



## TEST REPORT

**Application No.:** SZEM1811010092CR  
**Applicant:** DASAN Zhone Solutions, Inc.  
**Address of Applicant:** 7195 Oakport St., Oakland, California, 94621 United States  
**Manufacturer:** DASAN Zhone Solutions, Inc.  
**Address of Manufacturer:** 7195 Oakport St., Oakland, California, 94621 United States  
**Factory:** Aztech Communication Device(DG) Ltd  
**Address of Factory:** Jiu Jiang Shui Village, Chang Ping Town, Dong Guan City, Guang Dong Province, China

**Equipment Under Test (EUT):**

**EUT Name:** Wireless Extender  
**Model No.:** MESH-2100  
**Trade mark:** DZS  
**FCC ID:** PJZMESH2100  
**Standard(s) :** 47 CFR Part 15, Subpart E 15.407  
**Date of Receipt:** 2018-11-28  
**Date of Test:** 2018-11-30 to 2018-12-29  
**Date of Issue:** 2019-01-04

<b>Test Result:</b>	<b>Pass*</b>
---------------------	--------------

\* In the configuration tested, the EUT complied with the standards specified above.

Keny Xu

Keny Xu  
EMC Laboratory Manager



SGS-CSTC Standards Technical Services Co., Ltd.  
Shenzhen Branch EMC Laboratory

Unless otherwise agreed in writing, this document is issued by the Company subject to its General Conditions of Service printed overleaf, available on request or accessible at <http://www.sgs.com/en/Terms-and-Conditions.aspx> and, for electronic format documents, subject to Terms and Conditions for Electronic Documents at <http://www.sgs.com/en/Terms-and-Conditions/Terms-e-Documents.aspx>. Attention is drawn to the limitation of liability, indemnification and jurisdiction issues defined therein. Any holder of this document is advised that information contained hereon reflects the Company's findings at the time of its intervention only and within the limits of Client's instructions, if any. The Company's sole responsibility is to its Client and this document does not exonerate parties to a transaction from exercising all their rights and obligations under the transaction documents. This document cannot be reproduced except in full, without prior written approval of the Company. Any unauthorized alteration, forgery or falsification of the content or appearance of this document is unlawful and offenders may be prosecuted to the fullest extent of the law. Unless otherwise stated the results shown in this test report refer only to the sample(s) tested and such sample(s) are retained for 30 days only.  
Attention: To check the authenticity of testing / inspection report & certificate, please contact us at telephone: (86-755) 8307 1443, or email: [CN.Doccheck@sgs.com](mailto:CN.Doccheck@sgs.com)

No.1 Workshop, M-10, Middle Section, Science & Technology Park, Shenzhen, China 518057 t (86-755) 26012053 f (86-755) 26710594 www.sgsgroup.com.cn  
中国·深圳·科技园中区M-10栋一号厂房 邮编: 518057 t (86-755) 26012053 f (86-755) 26710594 sgs.china@sgs.com



Revision Record				
Version	Chapter	Date	Modifier	Remark
01		2019-01-04		Original

Authorized for issue by:			
			
		Edison Li /Project Engineer	
			
		Eric Fu /Reviewer	



Unless otherwise agreed in writing, this document is issued by the Company subject to its General Conditions of Service printed overleaf, available on request or accessible at <http://www.sgs.com/en/Terms-and-Conditions.aspx> and, for electronic format documents, subject to Terms and Conditions for Electronic Documents at <http://www.sgs.com/en/Terms-and-Conditions/Terms-e-Documents.aspx>. Attention is drawn to the limitation of liability, indemnification and jurisdiction issues defined therein. Any holder of this document is advised that information contained hereon reflects the Company's findings at the time of its intervention only and within the limits of Client's instructions, if any. The Company's sole responsibility is to its Client and this document does not exonerate parties to a transaction from exercising all their rights and obligations under the transaction documents. This document cannot be reproduced except in full, without prior written approval of the Company. Any unauthorized alteration, forgery or falsification of the content or appearance of this document is unlawful and offenders may be prosecuted to the fullest extent of the law. Unless otherwise stated the results shown in this test report refer only to the sample(s) tested and such sample(s) are retained for 30 days only.  
Attention: To check the authenticity of testing /inspection report & certificate, please contact us at telephone: (86-755) 8307 1443, or email: [CN.Doccheck@sgs.com](mailto:CN.Doccheck@sgs.com)

## 2 Test Summary

Radio Spectrum Technical Requirement				
Item	Standard	Method	Requirement	Result
Antenna Requirement	47 CFR Part 15, Subpart E 15.407	N/A	47 CFR Part 15, Subpart C 15.203	Pass
Transmission in the Absence of Data	47 CFR Part 15, Subpart E 15.407	N/A	47 CFR Part 15, Subpart C 15.407 (c)	Pass

N/A: Not applicable

Radio Spectrum Matter Part				
Item	Standard	Method	Requirement	Result
Conducted Emissions at AC Power Line (150kHz-30MHz)	47 CFR Part 15, Subpart E 15.407	ANSI C63.10 (2013) Section 6.2	47 CFR Part 15, Subpart C 15.207 & 15.407 b(6)	Pass
99% Bandwidth	47 CFR Part 15, Subpart E 15.407	KDB 789033 II D	N/A	Pass
26dB Emission bandwidth	47 CFR Part 15, Subpart E 15.407	KDB 789033 D02 II C 1	47 CFR Part 15, Subpart C 15.407 (a)	Pass
Maximum Conducted output power	47 CFR Part 15, Subpart E 15.407	KDB 789033 D02 II E	47 CFR Part 15, Subpart C 15.407 (a)	Pass
Peak Power spectrum density	47 CFR Part 15, Subpart E 15.407	KDB 789033 D02 II F	47 CFR Part 15, Subpart C 15.407 (a)	Pass
Radiated Emissions	47 CFR Part 15, Subpart E 15.407	KDB 789033 D02 II G	47 CFR Part 15, Subpart C 15.209 & 15.407(b)	Pass
Radiated Emissions which fall in the restricted bands	47 CFR Part 15, Subpart E 15.407	KDB 789033 D02 II G	47 CFR Part 15, Subpart C 15.209 & 15.407(b)	Pass
Frequency Stability	47 CFR Part 15, Subpart E 15.407	ANSI C63.10 (2013) Section 6.8	47 CFR Part 15, Subpart C 15.407 (g)	Pass

N/A: Not applicable

### 3 Contents

	Page
<b>1 COVER PAGE .....</b>	<b>1</b>
<b>2 TEST SUMMARY .....</b>	<b>3</b>
<b>3 CONTENTS .....</b>	<b>4</b>
<b>4 GENERAL INFORMATION .....</b>	<b>6</b>
4.1 DETAILS OF E.U.T. ....	6
4.2 DESCRIPTION OF SUPPORT UNITS .....	6
4.3 MEASUREMENT UNCERTAINTY .....	7
4.4 TEST LOCATION.....	8
4.5 TEST FACILITY.....	8
4.6 DEVIATION FROM STANDARDS.....	8
4.7 ABNORMALITIES FROM STANDARD CONDITIONS .....	8
<b>5 EQUIPMENT LIST.....</b>	<b>9</b>
<b>6 RADIO SPECTRUM TECHNICAL REQUIREMENT .....</b>	<b>12</b>
6.1 ANTENNA REQUIREMENT .....	12
6.1.1 <i>Test Requirement:</i> .....	12
6.1.2 <i>Conclusion</i> .....	12
6.2 TRANSMISSION IN THE ABSENCE OF DATA.....	13
6.2.1 <i>Test Requirement:</i> .....	13
6.2.2 <i>Conclusion</i> .....	13
<b>7 RADIO SPECTRUM MATTER TEST RESULTS.....</b>	<b>14</b>
7.1 CONDUCTED EMISSIONS AT AC POWER LINE (150KHZ-30MHZ).....	14
7.1.1 <i>E.U.T. Operation</i> .....	14
7.1.2 <i>Test Setup Diagram</i> .....	15
7.1.3 <i>Measurement Procedure and Data</i> .....	15
7.2 99% BANDWIDTH .....	18
7.2.1 <i>E.U.T. Operation</i> .....	18
7.2.2 <i>Test Setup Diagram</i> .....	18
7.2.3 <i>Measurement Procedure and Data</i> .....	19
7.3 26dB EMISSION BANDWIDTH .....	20
7.3.1 <i>E.U.T. Operation</i> .....	20
7.3.2 <i>Test Setup Diagram</i> .....	20
7.3.3 <i>Measurement Procedure and Data</i> .....	21
7.4 MAXIMUM CONDUCTED OUTPUT POWER.....	22
7.4.1 <i>E.U.T. Operation</i> .....	22
7.4.2 <i>Test Setup Diagram</i> .....	23
7.4.3 <i>Measurement Procedure and Data</i> .....	23
7.5 PEAK POWER SPECTRUM DENSITY.....	24
7.5.1 <i>E.U.T. Operation</i> .....	24
7.5.2 <i>Test Setup Diagram</i> .....	25
7.5.3 <i>Measurement Procedure and Data</i> .....	25



Unless otherwise agreed in writing, this document is issued by the Company subject to its General Conditions of Service printed overleaf, available on request or accessible at <http://www.sgs.com/en/Terms-and-Conditions.aspx> and, for electronic format documents, subject to Terms and Conditions for Electronic Documents at <http://www.sgs.com/en/Terms-and-Conditions/Terms-e-Documents.aspx>. Attention is drawn to the limitation of liability, indemnification and jurisdiction issues defined therein. Any holder of this document is advised that information contained hereon reflects the Company's findings at the time of its intervention only and within the limits of Client's instructions, if any. The Company's sole responsibility is to its Client and this document does not exonerate parties to a transaction from exercising all their rights and obligations under the transaction documents. This document cannot be reproduced except in full, without prior written approval of the Company. Any unauthorized alteration, forgery or falsification of the content or appearance of this document is unlawful and offenders may be prosecuted to the fullest extent of the law. Unless otherwise stated the results shown in this test report refer only to the sample(s) tested and such sample(s) are retained for 30 days only.

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

SGS-CSTC Standards Technical Services Co., Ltd.  
Shenzhen Branch (China) Standards & Testing Laboratory

No.1 Workshop, M-10, Middle Section, Science & Technology Park, Shenzhen, China 518057 t (86-755) 26012053 f (86-755) 26710594 www.sgsgroup.com.cn  
中国·深圳·科技园中区M-10栋一号厂房 邮编: 518057 t (86-755) 26012053 f (86-755) 26710594 sgs.china@sgs.com





7.6	RADIATED EMISSIONS .....	26
7.6.1	E.U.T. Operation .....	26
7.6.2	Test Setup Diagram .....	27
7.6.3	Measurement Procedure and Data .....	28
7.7	RADIATED EMISSIONS WHICH FALL IN THE RESTRICTED BANDS .....	87
7.7.1	E.U.T. Operation .....	87
7.7.2	Test Setup Diagram .....	88
7.7.3	Measurement Procedure and Data .....	89
7.8	FREQUENCY STABILITY .....	156
7.8.1	E.U.T. Operation .....	156
7.8.2	Test Setup Diagram .....	157
7.8.3	Measurement Procedure and Data .....	157
8	PHOTOGRAPHS .....	158
8.1	TEST SETUP .....	158
8.2	EUT CONSTRUCTIONAL DETAILS (EUT PHOTOS) .....	158
9	APPENDIX .....	159
9.1	APPENDIX 15.407 .....	159-405





## 4 General Information

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

Power supply:	Switching Adapter Model: S18B72-120A150-C4 Input: AC 100-240V, 50/60Hz, Max 0.7A Output: DC 12V, 1.5A			
Test voltage:	AC120V, 60Hz			
Cable:	DC Cable: 122cm unshielded Network Cable: 180cm unshielded			
Operation Frequency:	Band	Mode	Frequency Range(MHz)	Number of channels
	UNII Band I	802.11a/n(HT20)/ac(HT20)	5180-5240	4
		802.11n(HT40)/ac(HT40)	5190-5230	2
		802.11ac(HT80)	5210	1
	UNII Band III	802.11a/n(HT20)/ac(HT20)	5745-5825	5
		802.11n(HT40)/ac(HT40)	5755-5795	2
		802.11ac(HT80)	5775	1
Modulation Type:	802.11a: OFDM (64QAM, 16QAM, QPSK, BPSK) 802.11n: OFDM (BPSK, QPSK, 16QAM, 64QAM) 802.11ac: OFDM (BPSK, QPSK, 16QAM, 64QAM, 256QAM)			
TPC Function:	Not support			
Sample Type:	Fixed device			
Antenna Type:	Integral			
Antenna Gain:	Ant1/Ant2/Ant3/Ant4: 5dBi Note: four antennas can simultaneous transmission.			

### 4.2 Description of Support Units

Description	Manufacturer	Model No.	Serial No.
Laptop	Lenovo	L430	--



Unless otherwise agreed in writing, this document is issued by the Company subject to its General Conditions of Service printed overleaf, available on request or accessible at <http://www.sgs.com/en/Terms-and-Conditions.aspx> and, for electronic format documents, subject to Terms and Conditions for Electronic Documents at <http://www.sgs.com/en/Terms-and-Conditions/Terms-e-Documents.aspx>. Attention is drawn to the limitation of liability, indemnification and jurisdiction issues defined therein. Any holder of this document is advised that information contained hereon reflects the Company's findings at the time of its intervention only and within the limits of Client's instructions, if any. The Company's sole responsibility is to its Client and this document does not exonerate parties to a transaction from exercising all their rights and obligations under the transaction documents. This document cannot be reproduced except in full, without prior written approval of the Company. Any unauthorized alteration, forgery or falsification of the content or appearance of this document is unlawful and offenders may be prosecuted to the fullest extent of the law. Unless otherwise stated the results shown in this test report refer only to the sample(s) tested and such sample(s) are retained for 30 days only.  
Attention: To check the authenticity of testing / inspection report & certificate, please contact us at telephone: (86-755) 8307 1443, or email: [CN.Doccheck@sgs.com](mailto:CN.Doccheck@sgs.com)

### 4.3 Measurement Uncertainty

No.	Item	Measurement Uncertainty
1	Radio Frequency	$\pm 7.25 \times 10^{-8}$
2	Duty cycle	$\pm 0.37\%$
3	Occupied Bandwidth	$\pm 3\%$
4	RF conducted power	$\pm 0.75\text{dB}$
5	RF power density	$\pm 2.84\text{dB}$
6	Conducted Spurious emissions	$\pm 0.75\text{dB}$
7	RF Radiated power	$\pm 4.5\text{dB}$ (below 1GHz)
		$\pm 4.8\text{dB}$ (above 1GHz)
8	Radiated Spurious emission test	$\pm 4.5\text{dB}$ (Below 1GHz)
		$\pm 4.8\text{dB}$ (Above 1GHz)
9	Temperature test	$\pm 1^\circ\text{C}$
10	Humidity test	$\pm 3\%$
11	Supply voltages	$\pm 1.5\%$
12	Time	$\pm 3\%$

#### 4.4 Test Location

All tests were performed at:

SGS-CSTC Standards Technical Services Co., Ltd., Shenzhen Branch

No. 1 Workshop, M-10, Middle Section, Science & Technology Park, Shenzhen, Guangdong, China. 518057.

Tel: +86 755 2601 2053 Fax: +86 755 2671 0594

No tests were sub-contracted.

#### 4.5 Test Facility

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

- **CNAS (No. CNAS L2929)**

CNAS has accredited SGS-CSTC Standards Technical Services Co., Ltd. Shenzhen Branch EMC Lab to ISO/IEC 17025:2005 General Requirements for the Competence of Testing and Calibration Laboratories (CNAS-CL01 Accreditation Criteria for the Competence of Testing and Calibration Laboratories) for the competence in the field of testing.

- **A2LA (Certificate No. 3816.01)**

SGS-CSTC Standards Technical Services Co., Ltd., Shenzhen EMC Laboratory is accredited by the American Association for Laboratory Accreditation(A2LA). Certificate No. 3816.01.

- **VCCI**

The 3m Fully-anechoic chamber for above 1GHz, 10m Semi-anechoic chamber for below 1GHz, Shielded Room for Mains Port Conducted Interference Measurement and Telecommunication Port Conducted Interference Measurement of SGS-CSTC Standards Technical Services Co., Ltd. have been registered in accordance with the Regulations for Voluntary Control Measures with Registration No.: G-20026, R-14188, C-12383 and T-11153 respectively.

- **FCC –Designation Number: CN1178**

SGS-CSTC Standards Technical Services Co., Ltd., Shenzhen EMC Laboratory has been recognized as an accredited testing laboratory.

Designation Number: CN1178. Test Firm Registration Number: 406779.

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

SGS-CSTC Standards Technical Services Co., Ltd., Shenzhen EMC Laboratory has been recognized by ISED as an accredited testing laboratory.

CAB identifier: CN0006.

IC#: 4620C.

