.sgs.com/en/Terms-and-Conditions/Terms

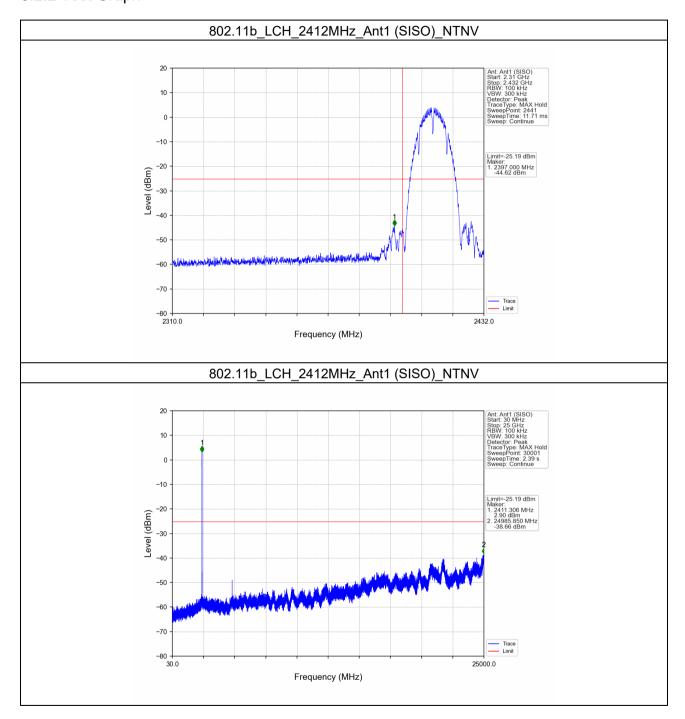
No.10, Weiye Road, Innovation Park, Kunshan, Jiangsu, China 215300 中国・江苏・昆山市留学生创业园伟业路10号 邮编 215300



Report No.: KSCR220800158701

Page: 101 of 108

#### 5.2.2 Test Graph





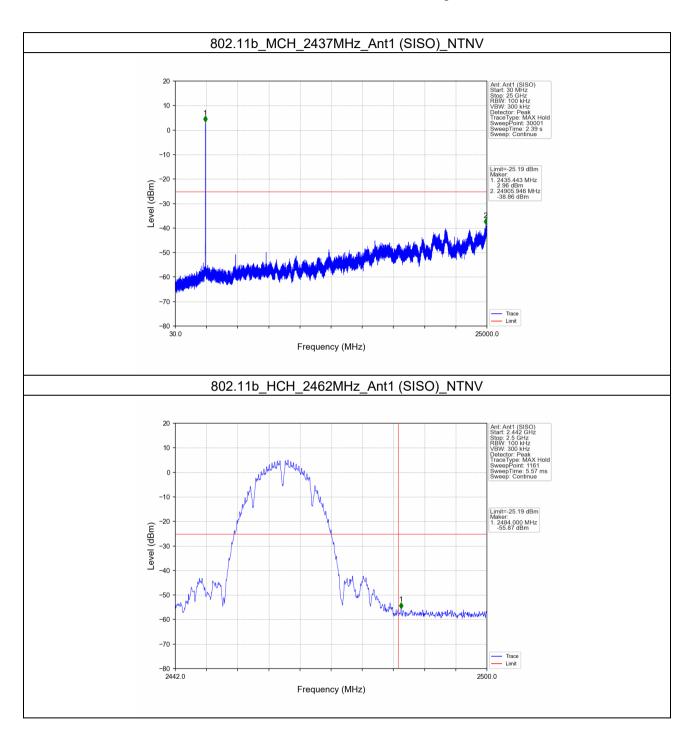
Unless otherwise agreed in writing, this document is issued by the Company subject to its General Conditions of Service printed overleaf, available on request or accessible at <a href="http://www.sgs.com/en/Terms-and-Conditions.aspx">http://www.sgs.com/en/Terms-and-Conditions/Terms

No.10, Weiye Road, Innovation Park, Kunshan, Jiangsu, China 215300 中国・江苏・昆山市留学生创业园伟业路10号 邮编 215300



Report No.: KSCR220800158701

Page: 102 of 108





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 <a href="http://www.sgs.com/en/Terms-and-Conditions.aspx">http://www.sgs.com/en/Terms-and-Conditions/Terms-a-Documents, subject to Terms and Conditions for Electronic Documents at <a href="http://www.sgs.com/en/Terms-and-Conditions/Terms-a-Document.aspx">http://www.sgs.com/en/Terms-and-Conditions/Terms-a-Document.aspx</a>. 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.