#### 4.6 Deviation from Standards

None

#### 4.7 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 <http://www.sgs.com/en/Terms-and-Conditions.aspx> and, for electronic format documents, subject to Terms and Conditions for Electronic Documents at <http://www.sgs.com/en/Terms-and-Conditions/Terms-e-Documents.aspx>. Attention is drawn to the limitation of liability, indemnification and jurisdiction issues defined therein. Any holder of this document is advised that information contained hereon reflects the Company's findings at the time of its intervention only and within the limits of Client's instructions, if any. The Company's sole responsibility is to its Client and this document does not exonerate parties to a transaction from exercising all their rights and obligations under the transaction documents. This document cannot be reproduced except in full, without prior written approval of the Company. Any unauthorized alteration, forgery or falsification of the content or appearance of this document is unlawful and offenders may be prosecuted to the fullest extent of the law. Unless otherwise stated the results shown in this test report refer only to the sample(s) tested and such sample(s) are retained for 30 days only.  
Attention: To check the authenticity of testing / inspection report & certificate, please contact us at telephone: (86-755) 8307 1443, or email: [CN.Doccheck@sgs.com](mailto:CN.Doccheck@sgs.com)

SGS-CSTC Standards Technical Services Co., Ltd.  
Shenzhen Branch EMC Laboratory

No.1 Workshop, M-10, Middle Section, Science & Technology Park, Shenzhen, China 518057 t (86-755) 26012053 f (86-755) 26710594 www.sgsgroup.com.cn  
中国·深圳·科技园中区M-10栋一号厂房 邮编: 518057 t (86-755) 26012053 f (86-755) 26710594 sgs.china@sgs.com



## 5 Equipment List

Conducted Emissions at AC Power Line (150kHz-30MHz)					
Equipment	Manufacturer	Model No	Inventory No	Cal Date	Cal Due Date
Shielding Room	ZhongYu Electron	GB-88	SEM001-06	2017-05-10	2020-05-09
Measurement Software	AUDIX	e3 V5.4.1221d	N/A	N/A	N/A
Coaxial Cable	SGS	N/A	SEM024-01	2018-07-12	2019-07-11
LISN	Rohde & Schwarz	ENV216	SEM007-01	2018-09-25	2019-09-24
LISN	ETS-LINDGREN	3816/2	SEM007-02	2018-04-02	2019-04-01
EMI Test Receiver	Rohde & Schwarz	ESCI	SEM004-02	2018-04-02	2019-04-01

RF Conducted Test					
Equipment	Manufacturer	Model No	Inventory No	Cal Date	Cal Due Date
DC Power Supply	ZhaoXin	RXN-305D	SEM011-02	2018-09-25	2019-09-24
Spectrum Analyzer	Rohde & Schwarz	FSP	SEM004-06	2018-09-27	2019-09-26
Measurement Software	JS Tonscend	JS1120-2 BT/WIFI V2.	N/A	N/A	N/A
Coaxial Cable	SGS	N/A	SEM031-02	2018-07-12	2019-07-11
Attenuator	Weinschel Associates	WA41	SEM021-09	N/A	N/A
Signal Generator	KEYSIGHT	N5173B	SEM006-05	2018-09-27	2019-09-26
Power Meter	Rohde & Schwarz	NRVS	SEM014-02	2018-09-25	2019-09-24

RE in Chamber					
Equipment	Manufacturer	Model No	Inventory No	Cal Date	Cal Due Date
3m Semi-Anechoic Chamber	ETS-LINDGREN	N/A	SEM001-01	2017-08-05	2020-08-04
MXE EMI Receiver (20Hz-8.4GHz)	Agilent Technologies	N9038A	SEM004-05	2018-09-27	2019-09-26
BiConiLog Antenna (26-3000MHz)	ETS-LINDGREN	3142C	SEM003-01	2017-06-27	2020-06-26
Pre-amplifier (0.1-1300MHz)	Agilent Technologies	8447D	SEM005-01	2018-04-02	2019-04-01
Measurement Software	AUDIX	e3 V8.2014-6-27	N/A	N/A	N/A
Coaxial Cable	SGS	N/A	SEM025-01	2018-07-12	2019-07-11



Unless otherwise agreed in writing, this document is issued by the Company subject to its General Conditions of Service printed overleaf, available on request or accessible at <http://www.sgs.com/en/Terms-and-Conditions.aspx> and, for electronic format documents, subject to Terms and Conditions for Electronic Documents at <http://www.sgs.com/en/Terms-and-Conditions/Terms-e-Documents.aspx>. Attention is drawn to the limitation of liability, indemnification and jurisdiction issues defined therein. Any holder of this document is advised that information contained hereon reflects the Company's findings at the time of its intervention only and within the limits of Client's instructions, if any. The Company's sole responsibility is to its Client and this document does not exonerate parties to a transaction from exercising all their rights and obligations under the transaction documents. This document cannot be reproduced except in full, without prior written approval of the Company. Any unauthorized alteration, forgery or falsification of the content or appearance of this document is unlawful and offenders may be prosecuted to the fullest extent of the law. Unless otherwise stated the results shown in this test report refer only to the sample(s) tested and such sample(s) are retained for 30 days only.

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

SGS-CSTC Standards Technical Services Co., Ltd.  
Shenzhen Branch - EMC Laboratory

No.1 Workshop, M-10, Middle Section, Science & Technology Park, Shenzhen, China 518057 t (86-755) 26012053 f (86-755) 26710594 www.sgs.com.cn  
中国·深圳·科技园中区M-10栋一号厂房 邮编: 518057 t (86-755) 26012053 f (86-755) 26710594 sgs.china@sgs.com

Radiated Emissions which fall in the restricted bands					
Equipment	Manufacturer	Model No	Inventory No	Cal Date	Cal Due Date
3m Semi-Anechoic Chamber	AUDIX	N/A	SEM001-02	2018-03-13	2021-03-12
Measurement Software	AUDIX	e3 V8.2014-6-27	N/A	N/A	N/A
Coaxial Cable	SGS	N/A	SEM026-01	2018-07-12	2019-07-11
Spectrum Analyzer	Rohde & Schwarz	FSU43	SEM004-08	2018-04-02	2019-04-01
BiConiLog Antenna (26-3000MHz)	ETS-Lindgren	3142C	SEM003-01	2017-06-27	2020-06-26
Horn Antenna (1-18GHz)	Rohde & Schwarz	HF907	SEM003-07	2018-04-13	2021-04-12
Horn Antenna (15GHz-40GHz)	Schwarzbeck	BBHA 9170	SEM003-15	2017-10-17	2020-10-16
Pre-amplifier (0.1-1300MHz)	HP	8447D	SEM005-02	2018-09-25	2019-09-24
Pre-Amplifier (0.1-26.5GHz)	Compliance Directions Systems Inc.	PAP-0126	SEM004-11	2018-09-27	2019-09-26
Pre-amplifier(18-26GHz)	Rohde & Schwarz	CH14-H052	SEM005-17	2018-04-02	2019-04-01
Pre-amplifier (26GHz-40GHz)	Compliance Directions Systems Inc.	PAP-2640-50	SEM005-08	2018-04-02	2019-04-01
DC Power Supply	Zhao Xin	RXN-305D	SEM011-02	2018-09-25	2019-09-24
Active Loop Antenna	ETS-Lindgren	6502	SEM003-08	2017-08-22	2020-08-21
Band filter	N/A	N/A	SEM023-01	N/A	N/A

Radiated Spurious Emissions					
Equipment	Manufacturer	Model No	Inventory No	Cal Date	Cal Due Date
3m Semi-Anechoic Chamber	AUDIX	N/A	SEM001-02	2018-03-13	2021-03-12
Measurement Software	AUDIX	e3 V8.2014-6-27	N/A	N/A	N/A
Coaxial Cable	SGS	N/A	SEM026-01	2018-07-12	2019-07-11
Spectrum Analyzer	Rohde & Schwarz	FSU43	SEM004-08	2018-04-02	2019-04-01
BiConiLog Antenna (26-3000MHz)	ETS-Lindgren	3142C	SEM003-01	2017-06-27	2020-06-26
Horn Antenna (1-18GHz)	Rohde & Schwarz	HF907	SEM003-07	2018-04-13	2021-04-12



Unless otherwise agreed in writing, this document is issued by the Company subject to its General Conditions of Service printed overleaf, available on request or accessible at <http://www.sgs.com/en/Terms-and-Conditions.aspx> and, for electronic format documents, subject to Terms and Conditions for Electronic Documents at <http://www.sgs.com/en/Terms-and-Conditions/Terms-e-Document.aspx>. Attention is drawn to the limitation of liability, indemnification and jurisdiction issues defined therein. Any holder of this document is advised that information contained hereon reflects the Company's findings at the time of its intervention only and within the limits of Client's instructions, if any. The Company's sole responsibility is to its Client and this document does not exonerate parties to a transaction from exercising all their rights and obligations under the transaction documents. This document cannot be reproduced except in full, without prior written approval of the Company. Any unauthorized alteration, forgery or falsification of the content or appearance of this document is unlawful and offenders may be prosecuted to the fullest extent of the law. Unless otherwise stated the results shown in this test report refer only to the sample(s) tested and such sample(s) are retained for 30 days only.

Attention: To check the authenticity of testing / inspection report & certificate, please contact us at telephone: (86-755) 8307 1443, or email: [CN.Doccheck@sgs.com](mailto:CN.Doccheck@sgs.com)  
No.1 Workshop, M-10, Middle Section, Science & Technology Park, Shenzhen, China 518057 t (86-755) 26012053 f (86-755) 26710594 www.sgs.com.cn  
中国·深圳·科技园中区M-10栋一号厂房 邮编: 518057 t (86-755) 26012053 f (86-755) 26710594 sgs.china@sgs.com

Horn Antenna (15GHz-40GHz)	Schwarzbeck	BBHA 9170	SEM003-15	2017-10-17	2020-10-16
Pre-amplifier (0.1-1300MHz)	HP	8447D	SEM005-02	2018-09-25	2019-09-24
Pre-Amplifier (0.1-26.5GHz)	Compliance Directions Systems Inc.	PAP-0126	SEM004-11	2018-09-27	2019-09-26
Pre-amplifier(18-26GHz)	Rohde & Schwarz	CH14-H052	SEM005-17	2018-04-02	2019-04-01
Pre-amplifier (26GHz-40GHz)	Compliance Directions Systems Inc.	PAP-2640-50	SEM005-08	2018-04-02	2019-04-01
DC Power Supply	Zhao Xin	RXN-305D	SEM011-02	2018-09-25	2019-09-24
Active Loop Antenna	ETS-Lindgren	6502	SEM003-08	2017-08-22	2020-08-21
Band filter	N/A	N/A	SEM023-01	N/A	N/A

**General used equipment**

Equipment	Manufacturer	Model No	Inventory No	Cal Date	Cal Due Date
Humidity/ Temperature Indicator	Shanghai Meteorological Industry Factory	ZJ1-2B	SEM002-03	2018-09-27	2019-09-26
Humidity/ Temperature Indicator	Shanghai Meteorological Industry Factory	ZJ1-2B	SEM002-04	2018-09-27	2019-09-26
Humidity/ Temperature Indicator	Mingle	N/A	SEM002-08	2018-09-27	2019-09-26
Barometer	Changchun Meteorological Industry Factory	DYM3	SEM002-01	2018-04-08	2019-04-07



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 <http://www.sgs.com/en/Terms-and-Conditions.aspx> and, for electronic format documents, subject to Terms and Conditions for Electronic Documents at <http://www.sgs.com/en/Terms-and-Conditions/Terms-e-Documents.aspx>. Attention is drawn to the limitation of liability, indemnification and jurisdiction issues defined therein. Any holder of this document is advised that information contained hereon reflects the Company's findings at the time of its intervention only and within the limits of Client's instructions, if any. The Company's sole responsibility is to its Client and this document does not exonerate parties to a transaction from exercising all their rights and obligations under the transaction documents. This document cannot be reproduced except in full, without prior written approval of the Company. Any unauthorized alteration, forgery or falsification of the content or appearance of this document is unlawful and offenders may be prosecuted to the fullest extent of the law. Unless otherwise stated the results shown in this test report refer only to the sample(s) tested and such sample(s) are retained for 30 days only.  
Attention: To check the authenticity of testing / inspection report & certificate, please contact us at telephone: (86-755) 8307 1443, or email: [CN.Doccheck@sgs.com](mailto:CN.Doccheck@sgs.com)

SGS-CSTC Standards Technical Services Co., Ltd.  
Shenzhen Branch (China) SGS-CSTC Laboratory

No.1 Workshop, M-10, Middle Section, Science & Technology Park, Shenzhen, China 518057 t (86-755) 26012053 f (86-755) 26710594 www.sgsgroup.com.cn  
中国·深圳·科技园中区M-10栋一号厂房 邮编: 518057 t (86-755) 26012053 f (86-755) 26710594 sgs.china@sgs.com



## 6 Radio Spectrum Technical Requirement

### 6.1 Antenna Requirement

#### 6.1.1 Test Requirement:

47 CFR Part 15, Subpart C 15.203

#### 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 an antenna that uses a unique coupling to the intentional radiator, the manufacturer may design the unit permanently attached antenna or of an so that a broken antenna can be replaced by the user, but the use of a standard antenna jack or electrical connector is prohibited.

EUT Antenna:

The antenna is integrated on the main PCB and no consideration of replacement. The best case gain of the antenna1: 5dBi, antenna2: 5dBi, antenna3: 5dBi, antenna4: 5dBi.

Antenna Location: Please refer to appendix(Internal photos).



Unless otherwise agreed in writing, this document is issued by the Company subject to its General Conditions of Service printed overleaf, available on request or accessible at <http://www.sgs.com/en/Terms-and-Conditions.aspx> and, for electronic format documents, subject to Terms and Conditions for Electronic Documents at <http://www.sgs.com/en/Terms-and-Conditions/Terms-e-Document.aspx>. Attention is drawn to the limitation of liability, indemnification and jurisdiction issues defined therein. Any holder of this document is advised that information contained hereon reflects the Company's findings at the time of its intervention only and within the limits of Client's instructions, if any. The Company's sole responsibility is to its Client and this document does not exonerate parties to a transaction from exercising all their rights and obligations under the transaction documents. This document cannot be reproduced except in full, without prior written approval of the Company. Any unauthorized alteration, forgery or falsification of the content or appearance of this document is unlawful and offenders may be prosecuted to the fullest extent of the law. Unless otherwise stated the results shown in this test report refer only to the sample(s) tested and such sample(s) are retained for 30 days only.  
Attention: To check the authenticity of testing / inspection report & certificate, please contact us at telephone: (86-755) 8307 1443, or email: [CN.Doccheck@sgs.com](mailto:CN.Doccheck@sgs.com)

SGS-CSTC Standards Technical Services Co., Ltd.  
Shenzhen Branch (China) (SGS) Laboratory

No.1 Workshop, M-10, Middle Section, Science & Technology Park, Shenzhen, China 518057 t (86-755) 26012053 f (86-755) 26710594 www.sgs.com.cn  
中国·深圳·科技园中区M-10栋一号厂房 邮编: 518057 t (86-755) 26012053 f (86-755) 26710594 sgs.china@sgs.com





## 6.2 Transmission in the Absence of Data

### 6.2.1 Test Requirement:

47 CFR Part 15, Subpart C 15.407 (c)

### 6.2.2 Conclusion

Standard Requirement:

The device shall automatically discontinue transmission in case of either absence of information to transmit or operational failure. These provisions are not intended to preclude the transmission of control or signalling information or the use of repetitive codes used by certain digital technologies to complete frame or burst intervals.

Applicants shall include in their application for equipment authorization a description of how this requirement is met.

EUT Details:

WIFI chip (QT2518B) support automatically discontinue transmission in case of either absence of information to transmit or operational failure, if the chip detect absence of information to transmit or operational failure, it will be automatically shut off.



## 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 & 15.407 b(6)  
Test Method: ANSI C63.10 (2013) Section 6.2  
Limit:

Frequency of emission(MHz)	Conducted limit(dBμV)	
	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.

#### 7.1.1 E.U.T. Operation

Operating Environment:

Temperature: 22.1 °C Humidity: 44.4 % RH Atmospheric Pressure: 1020 mbar

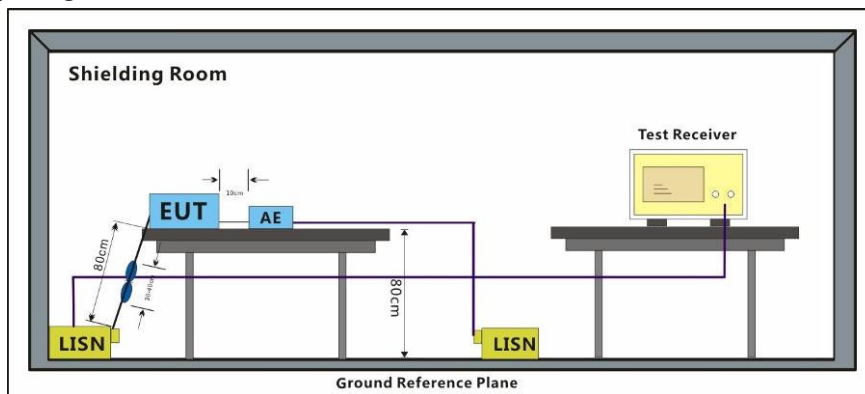
Pretest these modes to find the worst case: c:TX mode (Band 1)\_Keep the EUT in continuously transmitting mode with all modulation types. All data rates for each modulation type have been tested and found the data rate @ 6Mbps is the worst case of IEEE 802.11a; data rate @ MCS0 is the worst case of IEEE 802.11n(HT20); data rate @ MCS0 is the worst case of IEEE 802.11n(HT40); data rate @ MCS0 is the worst case of IEEE 802.11ac(VHT20); data rate @ MCS0 is the worst case of IEEE 802.11ac(VHT40); data rate @ MCS0 is the worst case of IEEE 802.11ac(VHT80). Only the data of worst case is recorded in the report.

f:TX mode (Band 3)\_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 @ 6Mbps is the worst case of IEEE 802.11a; data rate @ MCS0 is the worst case of IEEE 802.11n(HT20); data rate @ MCS0 is the worst case of IEEE 802.11n(HT40); data rate @ MCS0 is the worst case of IEEE 802.11ac(VHT20); data rate @ MCS0 is the worst case of IEEE 802.11ac(VHT40); data rate @ MCS0 is the worst case of IEEE 802.11ac(VHT80). Only the data of worst case is recorded in the report.

The worst case for final test: c:TX mode (Band 1)\_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 @ 6Mbps is the worst case of IEEE 802.11a; data rate @ MCS0 is the worst case of IEEE 802.11n(HT20); data rate @ MCS0 is the worst case of IEEE 802.11n(HT40); data rate @ MCS0 is the worst case of IEEE 802.11ac(VHT20); data rate @ MCS0 is the worst case of IEEE 802.11ac(VHT40); data rate @ MCS0 is the worst case of IEEE 802.11ac(VHT80). Only the data of worst case is recorded in the report.



### 7.1.2 Test Setup Diagram

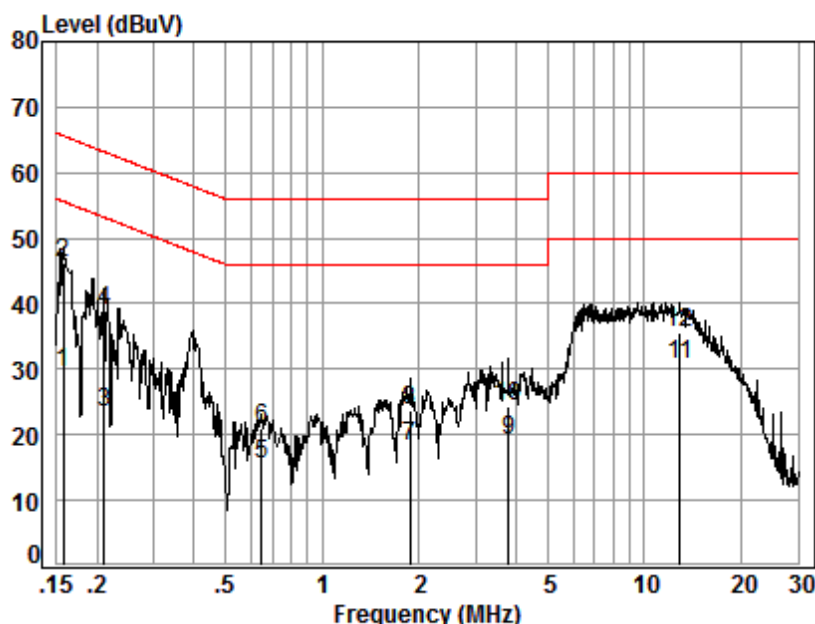


### 7.1.3 Measurement Procedure and Data

- 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 50ohm/50μH + 5ohm 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: LISN=Read Level+ Cable Loss+ LISN Factor

Mode:c; Line:Live Line

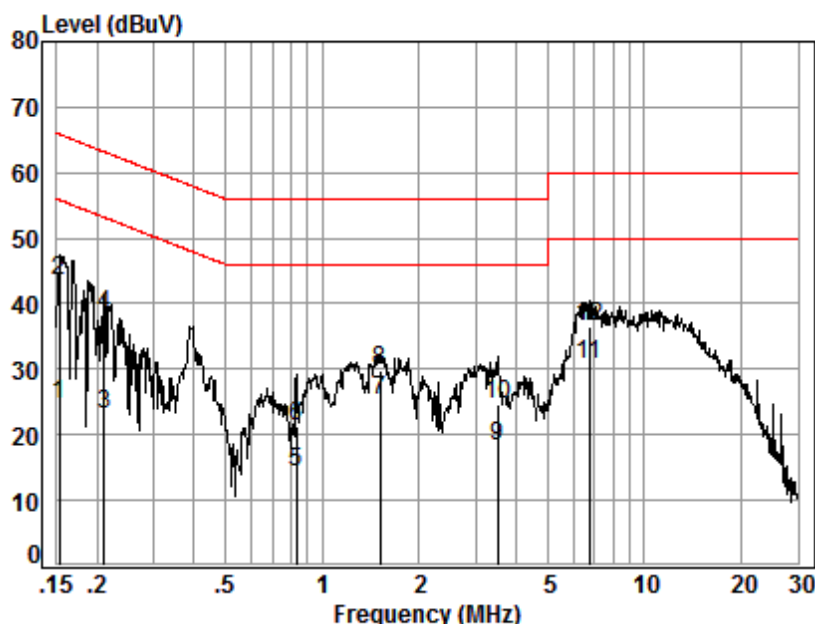


Site : Shielding Room  
Condition: Line  
Job No. : 10092CR  
Test mode: c

	Freq	Cable Loss	LISN Factor	Read Level	Level	Limit Line	Over Limit	Remark
	MHz	dB	dB	dBuV	dBuV	dBuV	dB	
1	0.16	0.01	9.66	19.73	29.40	55.60	-26.20	Average
2	0.16	0.01	9.66	36.52	46.19	65.60	-19.41	QP
3	0.21	0.02	9.66	13.60	23.28	53.18	-29.90	Average
4	0.21	0.02	9.66	29.16	38.84	63.18	-24.34	QP
5	0.65	0.07	9.67	5.70	15.44	46.00	-30.56	Average
6	0.65	0.07	9.67	11.31	21.05	56.00	-34.95	QP
7	1.88	0.15	9.72	8.51	18.38	46.00	-27.62	Average
8	1.88	0.15	9.72	14.00	23.87	56.00	-32.13	QP
9	3.78	0.16	9.72	9.21	19.09	46.00	-26.91	Average
10	3.78	0.16	9.72	14.45	24.33	56.00	-31.67	QP
11	12.85	0.19	10.16	20.23	30.58	50.00	-19.42	Average
12	12.85	0.19	10.16	25.26	35.61	60.00	-24.39	QP



Mode:c; Line:Neutral Line



Site : Shielding Room

Condition: Neutral

Job No. : 10092CR

Test mode: c

	Freq	Cable Loss	LISN Factor	Read Level	Level	Limit Line	Over Limit	Remark
	MHz	dB	dB	dBuV	dBuV	dBuV	dB	
1	0.15	0.01	9.63	15.02	24.66	55.82	-31.16	Average
2	0.15	0.01	9.63	33.87	43.51	65.82	-22.31	QP
3	0.21	0.02	9.64	13.40	23.06	53.18	-30.12	Average
4	0.21	0.02	9.64	28.76	38.42	63.18	-24.76	QP
5	0.83	0.08	9.71	4.63	14.42	46.00	-31.58	Average
6	0.83	0.08	9.71	11.44	21.23	56.00	-34.77	QP
7	1.51	0.13	9.70	15.28	25.11	46.00	-20.89	Average
8	1.51	0.13	9.70	20.03	29.86	56.00	-26.14	QP
9	3.51	0.16	9.69	8.37	18.22	46.00	-27.78	Average
10	3.51	0.16	9.69	14.82	24.67	56.00	-31.33	QP
11	6.77	0.17	9.76	20.69	30.62	50.00	-19.38	Average
12	6.77	0.17	9.76	26.51	36.44	60.00	-23.56	QP

## 7.2 99% Bandwidth

Test Requirement N/A  
Test Method: KDB 789033 II D

### 7.2.1 E.U.T. Operation

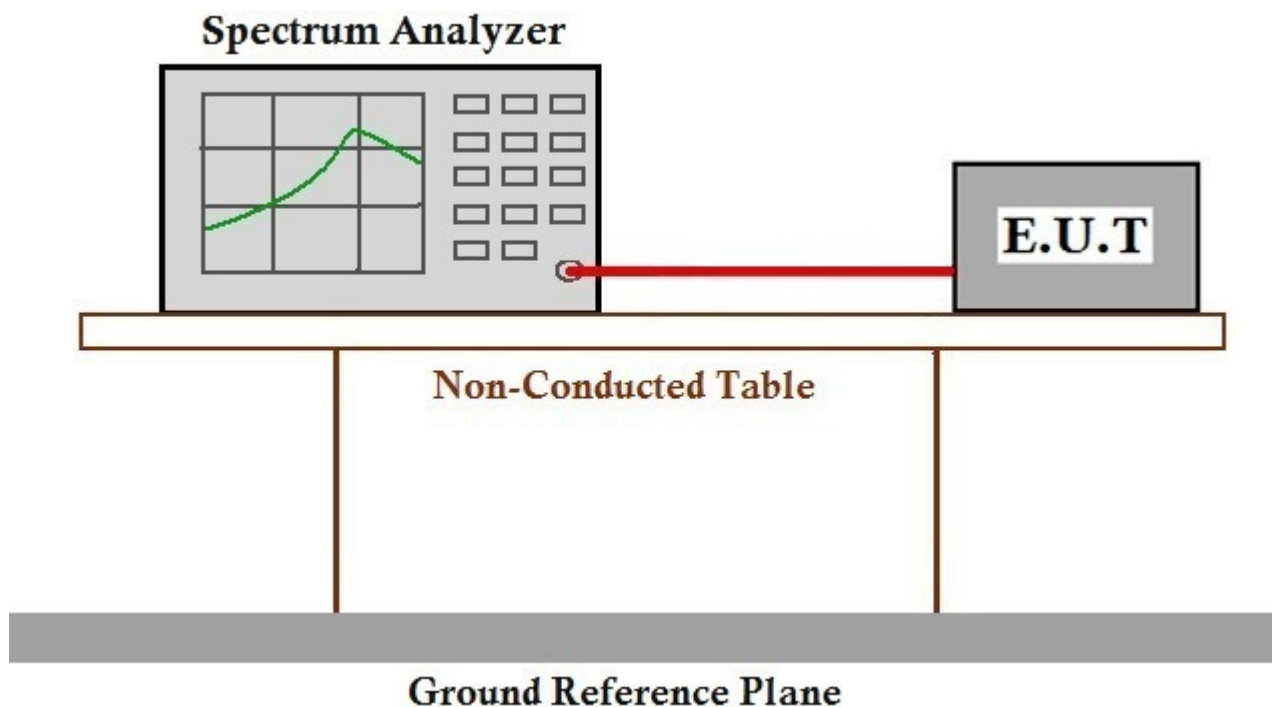
Operating Environment:

Temperature: 24.3 °C Humidity: 48.3 % RH Atmospheric Pressure: 1020 mbar

Test mode: c:TX mode (Band 1)\_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 @ 6Mbps is the worst case of IEEE 802.11a; data rate @ MCS0 is the worst case of IEEE 802.11n(HT20); data rate @ MCS0 is the worst case of IEEE 802.11n(HT40); data rate @ MCS0 is the worst case of IEEE 802.11ac(VHT20); data rate @ MCS0 is the worst case of IEEE 802.11ac(VHT40); data rate @ MCS0 is the worst case of IEEE 802.11ac(VHT80). Only the data of worst case is recorded in the report.

f:TX mode (Band 3)\_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 @ 6Mbps is the worst case of IEEE 802.11a; data rate @ MCS0 is the worst case of IEEE 802.11n(HT20); data rate @ MCS0 is the worst case of IEEE 802.11n(HT40); data rate @ MCS0 is the worst case of IEEE 802.11ac(VHT20); data rate @ MCS0 is the worst case of IEEE 802.11ac(VHT40); data rate @ MCS0 is the worst case of IEEE 802.11ac(VHT80). Only the data of worst case is recorded in the report.

### 7.2.2 Test Setup Diagram





### 7.2.3 Measurement Procedure and Data

The detailed test data see: Appendix 15.407



SGS-CSTC Standards Technical Services Co., Ltd.  
Shenzhen Branch (China) (SGS) Laboratory

Unless otherwise agreed in writing, this document is issued by the Company subject to its General Conditions of Service printed overleaf, available on request or accessible at <http://www.sgs.com/en/Terms-and-Conditions.aspx> and, for electronic format documents, subject to Terms and Conditions for Electronic Documents at <http://www.sgs.com/en/Terms-and-Conditions/Terms-e-Documents.aspx>. Attention is drawn to the limitation of liability, indemnification and jurisdiction issues defined therein. Any holder of this document is advised that information contained hereon reflects the Company's findings at the time of its intervention only and within the limits of Client's instructions, if any. The Company's sole responsibility is to its Client and this document does not exonerate parties to a transaction from exercising all their rights and obligations under the transaction documents. This document cannot be reproduced except in full, without prior written approval of the Company. Any unauthorized alteration, forgery or falsification of the content or appearance of this document is unlawful and offenders may be prosecuted to the fullest extent of the law. Unless otherwise stated the results shown in this test report refer only to the sample(s) tested and such sample(s) are retained for 30 days only.  
Attention: To check the authenticity of testing / inspection report & certificate, please contact us at telephone: (86-755) 8307 1443, or email: [CN.Doccheck@sgs.com](mailto:CN.Doccheck@sgs.com)

No.1 Workshop, M-10, Middle Section, Science & Technology Park, Shenzhen, China 518057 t (86-755) 26012053 f (86-755) 26710594 www.sgs.com.cn  
中国·深圳·科技园中区M-10栋一号厂房 邮编: 518057 t (86-755) 26012053 f (86-755) 26710594 sgs.china@sgs.com

### 7.3 26dB Emission bandwidth

Test Requirement 47 CFR Part 15, Subpart C 15.407 (a)  
Test Method: KDB 789033 D02 II C 1

#### 7.3.1 E.U.T. Operation

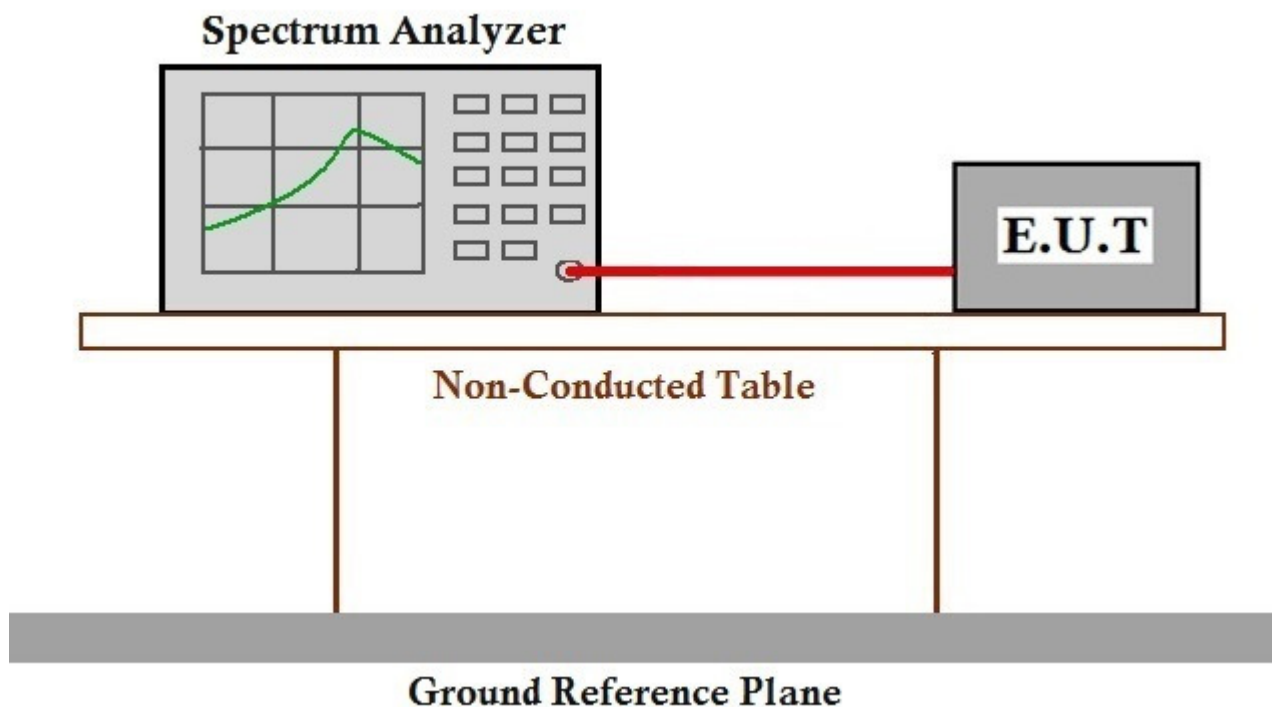
Operating Environment:

Temperature: 24.3 °C Humidity: 48.2 % RH Atmospheric Pressure: 1020 mbar

Test mode: c:TX mode (Band 1)\_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 @ 6Mbps is the worst case of IEEE 802.11a; data rate @ MCS0 is the worst case of IEEE 802.11n(HT20); data rate @ MCS0 is the worst case of IEEE 802.11n(HT40); data rate @ MCS0 is the worst case of IEEE 802.11ac(VHT20); data rate @ MCS0 is the worst case of IEEE 802.11ac(VHT40); data rate @ MCS0 is the worst case of IEEE 802.11ac(VHT80). Only the data of worst case is recorded in the report.

f:TX mode (Band 3)\_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 @ 6Mbps is the worst case of IEEE 802.11a; data rate @ MCS0 is the worst case of IEEE 802.11n(HT20); data rate @ MCS0 is the worst case of IEEE 802.11n(HT40); data rate @ MCS0 is the worst case of IEEE 802.11ac(VHT20); data rate @ MCS0 is the worst case of IEEE 802.11ac(VHT40); data rate @ MCS0 is the worst case of IEEE 802.11ac(VHT80). Only the data of worst case is recorded in the report.