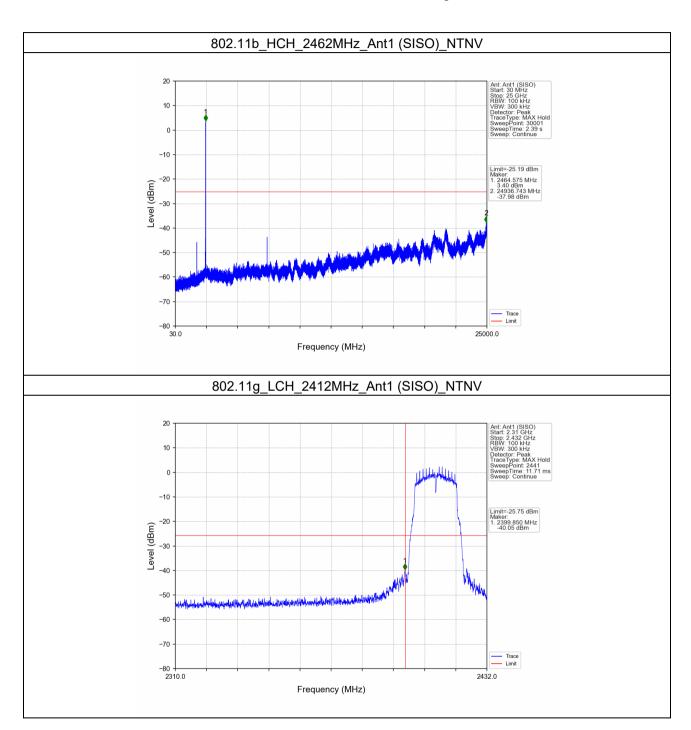
Attention: To check the authenticity of testing /inspection report & certificate, please contact us at telephone: (86-75) 83071443, or email: CN.Doccheck@sas.com

No.10, Weiye Road, Innovation Park, Kunshan, Jiangsu, China 215300 中国・江苏・昆山市留学生创业园伟业路10号 邮编 215300



Report No.: KSCR220800158701

Page: 103 of 108





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 <a href="http://www.sgs.com/en/Terms-and-Conditions.aspx">http://www.sgs.com/en/Terms-and-Conditions/Terms-a-Documents, subject to Terms and Conditions for Electronic Documents at <a href="http://www.sgs.com/en/Terms-and-Conditions/Terms-a-Document.aspx">http://www.sgs.com/en/Terms-and-Conditions/Terms-a-Document.aspx</a>. 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.

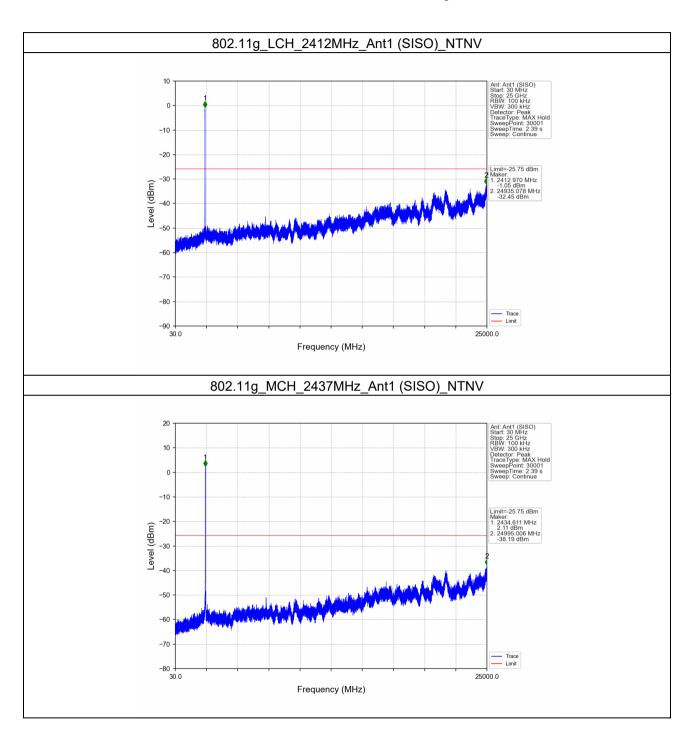
Attention: To check the authenticity of testing /inspection report & certificate, please contact us at telephone: (86-75) 83071443, or email: CN.Doccheck@sas.com

No.10, Weiye Road, Innovation Park, Kunshan, Jiangsu, China 215300 中国・江苏・昆山市留学生创业园伟业路10号 邮编 215300



Report No.: KSCR220800158701

Page: 104 of 108





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 <a href="http://www.sgs.com/en/Terms-and-Conditions.aspx">http://www.sgs.com/en/Terms-and-Conditions/Terms-a-Documents, subject to Terms and Conditions for Electronic Documents at <a href="http://www.sgs.com/en/Terms-and-Conditions/Terms-a-Document.aspx">http://www.sgs.com/en/Terms-and-Conditions/Terms-a-Document.aspx</a>. 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.