#### 7.3.2 Test Setup Diagram







### 7.3.3 Measurement Procedure and Data

The detailed test data see: Appendix 15.407



SGS-CSTC Standards Technical Services Co., Ltd.  
Shenzhen Branch (China) CSTC Laboratory

Unless otherwise agreed in writing, this document is issued by the Company subject to its General Conditions of Service printed overleaf, available on request or accessible at <http://www.sgs.com/en/Terms-and-Conditions.aspx> and, for electronic format documents, subject to Terms and Conditions for Electronic Documents at <http://www.sgs.com/en/Terms-and-Conditions/Terms-e-Document.aspx>. Attention is drawn to the limitation of liability, indemnification and jurisdiction issues defined therein. Any holder of this document is advised that information contained hereon reflects the Company's findings at the time of its intervention only and within the limits of Client's instructions, if any. The Company's sole responsibility is to its Client and this document does not exonerate parties to a transaction from exercising all their rights and obligations under the transaction documents. This document cannot be reproduced except in full, without prior written approval of the Company. Any unauthorized alteration, forgery or falsification of the content or appearance of this document is unlawful and offenders may be prosecuted to the fullest extent of the law. Unless otherwise stated the results shown in this test report refer only to the sample(s) tested and such sample(s) are retained for 30 days only.  
Attention: To check the authenticity of testing / inspection report & certificate, please contact us at telephone: (86-755) 8307 1443, or email: [CN.Doccheck@sgs.com](mailto:CN.Doccheck@sgs.com)

No.1 Workshop, M-10, Middle Section, Science & Technology Park, Shenzhen, China 518057 t (86-755) 26012053 f (86-755) 26710594 www.sgsgroup.com.cn  
中国·深圳·科技园中区M-10栋一号厂房 邮编: 518057 t (86-755) 26012053 f (86-755) 26710594 sgs.china@sgs.com

## 7.4 Maximum Conducted output power

Test Requirement: 47 CFR Part 15, Subpart C 15.407 (a)  
Test Method: KDB 789033 D02 II E  
Limit:

Frequency band(MHz)	Limit
5150-5250	≤1W(30dBm) for master device
	≤250mW(24dBm) for client device
5250-5350	≤250mW(24dBm) for client device or 11dBm+10logB*
5470-5725	≤250mW(24dBm) for client device or 11dBm+10logB*
5725-5850	≤1W(30dBm)
Remark:	<p>* Where B is the 26dB emission bandwidth in MHz.</p> <p>The maximum conducted output power must be measured over any interval of continuous transmission using instrumentation calibrated in terms of an rms-equivalent voltage.</p>

### 7.4.1 E.U.T. Operation

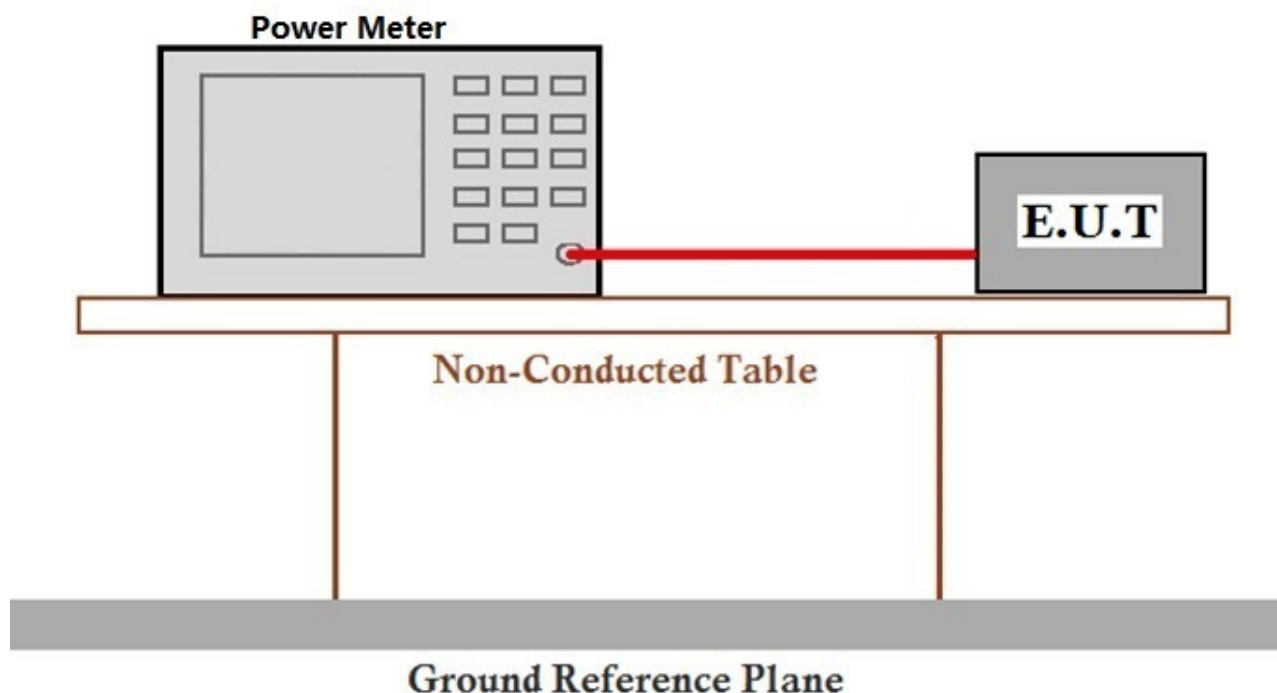
Operating Environment:

Temperature: 24.3 °C Humidity: 48.3 % RH Atmospheric Pressure: 1020 mbar

Test mode: c:TX mode (Band 1)\_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 @ 6Mbps is the worst case of IEEE 802.11a; data rate @ MCS0 is the worst case of IEEE 802.11n(HT20); data rate @ MCS0 is the worst case of IEEE 802.11n(HT40); data rate @ MCS0 is the worst case of IEEE 802.11ac(VHT20); data rate @ MCS0 is the worst case of IEEE 802.11ac(VHT40); data rate @ MCS0 is the worst case of IEEE 802.11ac(VHT80). Only the data of worst case is recorded in the report.

f:TX mode (Band 3)\_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 @ 6Mbps is the worst case of IEEE 802.11a; data rate @ MCS0 is the worst case of IEEE 802.11n(HT20); data rate @ MCS0 is the worst case of IEEE 802.11n(HT40); data rate @ MCS0 is the worst case of IEEE 802.11ac(VHT20); data rate @ MCS0 is the worst case of IEEE 802.11ac(VHT40); data rate @ MCS0 is the worst case of IEEE 802.11ac(VHT80). Only the data of worst case is recorded in the report.

### 7.4.2 Test Setup Diagram



### 7.4.3 Measurement Procedure and Data

The detailed test data see: Appendix 15.407

## 7.5 Peak Power spectrum density

Test Requirement 47 CFR Part 15, Subpart C 15.407 (a)

Test Method: KDB 789033 D02 II F

Limit:

Frequency band(MHz)	Limit
5150-5250	≤17dBm in 1MHz for master device
	≤11dBm in 1MHz for client device
5250-5350	≤11dBm in 1MHz for client device
5470-5725	≤11dBm in 1MHz for client device
5725-5850	≤30dBm in 500 kHz
Remark:	The maximum power spectral density is measured as a conducted emission by direct connection of a calibrated test instrument to the equipment under test.

### 7.5.1 E.U.T. Operation

Operating Environment:

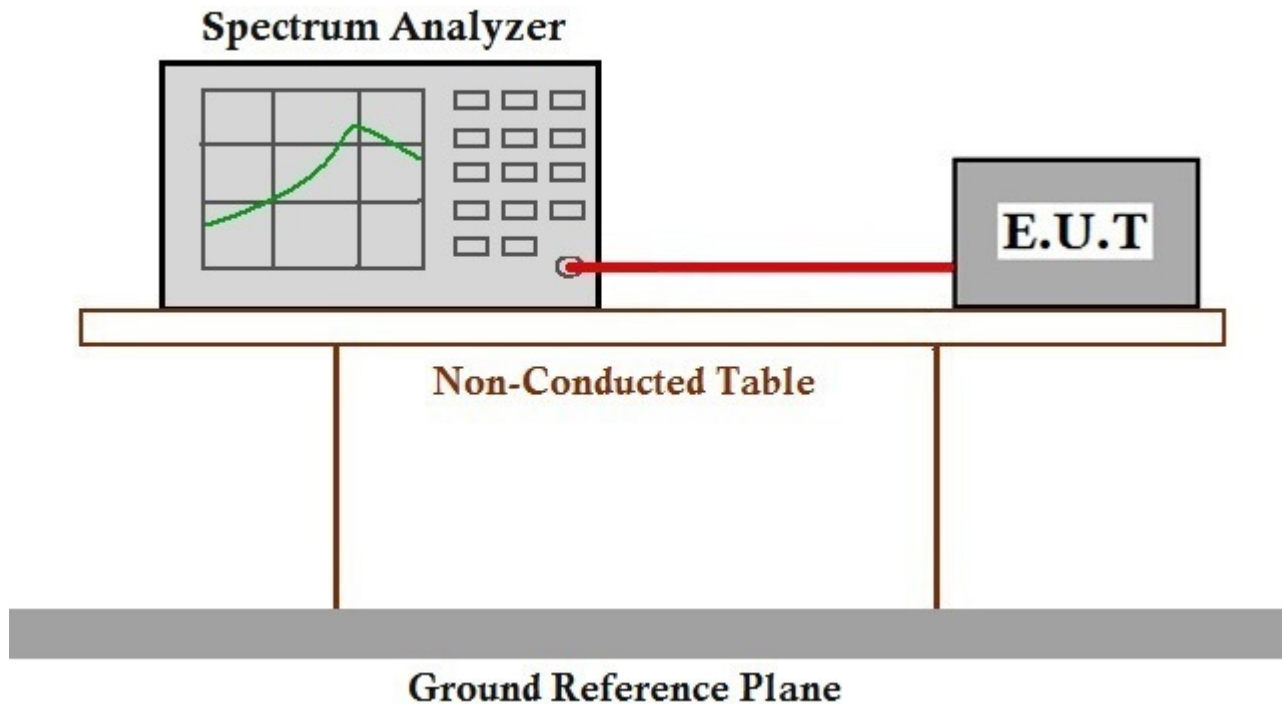
Temperature: 24.3 °C Humidity: 48.3 % RH Atmospheric Pressure: 1020 mbar

Test mode: c:TX mode (Band 1)\_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 @ 6Mbps is the worst case of IEEE 802.11a; data rate @ MCS0 is the worst case of IEEE 802.11n(HT20); data rate @ MCS0 is the worst case of IEEE 802.11n(HT40); data rate @ MCS0 is the worst case of IEEE 802.11ac(VHT20); data rate @ MCS0 is the worst case of IEEE 802.11ac(VHT40); data rate @ MCS0 is the worst case of IEEE 802.11ac(VHT80). Only the data of worst case is recorded in the report.

f:TX mode (Band 3)\_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 @ 6Mbps is the worst case of IEEE 802.11a; data rate @ MCS0 is the worst case of IEEE 802.11n(HT20); data rate @ MCS0 is the worst case of IEEE 802.11n(HT40); data rate @ MCS0 is the worst case of IEEE 802.11ac(VHT20); data rate @ MCS0 is the worst case of IEEE 802.11ac(VHT40); data rate @ MCS0 is the worst case of IEEE 802.11ac(VHT80). Only the data of worst case is recorded in the report.



## 7.5.2 Test Setup Diagram



## 7.5.3 Measurement Procedure and Data

The detailed test data see: Appendix 15.407



## 7.6 Radiated Emissions

Test Requirement 47 CFR Part 15, Subpart C 15.209 & 15.407(b)

Test Method: KDB 789033 D02 II G

Measurement Distance: 3m

### 7.6.1 E.U.T. Operation

Operating Environment:

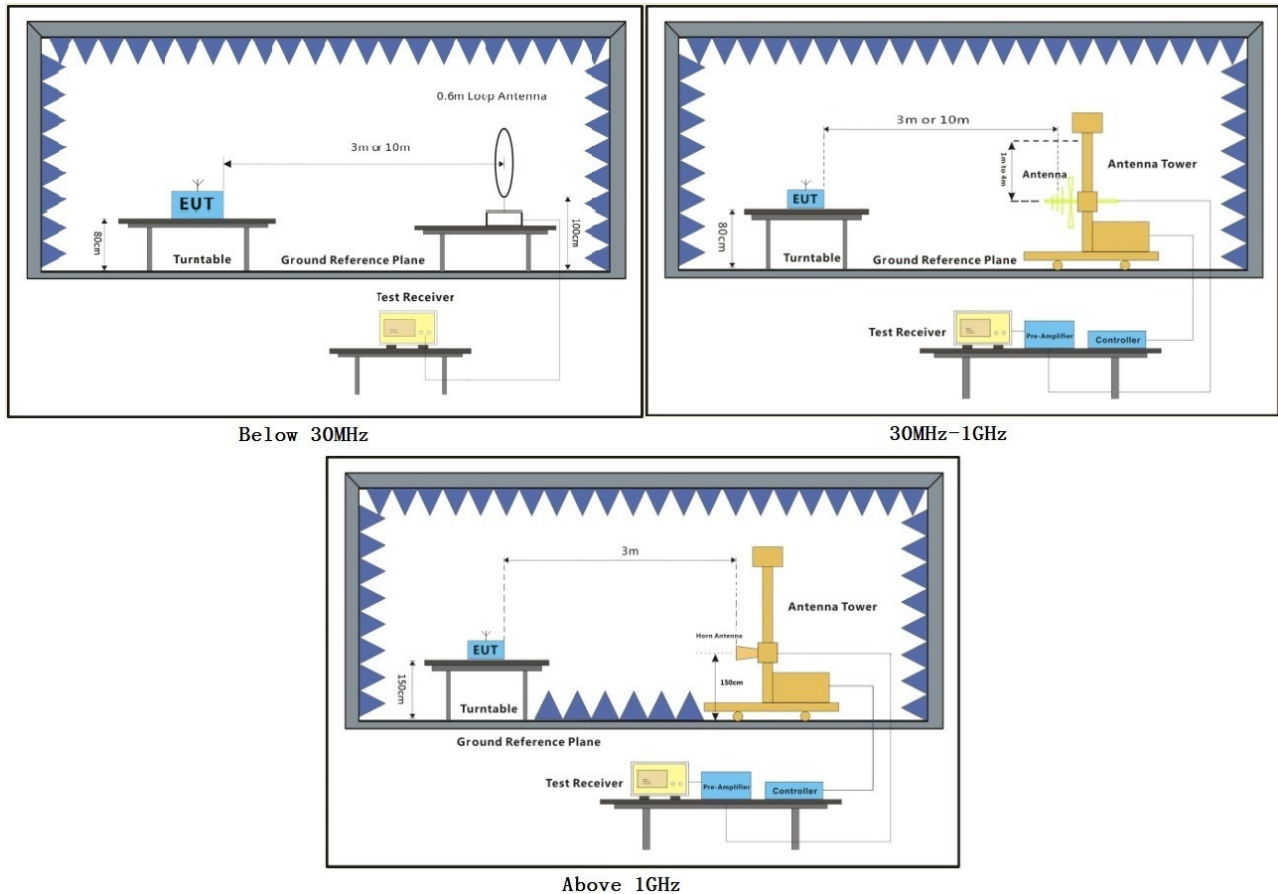
Temperature: 22.4 °C Humidity: 59.1 % RH Atmospheric Pressure: 1020 mbar

Test mode: c:TX mode (Band 1)\_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 @ 6Mbps is the worst case of IEEE 802.11a; data rate @ MCS0 is the worst case of IEEE 802.11n(HT20); data rate @ MCS0 is the worst case of IEEE 802.11n(HT40); data rate @ MCS0 is the worst case of IEEE 802.11ac(VHT20); data rate @ MCS0 is the worst case of IEEE 802.11ac(VHT40); data rate @ MCS0 is the worst case of IEEE 802.11ac(VHT80). Only the data of worst case is recorded in the report.

f:TX mode (Band 3)\_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 @ 6Mbps is the worst case of IEEE 802.11a; data rate @ MCS0 is the worst case of IEEE 802.11n(HT20); data rate @ MCS0 is the worst case of IEEE 802.11n(HT40); data rate @ MCS0 is the worst case of IEEE 802.11ac(VHT20); data rate @ MCS0 is the worst case of IEEE 802.11ac(VHT40); data rate @ MCS0 is the worst case of IEEE 802.11ac(VHT80). Only the data of worst case is recorded in the report.



### 7.6.2 Test Setup Diagram



### 7.6.3 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
2. For emission below 1GHz, through the pre-scan found the worst case is the lowest channel of 802.11a. Only the worst case is recorded in the report.
3. Scan from 9kHz to 40GHz, the disturbance above 18GHz and 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.
4. 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.

Remark: Pretest the EUT at antenna 1, antenna 2, antenna 3, antenna 4 found the antenna 1 which is worst case for 802.11a mode, Pretest the EUT at antenna 1, antenna 2, antenna 3, antenna 4 MIMO mode and found the MIMO mode which is worst case for 802.11n/ac mode; So, Only the worst test data 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 <http://www.sgs.com/en/Terms-and-Conditions.aspx> and, for electronic format documents, subject to Terms and Conditions for Electronic Documents at <http://www.sgs.com/en/Terms-and-Conditions/Terms-e-Documents.aspx>. Attention is drawn to the limitation of liability, indemnification and jurisdiction issues defined therein. Any holder of this document is advised that information contained hereon reflects the Company's findings at the time of its intervention only and within the limits of Client's instructions, if any. The Company's sole responsibility is to its Client and this document does not exonerate parties to a transaction from exercising all their rights and obligations under the transaction documents. This document cannot be reproduced except in full, without prior written approval of the Company. Any unauthorized alteration, forgery or falsification of the content or appearance of this document is unlawful and offenders may be prosecuted to the fullest extent of the law. Unless otherwise stated the results shown in this test report refer only to the sample(s) tested and such sample(s) are retained for 30 days only.  
Attention: To check the authenticity of testing inspection report & certificate, please contact us at telephone: (86-755) 8307 1443, or email: [CN.Doccheck@sgs.com](mailto:CN.Doccheck@sgs.com)

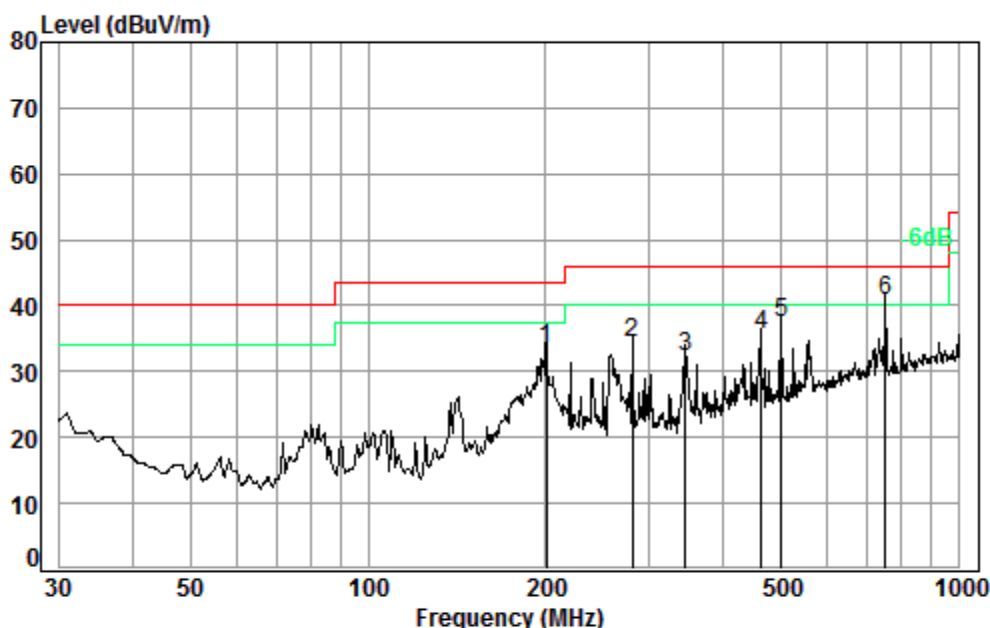
SGS-CSTC Standards Technical Services Co., Ltd.  
Shenzhen Branch, CSTC Laboratory

No.1 Workshop, M-10, Middle Section, Science & Technology Park, Shenzhen, China 518057 t (86-755) 26012053 f (86-755) 26710594 www.sgs.com.cn  
中国·深圳·科技园中区M-10栋一号厂房 邮编: 518057 t (86-755) 26012053 f (86-755) 26710594 sgs.china@sgs.com



### Radiated emission below 1GHz

Mode:c; Polarization:Horizontal



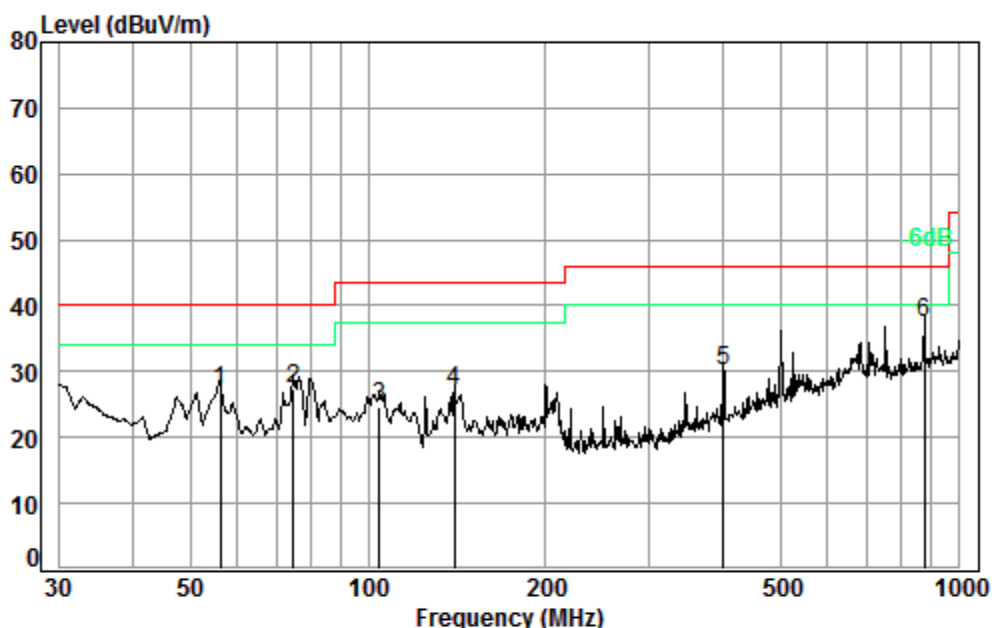
Condition: 3m HORIZONTAL

Job No. : 10092CR

Test mode: c

	Freq	Cable Loss	Ant Factor	Preamp Factor	Read Level	Level	Limit Line	Over Limit
	MHz	dB	dB/m	dB	dBuV	dBuV/m	dBuV/m	dB
1	200.69	1.40	16.53	27.53	43.05	33.45	43.50	-10.05
2	280.02	1.81	18.80	27.54	41.27	34.34	46.00	-11.66
3	344.39	2.04	20.94	27.63	36.77	32.12	46.00	-13.88
4	462.35	2.46	23.83	27.83	37.17	35.63	46.00	-10.37
5	501.18	2.60	24.63	27.88	38.03	37.38	46.00	-8.62
6 pp	750.11	3.06	28.21	27.48	37.06	40.85	46.00	-5.15

Mode:c; Polarization:Vertical



Condition: 3m VERTICAL  
Job No. : 10092CR  
Test mode: c

	Freq	Cable Loss	Ant Factor	Preamp Factor	Read Level	Level	Limit Line	Over Limit
	MHz	dB	dB/m	dB	dBuV	dBuV/m	dBuV/m	dB
1	56.20	0.80	13.56	27.58	40.23	27.01	40.00	-12.99
2	74.66	0.94	12.41	27.51	41.66	27.50	40.00	-12.50
3	104.54	1.21	13.78	27.51	37.24	24.72	43.50	-18.78
4	139.85	1.30	13.70	27.52	39.60	27.08	43.50	-16.42
5	399.03	2.20	22.38	27.73	33.17	30.02	46.00	-15.98
6 pp	875.25	3.51	29.49	27.16	31.65	37.49	46.00	-8.51

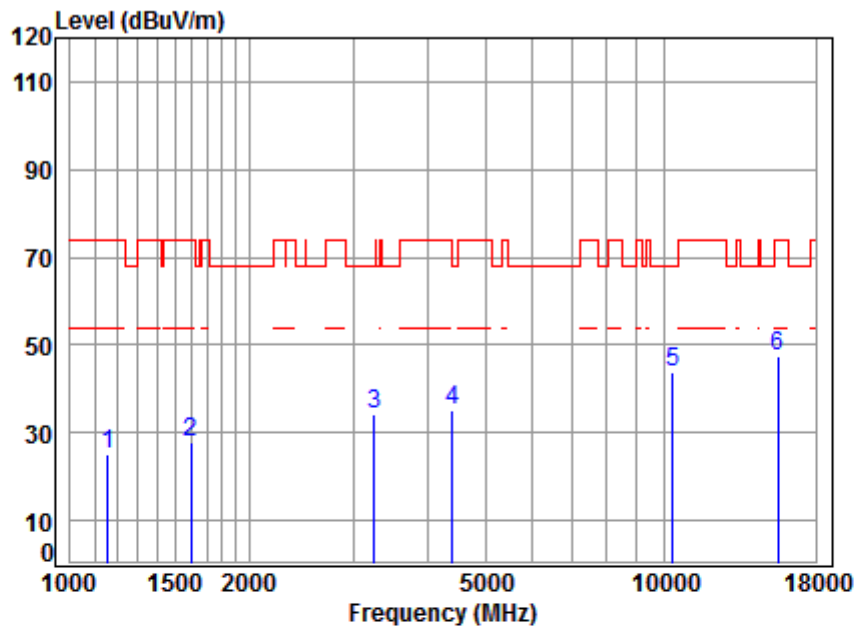


Unless otherwise agreed in writing, this document is issued by the Company subject to its General Conditions of Service printed overleaf, available on request or accessible at <http://www.sgs.com/en/Terms-and-Conditions.aspx> and, for electronic format documents, subject to Terms and Conditions for Electronic Documents at <http://www.sgs.com/en/Terms-and-Conditions/Terms-e-Documents.aspx>. Attention is drawn to the limitation of liability, indemnification and jurisdiction issues defined therein. Any holder of this document is advised that information contained hereon reflects the Company's findings at the time of its intervention only and within the limits of Client's instructions, if any. The Company's sole responsibility is to its Client and this document does not exonerate parties to a transaction from exercising all their rights and obligations under the transaction documents. This document cannot be reproduced except in full, without prior written approval of the Company. Any unauthorized alteration, forgery or falsification of the content or appearance of this document is unlawful and offenders may be prosecuted to the fullest extent of the law. Unless otherwise stated the results shown in this test report refer only to the sample(s) tested and such sample(s) are retained for 30 days only.

Attention: To check the authenticity of testing / inspection report and certificate, please contact us at telephone: (86-755) 8307 1443, or email: [CN.Doccheck@sgs.com](mailto:CN.Doccheck@sgs.com)  
No.1 Workshop, M-10, Middle Section, Science & Technology Park, Shenzhen, China 518057 t (86-755) 26012053 f (86-755) 26710594 www.sgs.com.cn  
中国·深圳·科技园中区M-10栋一号厂房 邮编: 518057 t (86-755) 26012053 f (86-755) 26710594 sgs.china@sgs.com

**Transmitter emission above 1GHz**

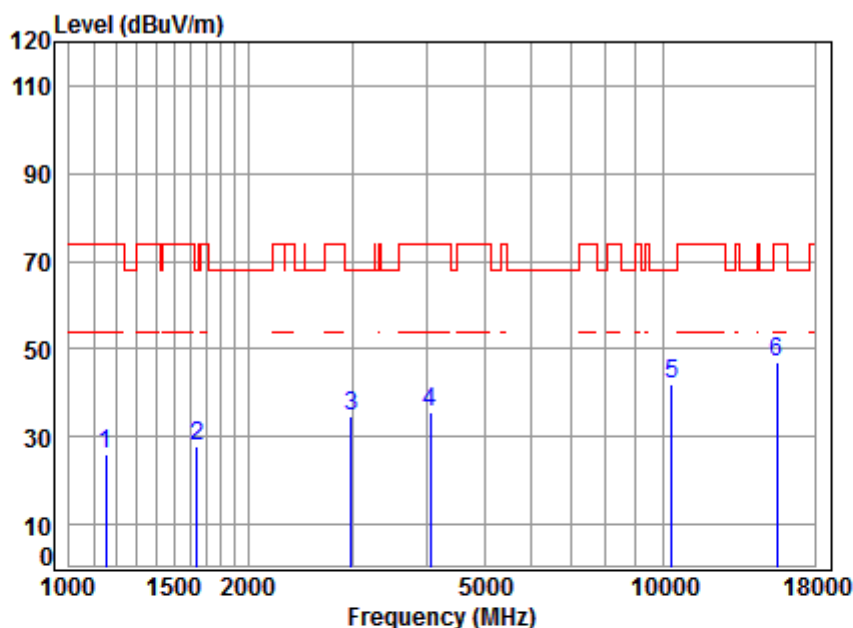
Mode:c; Polarization:Horizontal; Modulation:802.11a; bandwidth:20MHz; Channel:Low



Site : chamber  
Condition: 3m HORIZONTAL  
Job No : 10092CR/10094CR  
Mode : 5180 TX RSE  
Note : 5G WIFI 11A

	Freq	Cable Loss	Ant Factor	Preamp Factor	Read Level	Level	Limit Line	Over Limit	Remark
	MHz	dB	dB/m	dB	dBuV	dBuV/m	dBuV/m	dB	
1	1158.828	4.25	24.40	40.45	36.71	24.91	74.00	-49.09	peak
2	1597.181	5.35	26.24	40.77	36.87	27.69	74.00	-46.31	peak
3	3252.005	6.23	31.32	41.78	38.36	34.13	68.20	-34.07	peak
4	4405.090	7.46	33.44	43.20	37.50	35.20	68.20	-33.00	peak
5	10360.000	11.19	37.76	37.97	32.83	43.81	68.20	-24.39	peak
6	15540.000	14.30	40.72	40.60	32.85	47.27	74.00	-26.73	peak

Mode:c; Polarization:Vertical; Modulation:802.11a; bandwidth:20MHz; Channel:Low

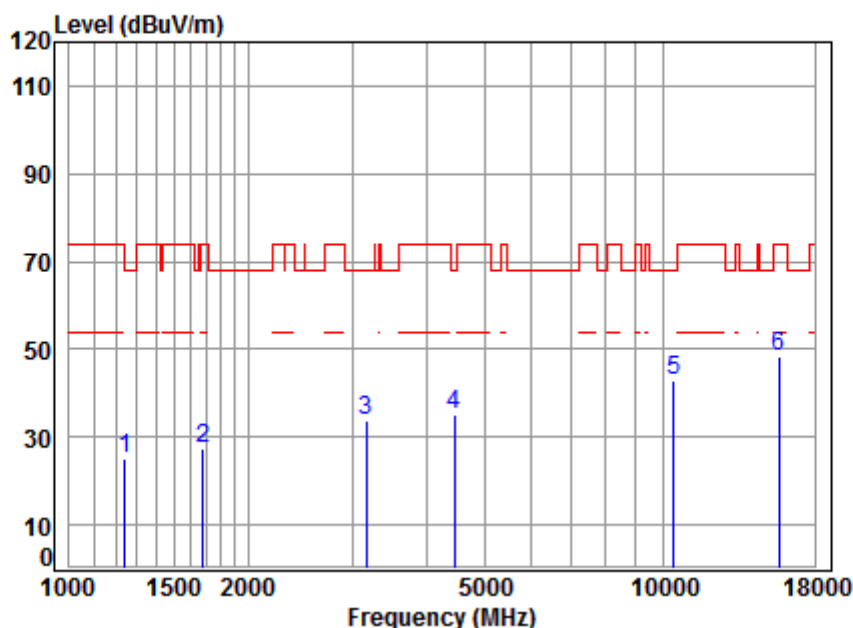


Site : chamber  
Condition: 3m VERTICAL  
Job No : 10092CR/10094CR  
Mode : 5180 TX RSE  
Note : 5G WIFI 11A

		Cable	Ant	Preamp	Read		Limit	Over	
Freq		Loss	Factor	Factor	Level	Level	Line	Limit	Remark
	MHz	dB	dB/m	dB	dBuV	dBuV/m	dBuV/m	dB	
1	1152.148	4.22	24.37	40.44	37.74	25.89	74.00	-48.11	peak
2	1644.019	5.30	26.44	40.80	37.07	28.01	68.20	-40.19	peak
3	2990.531	5.97	30.86	41.40	39.25	34.68	68.20	-33.52	peak
4	4062.629	7.06	32.82	42.82	38.47	35.53	74.00	-38.47	peak
5	10360.000	11.19	37.76	37.97	31.22	42.20	68.20	-26.00	peak
6	15540.000	14.30	40.72	40.60	32.65	47.07	74.00	-26.93	peak



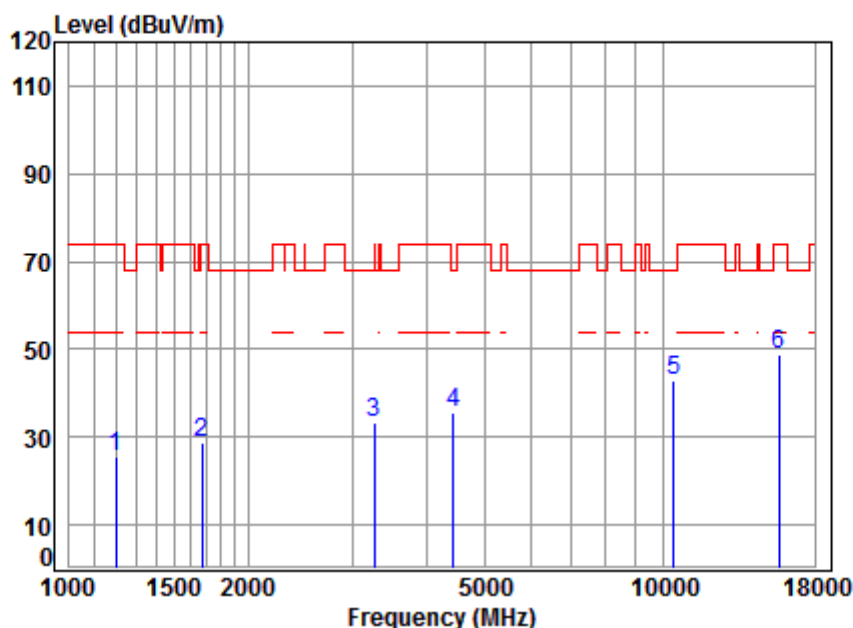
Mode:c; Polarization:Horizontal; Modulation:802.11a; bandwidth:20MHz; Channel:middle



Site : chamber  
Condition: 3m HORIZONTAL  
Job No : 10092CR/10094CR  
Mode : 5220 TX RSE  
Note : 5G WIFI 11A

		Cable	Ant	Preamp	Read		Limit	Over	
	Freq	Loss	Factor	Factor	Level	Level	Line	Limit	Remark
	MHz	dB	dB/m	dB	dBuV	dBuV/m	dBuV/m	dB	
1	1242.068	4.58	24.78	40.52	36.43	25.27	68.20	-42.93	peak
2	1677.621	5.25	26.58	40.82	36.29	27.30	74.00	-46.70	peak
3	3168.500	6.15	31.18	41.66	37.99	33.66	68.20	-34.54	peak
4	4456.315	7.51	33.53	43.26	37.23	35.01	68.20	-33.19	peak
5	10440.000	11.25	37.72	38.01	32.13	43.09	68.20	-25.11	peak
6	15660.000	14.48	40.80	40.58	33.45	48.15	74.00	-25.85	peak