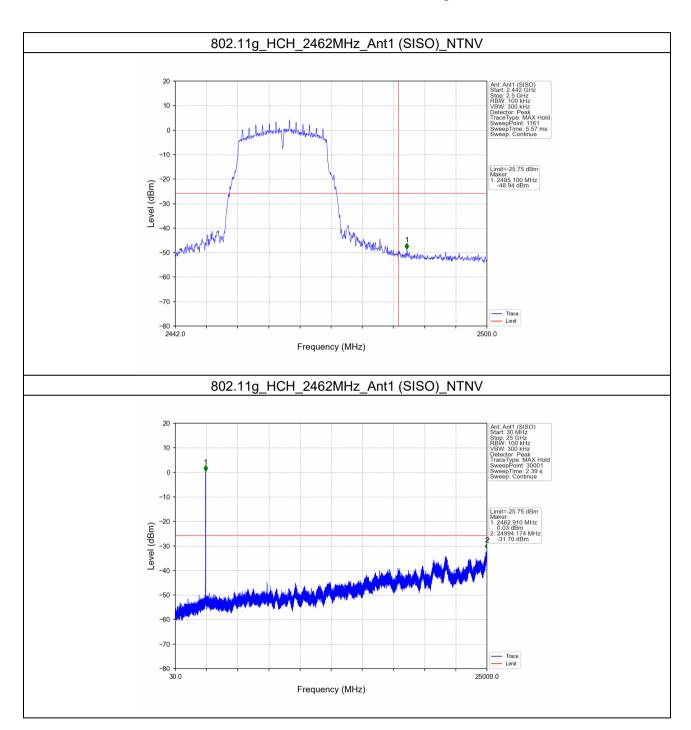
Attention: To check the authenticity of testing /inspection report & certificate, please contact us at telephone: (86-75) 83071443, or email: CN.Doccheck@sas.com

No.10, Weiye Road, Innovation Park, Kunshan, Jiangsu, China 215300 中国・江苏・昆山市留学生创业园伟业路10号 邮编 215300



Report No.: KSCR220800158701

Page: 105 of 108





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 <a href="http://www.sgs.com/en/Terms-and-Conditions.aspx">http://www.sgs.com/en/Terms-and-Conditions/Terms-a-Documents, subject to Terms and Conditions for Electronic Documents at <a href="http://www.sgs.com/en/Terms-and-Conditions/Terms-a-Document.aspx">http://www.sgs.com/en/Terms-and-Conditions/Terms-a-Document.aspx</a>. 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.

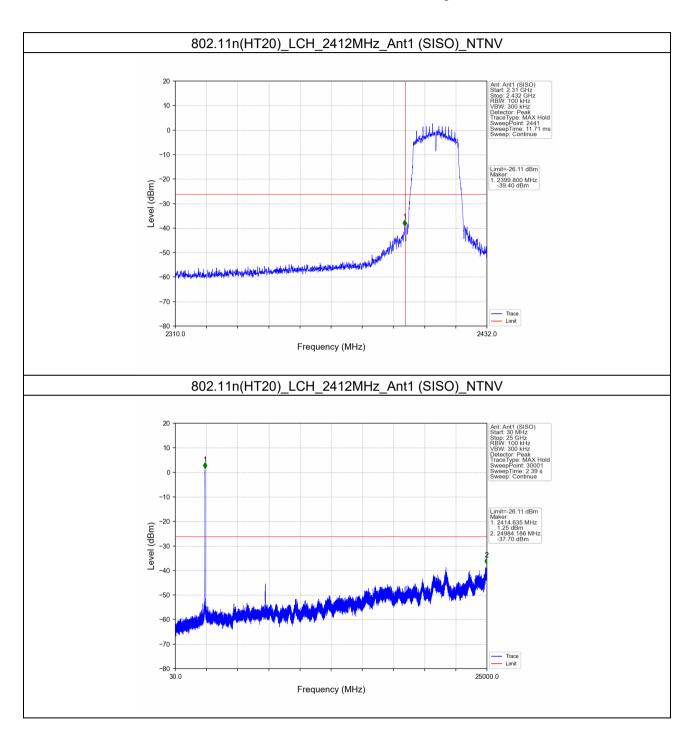
Attention: To check the authenticity of testing /inspection report & certificate, please contact us at telephone: (86-75) 83071443, or email: CN.Doccheck@sas.com

No.10, Weiye Road, Innovation Park, Kunshan, Jiangsu, China 215300 中国・江苏・昆山市留学生创业园伟业路10号 邮编 215300



Report No.: KSCR220800158701

Page: 106 of 108





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 <a href="http://www.sgs.com/en/Terms-and-Conditions.aspx">http://www.sgs.com/en/Terms-and-Conditions/Terms-a-Documents, subject to Terms and Conditions for Electronic Documents at <a href="http://www.sgs.com/en/Terms-and-Conditions/Terms-a-Document.aspx">http://www.sgs.com/en/Terms-and-Conditions/Terms-a-Document.aspx</a>. 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.

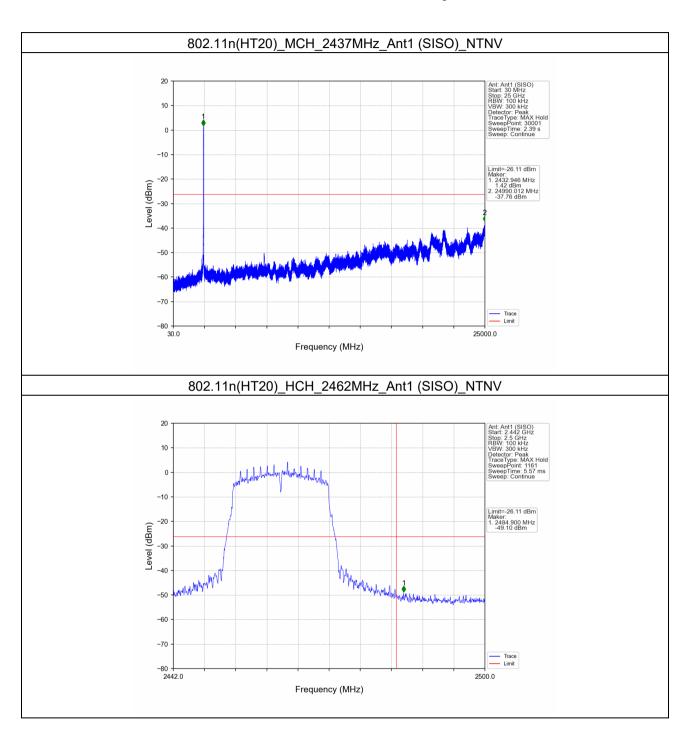
Attention: To check the authenticity of testing /inspection report & certificate, please contact us at telephone: (86-75) 83071443, or email: CN.Doccheck@sas.com

No.10, Weiye Road, Innovation Park, Kunshan, Jiangsu, China 215300 中国・江苏・昆山市留学生创业园伟业路10号 邮编 215300



Report No.: KSCR220800158701

Page: 107 of 108





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 <a href="http://www.sgs.com/en/Terms-and-Conditions.aspx">http://www.sgs.com/en/Terms-and-Conditions/Terms-a-Documents, subject to Terms and Conditions for Electronic Documents at <a href="http://www.sgs.com/en/Terms-and-Conditions/Terms-a-Document.aspx">http://www.sgs.com/en/Terms-and-Conditions/Terms-a-Document.aspx</a>. 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.

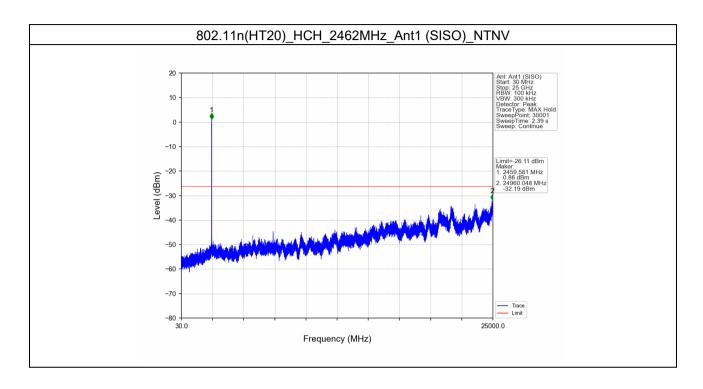
Attention: To check the authenticity of testing /inspection report & certificate, please contact us at telephone: (86-75) 83071443, or email: CN.Doccheck@sas.com

No.10, Weiye Road, Innovation Park, Kunshan, Jiangsu, China 215300 中国・江苏・昆山市留学生创业园伟业路10号 邮编 215300



Report No.: KSCR220800158701

Page: 108 of 108



- End of the 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 <a href="http://www.sgs.com/en/Terms-and-Conditions.aspx">http://www.sgs.com/en/Terms-and-Conditions/Terms

No.10, Weiye Road, Innovation Park, Kunshan, Jiangsu, China 215300 中国・江苏・昆山市留学生创业园伟业路10号 邮编 215300