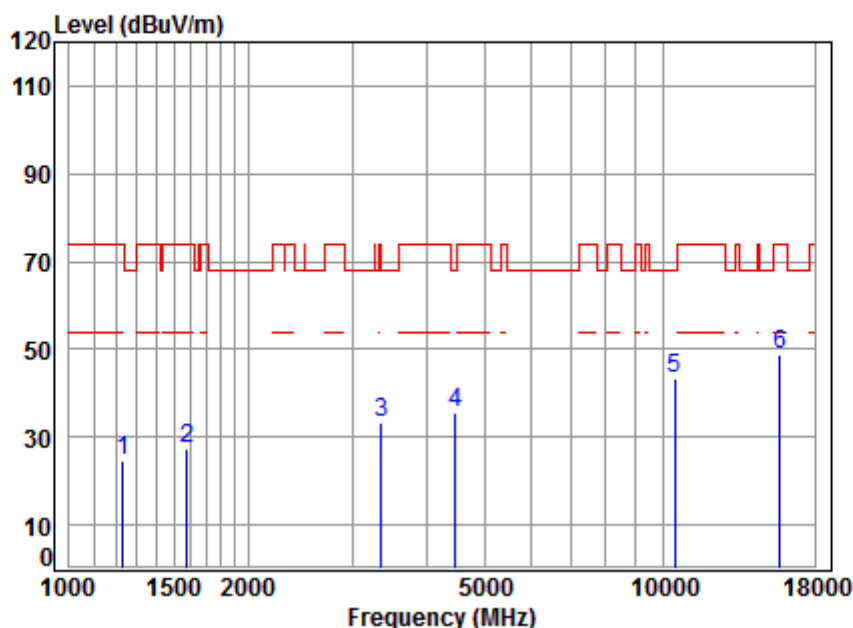
Mode:c; Polarization:Vertical; Modulation:802.11a; bandwidth:20MHz; Channel:middle



Site : chamber  
Condition: 3m VERTICAL  
Job No : 10092CR/10094CR  
Mode : 5220 TX RSE  
Note : 5G WIFI 11A

		Cable	Ant	Preamp	Read		Limit	Over	
Freq		Loss	Factor	Factor	Level	Level	Line	Limit	Remark
MHz		dB	dB/m	dB	dBuV	dBuV/m	dBuV/m	dB	
1	1199.726	4.42	24.59	40.48	37.16	25.69	74.00	-48.31	peak
2	1672.779	5.26	26.56	40.82	37.77	28.77	74.00	-45.23	peak
3	3261.418	6.24	31.33	41.79	37.51	33.29	74.00	-40.71	peak
4	4430.628	7.48	33.48	43.23	37.82	35.55	68.20	-32.65	peak
5	10440.000	11.25	37.72	38.01	32.02	42.98	68.20	-25.22	peak
6	15660.000	14.48	40.80	40.58	33.91	48.61	74.00	-25.39	peak

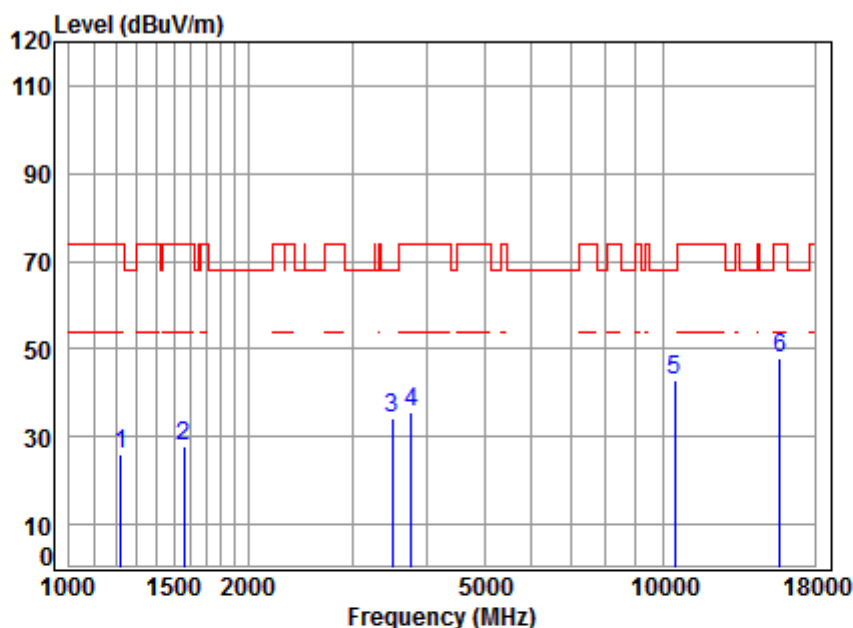
Mode:c; Polarization:Horizontal; Modulation:802.11a; bandwidth:20MHz; Channel:High



Site : chamber  
Condition: 3m HORIZONTAL  
Job No : 10092CR/10094CR  
Mode : 5240 TX RSE  
Note : 5G WIFI 11A

		Cable	Ant	Preamp	Read		Limit	Over	
	Freq	Loss	Factor	Factor	Level	Level	Line	Limit	Remark
	MHz	dB	dB/m	dB	dBuV	dBuV/m	dBuV/m	dB	
1	1231.345	4.54	24.73	40.51	36.09	24.85	74.00	-49.15	peak
2	1578.822	5.38	26.16	40.76	36.71	27.49	74.00	-46.51	peak
3	3357.061	6.33	31.48	41.93	37.40	33.28	74.00	-40.72	peak
4	4469.214	7.53	33.55	43.27	37.96	35.77	68.20	-32.43	peak
5	10480.000	11.28	37.71	38.03	32.50	43.46	68.20	-24.74	peak
6	15720.000	14.57	40.83	40.57	33.80	48.63	74.00	-25.37	peak

Mode:c; Polarization:Vertical; Modulation:802.11a; bandwidth:20MHz; Channel:High

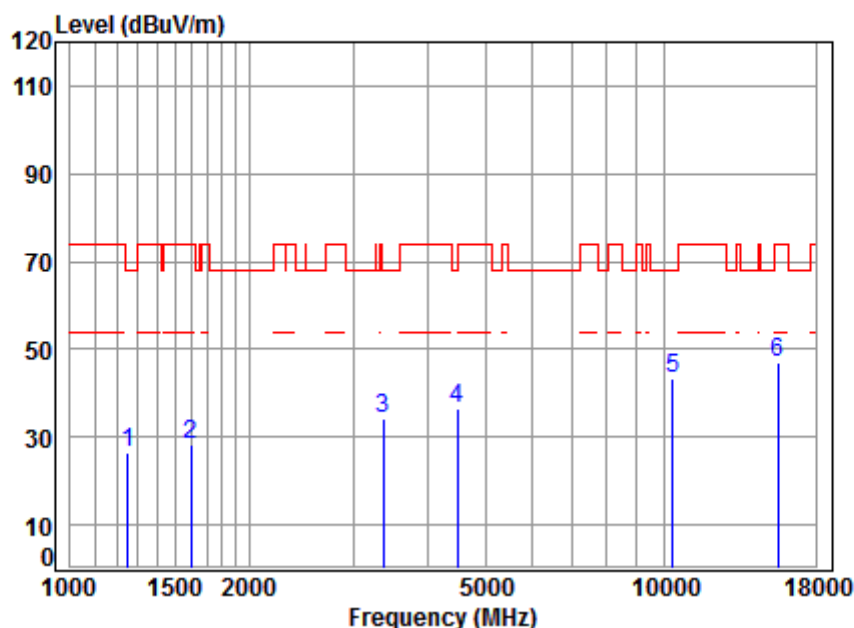


Site : chamber  
Condition: 3m VERTICAL  
Job No : 10092CR/10094CR  
Mode : 5240 TX RSE  
Note : 5G WIFI 11A

		Cable	Ant	Preamp	Read		Limit	Over	
Freq		Loss	Factor	Factor	Level	Level	Line	Limit	Remark
MHz		dB	dB/m	dB	dBuV	dBuV/m	dBuV/m	dB	
1	1224.247	4.51	24.70	40.50	37.31	26.02	74.00	-47.98	peak
2	1560.673	5.40	26.08	40.75	37.20	27.93	74.00	-46.07	peak
3	3495.691	6.46	31.69	42.12	38.06	34.09	68.20	-34.11	peak
4	3768.513	6.75	32.25	42.47	39.12	35.65	74.00	-38.35	peak
5	10480.000	11.28	37.71	38.03	31.73	42.69	68.20	-25.51	peak
6	15720.000	14.57	40.83	40.57	33.06	47.89	74.00	-26.11	peak



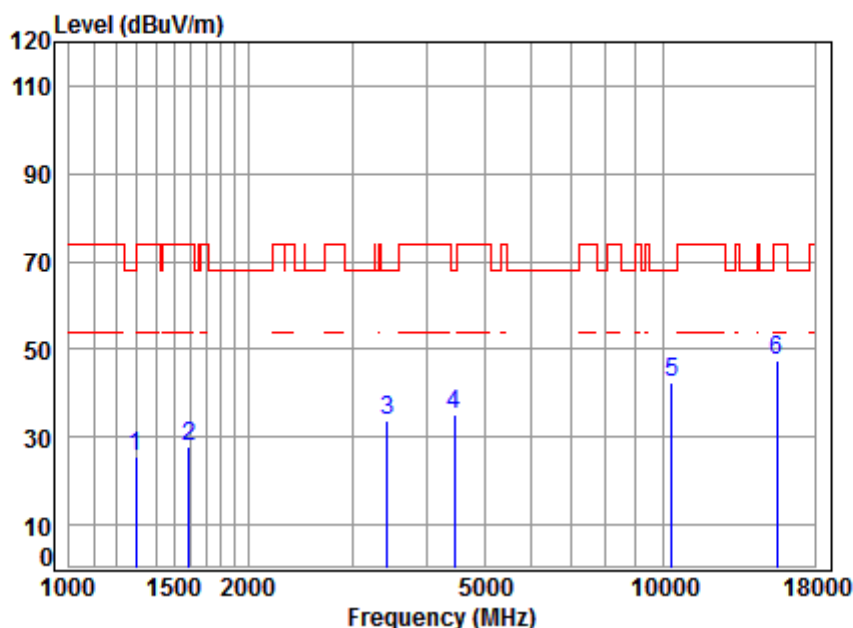
Mode:c; Polarization:Horizontal; Modulation:802.11ac; bandwidth:20MHz; Channel:Low



Site : chamber  
Condition: 3m HORIZONTAL  
Job No : 10092CR/10094CR  
Mode : 5180 TX RSE  
Note : 5G WIFI 11AC20

		Cable	Ant	Preamp	Read		Limit	Over	
	Freq	Loss	Factor	Factor	Level	Level	Line	Limit	Remark
	MHz	dB	dB/m	dB	dBuV	dBuV/m	dBuV/m	dB	
1	1249.269	4.61	24.81	40.52	37.45	26.35	68.20	-41.85	peak
2	1597.181	5.35	26.24	40.77	37.51	28.33	74.00	-45.67	peak
3	3366.778	6.34	31.50	41.94	38.23	34.13	68.20	-34.07	peak
4	4495.125	7.55	33.59	43.30	38.81	36.65	68.20	-31.55	peak
5	10360.000	11.19	37.76	37.97	32.18	43.16	68.20	-25.04	peak
6	15540.000	14.30	40.72	40.60	32.43	46.85	74.00	-27.15	peak

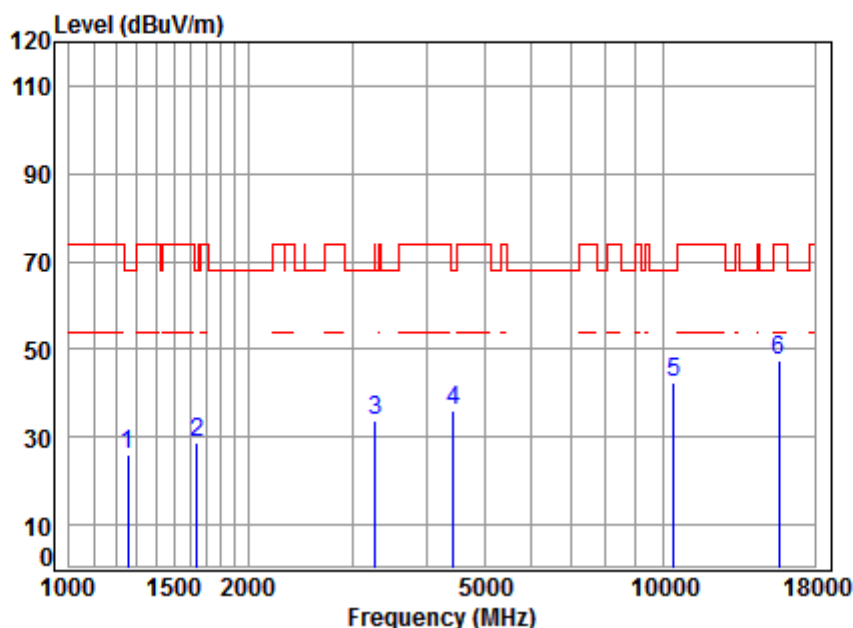
Mode:c; Polarization:Vertical; Modulation:802.11ac; bandwidth:20MHz; Channel:Low



Site : chamber  
Condition: 3m VERTICAL  
Job No : 10092CR/10094CR  
Mode : 5180 TX RSE  
Note : 5G WIFI 11AC20

		Cable	Ant	Preamp	Read		Limit	Over	
	Freq	Loss	Factor	Factor	Level	Level	Line	Limit	Remark
	MHz	dB	dB/m	dB	dBuV	dBuV/m	dBuV/m	dB	
1	1297.103	4.79	25.01	40.56	36.25	25.49	68.20	-42.71	peak
2	1592.571	5.36	26.22	40.77	36.93	27.74	74.00	-46.26	peak
3	3435.590	6.40	31.60	42.04	37.78	33.74	68.20	-34.46	peak
4	4456.315	7.51	33.53	43.26	37.57	35.35	68.20	-32.85	peak
5	10360.000	11.19	37.76	37.97	31.57	42.55	68.20	-25.65	peak
6	15540.000	14.30	40.72	40.60	33.14	47.56	74.00	-26.44	peak

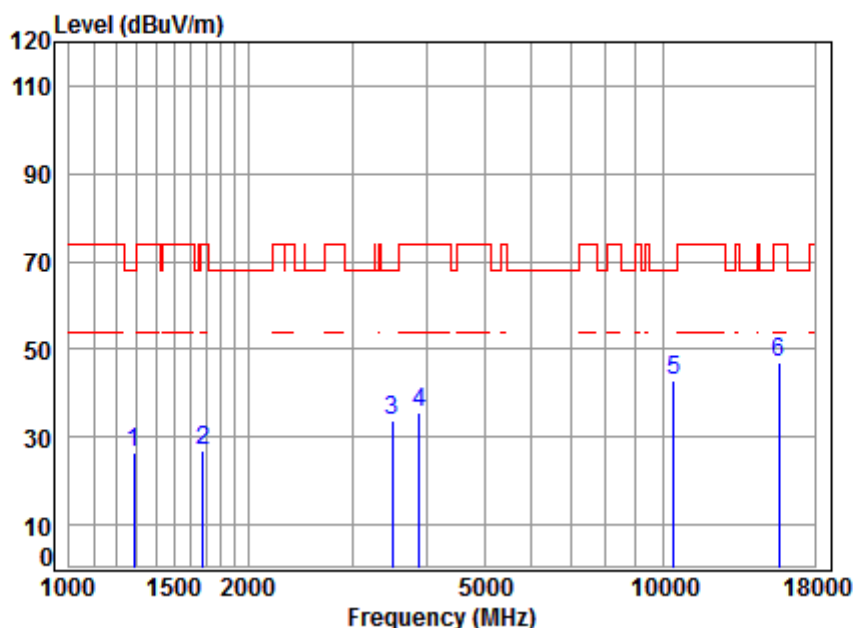
Mode:c; Polarization:Horizontal; Modulation:802.11ac; bandwidth:20MHz; Channel:Middle



Site : chamber  
Condition: 3m HORIZONTAL  
Job No : 10092CR/10094CR  
Mode : 5220 TX RSE  
Note : 5G WIFI 11AC20

		Cable	Ant	Preamp	Read		Limit	Over	
Freq		Loss	Factor	Factor	Level	Level	Line	Limit	Remark
MHz		dB	dB/m	dB	dBuV	dBuV/m	dBuV/m	dB	
1	1256.512	4.64	24.84	40.53	37.11	26.06	68.20	-42.14	peak
2	1639.274	5.30	26.42	40.79	37.83	28.76	68.20	-39.44	peak
3	3280.326	6.26	31.36	41.82	37.89	33.69	68.20	-34.51	peak
4	4430.628	7.48	33.48	43.23	38.37	36.10	68.20	-32.10	peak
5	10440.000	11.25	37.72	38.01	31.63	42.59	68.20	-25.61	peak
6	15660.000	14.48	40.80	40.58	32.66	47.36	74.00	-26.64	peak

Mode:c; Polarization:Vertical; Modulation:802.11ac; bandwidth:20MHz; Channel:Middle

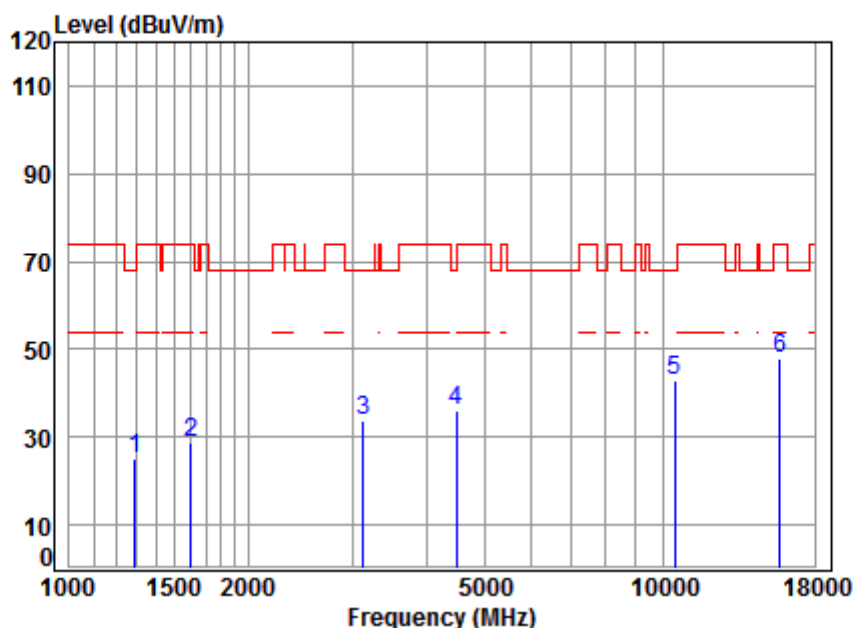


Site : chamber  
Condition: 3m VERTICAL  
Job No : 10092CR/10094CR  
Mode : 5220 TX RSE  
Note : 5G WIFI 11AC20

		Cable	Ant	Preamp	Read		Limit	Over	
Freq		Loss	Factor	Factor	Level	Level	Line	Limit	Remark
	MHz	dB	dB/m	dB	dBuV	dBuV/m	dBuV/m	dB	
1	1285.904	4.75	24.96	40.55	37.11	26.27	68.20	-41.93	peak
2	1677.621	5.25	26.58	40.82	35.86	26.87	74.00	-47.13	peak
3	3495.691	6.46	31.69	42.12	37.72	33.75	68.20	-34.45	peak
4	3890.255	6.87	32.49	42.62	38.92	35.66	74.00	-38.34	peak
5	10440.000	11.25	37.72	38.01	31.77	42.73	68.20	-25.47	peak
6	15660.000	14.48	40.80	40.58	32.49	47.19	74.00	-26.81	peak



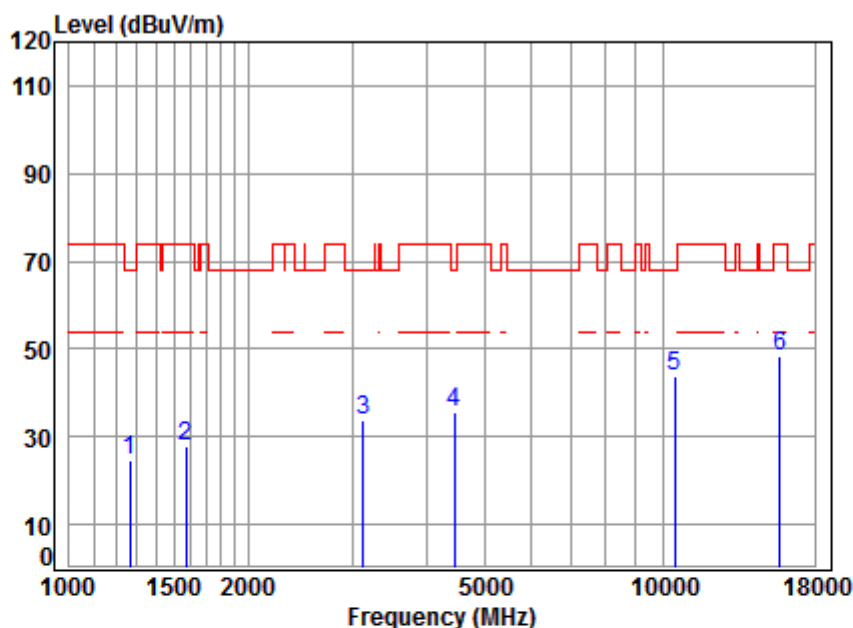
Mode:c; Polarization:Horizontal; Modulation:802.11ac; bandwidth:20MHz; Channel:High



Site : chamber  
Condition: 3m HORIZONTAL  
Job No : 10092CR/10094CR  
Mode : 5240 TX RSE  
Note : 5G WIFI 11AC20

		Cable	Ant	Preamp	Read	Limit	Over	
Freq	Loss	Factor	Factor	Level	Level	Line	Limit	Remark
MHz	dB	dB/m	dB	dBuV	dBuV/m	dBuV/m	dB	
1	1289.627	4.76	24.98	40.55	35.69	24.88	68.20	-43.32 peak
2	1601.804	5.35	26.26	40.77	37.70	28.54	74.00	-45.46 peak
3	3123.039	6.11	31.11	41.59	38.33	33.96	68.20	-34.24 peak
4	4482.150	7.54	33.57	43.29	38.38	36.20	68.20	-32.00 peak
5	10480.000	11.28	37.71	38.03	32.13	43.09	68.20	-25.11 peak
6	15720.000	14.57	40.83	40.57	32.92	47.75	74.00	-26.25 peak

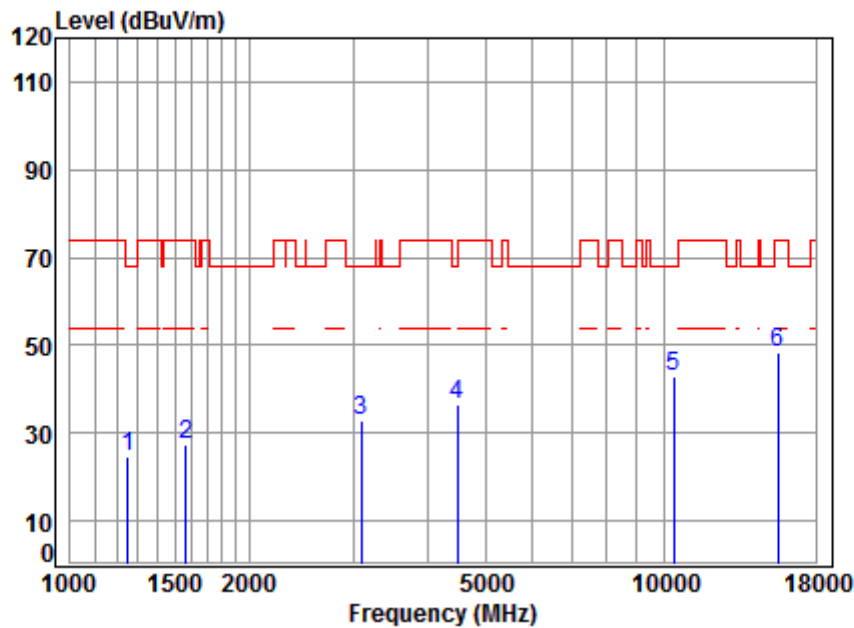
Mode:c; Polarization:Vertical; Modulation:802.11ac; bandwidth:20MHz; Channel:High



Site : chamber  
Condition: 3m VERTICAL  
Job No : 10092CR/10094CR  
Mode : 5240 TX RSE  
Note : 5G WIFI 11AC20

		Cable	Ant	Preamp	Read		Limit	Over	
Freq		Loss	Factor	Factor	Level	Level	Line	Limit	Remark
	MHz	dB	dB/m	dB	dBuV	dBuV/m	dBuV/m	dB	
1	1263.796	4.66	24.87	40.53	35.55	24.55	68.20	-43.65	peak
2	1574.265	5.38	26.14	40.75	36.87	27.64	74.00	-46.36	peak
3	3132.079	6.11	31.12	41.60	38.12	33.75	68.20	-34.45	peak
4	4456.315	7.51	33.53	43.26	38.00	35.78	68.20	-32.42	peak
5	10480.000	11.28	37.71	38.03	32.89	43.85	68.20	-24.35	peak
6	15720.000	14.57	40.83	40.57	33.38	48.21	74.00	-25.79	peak

Mode:c; Polarization:Horizontal; Modulation:802.11ac; bandwidth:40MHz; Channel:Low

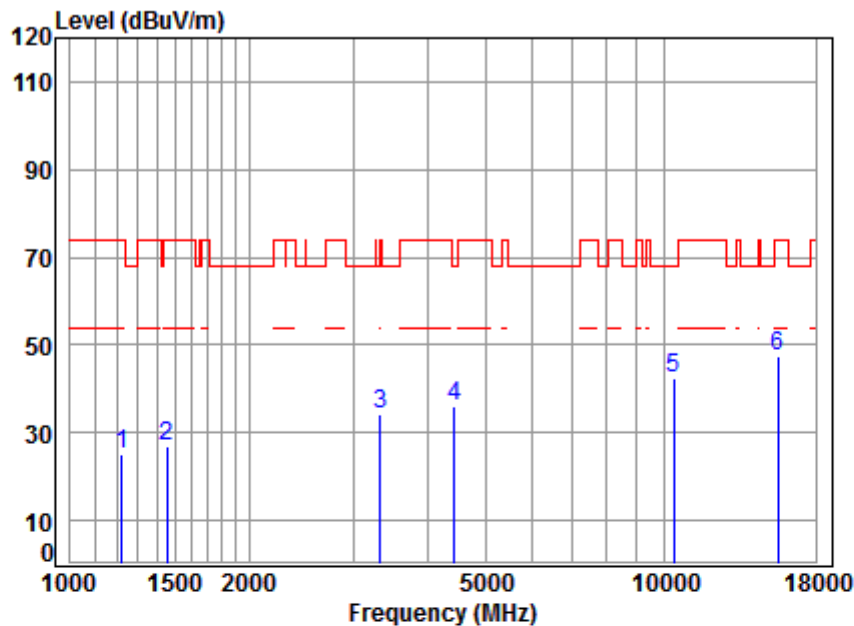


Site : chamber  
Condition: 3m HORIZONTAL  
Job No : 10092CR/10094CR  
Mode : 5190 TX RSE  
Note : 5G WIFI 11AC40

		Cable	Ant	Preamp	Read		Limit	Over	
Freq		Loss	Factor	Factor	Level	Level	Line	Limit	Remark
MHz		dB	dB/m	dB	dBuV	dBuV/m	dBuV/m	dB	
1	1249.269	4.61	24.81	40.52	35.74	24.64	68.20	-43.56	peak
2	1565.191	5.39	26.10	40.75	36.64	27.38	74.00	-46.62	peak
3	3087.140	6.07	31.05	41.53	37.26	32.85	68.20	-35.35	peak
4	4495.125	7.55	33.59	43.30	38.68	36.52	68.20	-31.68	peak
5	10380.000	11.21	37.75	37.98	31.80	42.78	68.20	-25.42	peak
6	15570.000	14.35	40.74	40.60	33.82	48.31	74.00	-25.69	peak



Mode:c; Polarization:Vertical; Modulation:802.11ac; bandwidth:40MHz; Channel:Low



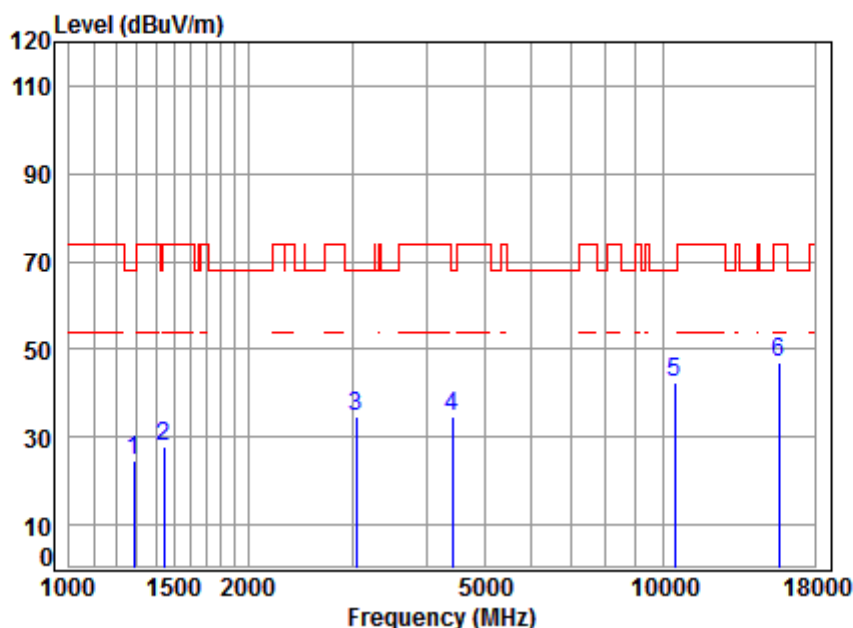
Site : chamber  
Condition: 3m VERTICAL  
Job No : 10092CR/10094CR  
Mode : 5190 TX RSE  
Note : 5G WIFI 11AC40

		Cable	Ant	Preamp	Read		Limit	Over	
Freq		Loss	Factor	Factor	Level	Level	Line	Limit	Remark
MHz		dB	dB/m	dB	dBuV	dBuV/m	dBuV/m	dB	
1	1220.714	4.50	24.68	40.50	36.27	24.95	74.00	-49.05	peak
2	1456.081	5.34	25.64	40.68	36.59	26.89	74.00	-47.11	peak
3	3328.077	6.30	31.44	41.89	38.15	34.00	68.20	-34.20	peak
4	4443.453	7.50	33.50	43.25	38.48	36.23	68.20	-31.97	peak
5	10380.000	11.21	37.75	37.98	31.42	42.40	68.20	-25.80	peak
6	15570.000	14.35	40.74	40.60	32.76	47.25	74.00	-26.75	peak





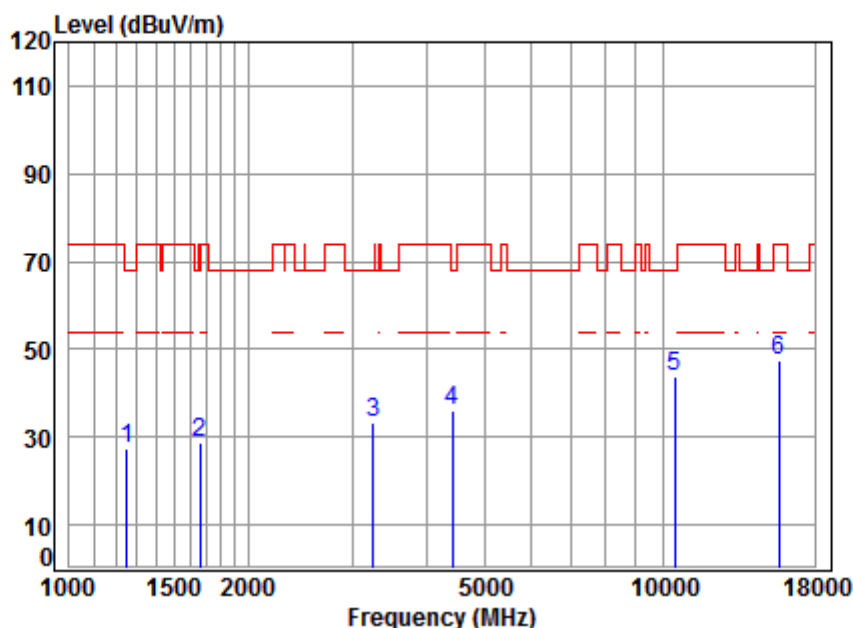
Mode:c; Polarization:Horizontal; Modulation:802.11ac; bandwidth:40MHz; Channel:High



Site : chamber  
Condition: 3m HORIZONTAL  
Job No : 10092CR/10094CR  
Mode : 5230 TX RSE  
Note : 5G WIFI 11AC40

		Cable	Ant	Preamp	Read		Limit	Over	
Freq		Loss	Factor	Factor	Level	Level	Line	Limit	Remark
MHz		dB	dB/m	dB	dBuV	dBuV/m	dBuV/m	dB	
1	1285.904	4.75	24.96	40.55	35.47	24.63	68.20	-43.57	peak
2	1443.509	5.30	25.59	40.67	37.43	27.65	74.00	-46.35	peak
3	3042.846	6.02	30.97	41.47	39.32	34.84	68.20	-33.36	peak
4	4417.841	7.47	33.46	43.22	37.12	34.83	68.20	-33.37	peak
5	10460.000	11.26	37.72	38.02	31.32	42.28	68.20	-25.92	peak
6	15690.000	14.53	40.82	40.58	32.11	46.88	74.00	-27.12	peak

Mode:c; Polarization:Vertical; Modulation:802.11ac; bandwidth:40MHz; Channel:High



Site : chamber  
Condition: 3m VERTICAL  
Job No : 10092CR/10094CR  
Mode : 5230 TX RSE  
Note : 5G WIFI 11AC40

		Cable	Ant	Preamp	Read		Limit	Over	
	Freq	Loss	Factor	Factor	Level	Level	Line	Limit	Remark
	MHz	dB	dB/m	dB	dBuV	dBuV/m	dBuV/m	dB	
1	1249.269	4.61	24.81	40.52	38.58	27.48	68.20	-40.72	peak
2	1663.137	5.27	26.52	40.81	37.67	28.65	74.00	-45.35	peak
3	3252.005	6.23	31.32	41.78	37.52	33.29	68.20	-34.91	peak
4	4417.841	7.47	33.46	43.22	38.21	35.92	68.20	-32.28	peak
5	10460.000	11.26	37.72	38.02	32.68	43.64	68.20	-24.56	peak
6	15690.000	14.53	40.82	40.58	32.86	47.63	74.00	-26.37	peak

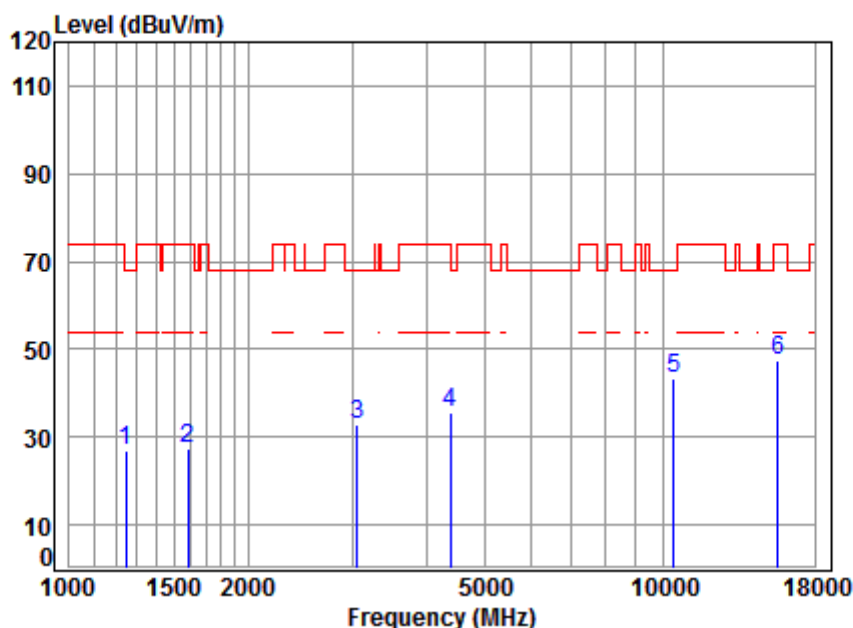


Unless otherwise agreed in writing, this document is issued by the Company subject to its General Conditions of Service printed overleaf, available on request or accessible at <http://www.sgs.com/en/Terms-and-Conditions.aspx> and, for electronic format documents, subject to Terms and Conditions for Electronic Documents at <http://www.sgs.com/en/Terms-and-Conditions/Terms-e-Documents.aspx>. Attention is drawn to the limitation of liability, indemnification and jurisdiction issues defined therein. Any holder of this document is advised that information contained hereon reflects the Company's findings at the time of its intervention only and within the limits of Client's instructions, if any. The Company's sole responsibility is to its Client and this document does not exonerate parties to a transaction from exercising all their rights and obligations under the transaction documents. This document cannot be reproduced except in full, without prior written approval of the Company. Any unauthorized alteration, forgery or falsification of the content or appearance of this document is unlawful and offenders may be prosecuted to the fullest extent of the law. Unless otherwise stated the results shown in this test report refer only to the sample(s) tested and such sample(s) are retained for 30 days only.  
Attention: To check the authenticity of testing / inspection report and certificate, please contact us at telephone: (86-755) 8307 1443, or email: [CN.Doccheck@sgs.com](mailto:CN.Doccheck@sgs.com)

SGS-CSTC Standards Technical Services Co., Ltd.  
Shenzhen Branch (China) SGS-CSTC Laboratory

No.1 Workshop, M-10, Middle Section, Science & Technology Park, Shenzhen, China 518057 t (86-755) 26012053 f (86-755) 26710594 www.sgs.com.cn  
中国·深圳·科技园中区M-10栋一号厂房 邮编: 518057 t (86-755) 26012053 f (86-755) 26710594 sgs.china@sgs.com

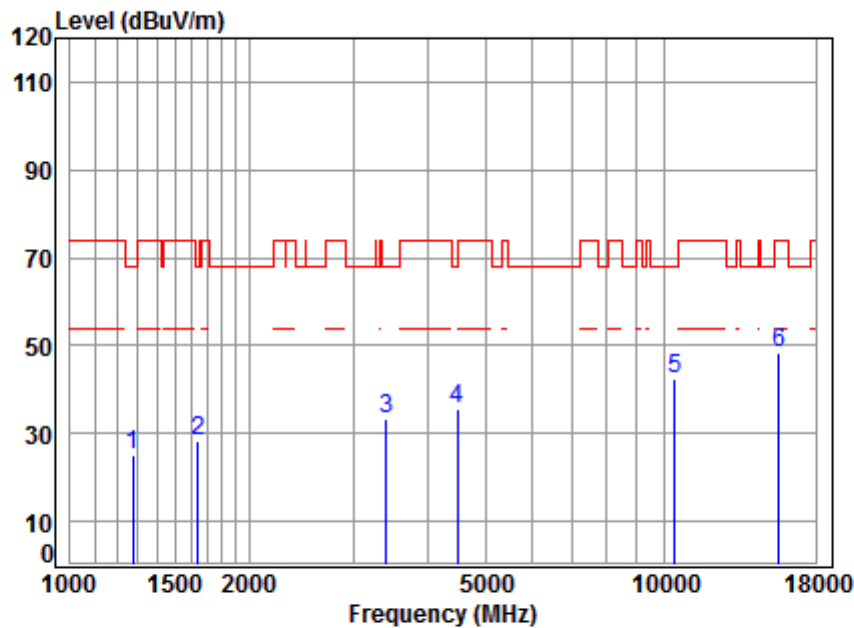
Mode:c; Polarization:Horizontal; Modulation:802.11ac; bandwidth:80MHz; Channel:middle



Site : chamber  
Condition: 3m HORIZONTAL  
Job No : 10092CR/10094CR  
Mode : 5210 TX RSE  
Note : 5G WIFI 11AC80

		Cable	Ant	Preamp	Read		Limit	Over	
	Freq	Loss	Factor	Factor	Level	Level	Line	Limit	Remark
	MHz	dB	dB/m	dB	dBuV	dBuV/m	dBuV/m	dB	
1	1245.663	4.60	24.79	40.52	38.21	27.08	68.20	-41.12	peak
2	1587.975	5.37	26.20	40.76	36.68	27.49	74.00	-46.51	peak
3	3051.653	6.03	30.99	41.48	37.41	32.95	68.20	-35.25	peak
4	4392.376	7.44	33.42	43.19	37.91	35.58	74.00	-38.42	peak
5	10420.000	11.24	37.73	38.00	32.48	43.45	68.20	-24.75	peak
6	15630.000	14.44	40.78	40.59	32.64	47.27	74.00	-26.73	peak

Mode:c; Polarization:Vertical; Modulation:802.11ac; bandwidth:80MHz; Channel:middle



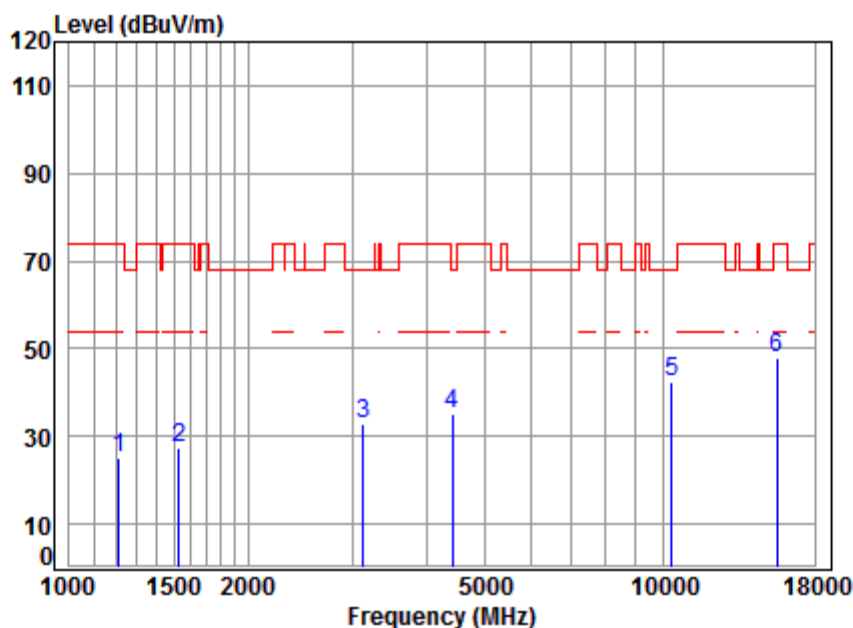
Site : chamber  
Condition: 3m VERTICAL  
Job No : 10092CR/10094CR  
Mode : 5210 TX RSE  
Note : 5G WIFI 11AC80

		Cable	Ant	Preamp	Read		Limit	Over	
	Freq	Loss	Factor	Factor	Level	Level	Line	Limit	Remark
	MHz	dB	dB/m	dB	dBuV	dBuV/m	dBuV/m	dB	
1	1274.802	4.71	24.92	40.54	35.89	24.98	68.20	-43.22	peak
2	1644.019	5.30	26.44	40.80	37.55	28.49	68.20	-39.71	peak
3	3405.929	6.38	31.56	42.00	37.39	33.33	68.20	-34.87	peak
4	4495.125	7.55	33.59	43.30	37.72	35.56	68.20	-32.64	peak
5	10420.000	11.24	37.73	38.00	31.46	42.43	68.20	-25.77	peak
6	15630.000	14.44	40.78	40.59	33.64	48.27	74.00	-25.73	peak





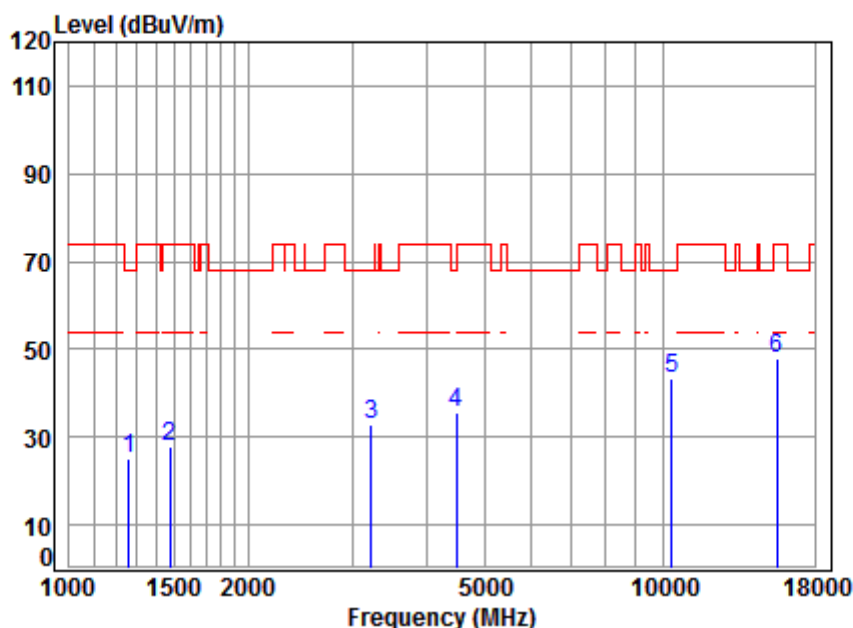
Mode:c; Polarization:Horizontal; Modulation:802.11n; bandwidth:20MHz; Channel:Low



Site : chamber  
Condition: 3m HORIZONTAL  
Job No : 10092CR/10094CR  
Mode : 5180 TX RSE  
Note : 5G WIFI 11N20

	Freq	Cable Loss	Ant Factor	Preamp Factor	Read Level	Level	Limit Line	Over Limit	Remark
	MHz	dB	dB/m	dB	dBuV	dBuV/m	dBuV/m	dB	
1	1210.174	4.46	24.64	40.49	36.46	25.07	74.00	-48.93	peak
2	1529.414	5.44	25.94	40.73	36.78	27.43	74.00	-46.57	peak
3	3132.079	6.11	31.12	41.60	37.06	32.69	68.20	-35.51	peak
4	4417.841	7.47	33.46	43.22	37.35	35.06	68.20	-33.14	peak
5	10360.000	11.19	37.76	37.97	31.56	42.54	68.20	-25.66	peak
6	15540.000	14.30	40.72	40.60	33.29	47.71	74.00	-26.29	peak

Mode:c; Polarization:Vertical; Modulation:802.11n; bandwidth:20MHz; Channel:Low



Site : chamber  
Condition: 3m VERTICAL  
Job No : 10092CR/10094CR  
Mode : 5180 TX RSE  
Note : 5G WIFI 11N20

		Cable	Ant	Preamp	Read		Limit	Over	
Freq		Loss	Factor	Factor	Level	Level	Line	Limit	Remark
MHz		dB	dB/m	dB	dBuV	dBuV/m	dBuV/m	dB	
1	1260.149	4.65	24.85	40.53	36.08	25.05	68.20	-43.15	peak
2	1477.276	5.41	25.72	40.69	37.40	27.84	74.00	-46.16	peak
3	3223.928	6.20	31.27	41.74	37.35	33.08	68.20	-35.12	peak
4	4482.150	7.54	33.57	43.29	37.60	35.42	68.20	-32.78	peak
5	10360.000	11.19	37.76	37.97	32.46	43.44	68.20	-24.76	peak
6	15540.000	14.30	40.72	40.60	33.40	47.82	74.00	-26.18	peak

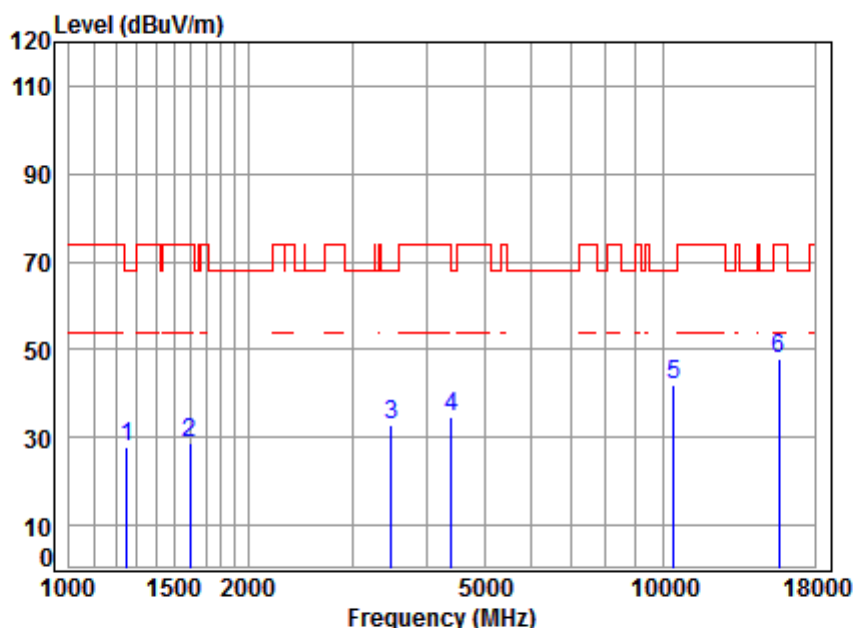


Unless otherwise agreed in writing, this document is issued by the Company subject to its General Conditions of Service printed overleaf, available on request or accessible at <http://www.sgs.com/en/Terms-and-Conditions.aspx> and, for electronic format documents, subject to Terms and Conditions for Electronic Documents at <http://www.sgs.com/en/Terms-and-Conditions/Terms-e-Documents.aspx>. Attention is drawn to the limitation of liability, indemnification and jurisdiction issues defined therein. Any holder of this document is advised that information contained hereon reflects the Company's findings at the time of its intervention only and within the limits of Client's instructions, if any. The Company's sole responsibility is to its Client and this document does not exonerate parties to a transaction from exercising all their rights and obligations under the transaction documents. This document cannot be reproduced except in full, without prior written approval of the Company. Any unauthorized alteration, forgery or falsification of the content or appearance of this document is unlawful and offenders may be prosecuted to the fullest extent of the law. Unless otherwise stated the results shown in this test report refer only to the sample(s) tested and such sample(s) are retained for 30 days only.  
Attention: To check the authenticity of testing / inspection report and certificate, please contact us at telephone: (86-755) 8307 1443, or email: [CN.Doccheck@sgs.com](mailto:CN.Doccheck@sgs.com)

SGS-CSTC Standards Technical Services Co., Ltd.  
Shenzhen Branch (China) SGS-CSTC Laboratory

No.1 Workshop, M-10, Middle Section, Science & Technology Park, Shenzhen, China 518057 t (86-755) 26012053 f (86-755) 26710594 www.sgsgroup.com.cn  
中国·深圳·科技园中区M-10栋一号厂房 邮编: 518057 t (86-755) 26012053 f (86-755) 26710594 sgs.china@sgs.com

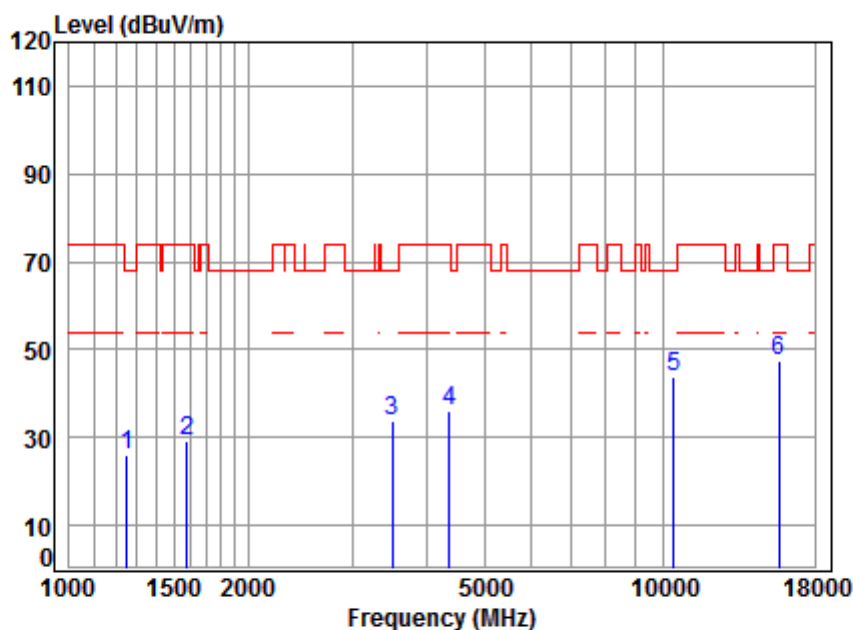
Mode:c; Polarization:Horizontal; Modulation:802.11n; bandwidth:20MHz; Channel:middle



Site : chamber  
Condition: 3m HORIZONTAL  
Job No : 10092CR/10094CR  
Mode : 5220 TX RSE  
Note : 5G WIFI 11N20

		Cable	Ant	Preamp	Read		Limit	Over	
Freq		Loss	Factor	Factor	Level	Level	Line	Limit	Remark
	MHz	dB	dB/m	dB	dBuV	dBuV/m	dBuV/m	dB	
1	1249.269	4.61	24.81	40.52	39.12	28.02	68.20	-40.18	peak
2	1597.181	5.35	26.24	40.77	37.77	28.59	74.00	-45.41	peak
3	3485.601	6.45	31.68	42.10	37.05	33.08	68.20	-35.12	peak
4	4405.090	7.46	33.44	43.20	37.20	34.90	68.20	-33.30	peak
5	10440.000	11.25	37.72	38.01	31.23	42.19	68.20	-26.01	peak
6	15660.000	14.48	40.80	40.58	33.22	47.92	74.00	-26.08	peak

Mode:c; Polarization:Vertical; Modulation:802.11n; bandwidth:20MHz; Channel:middle

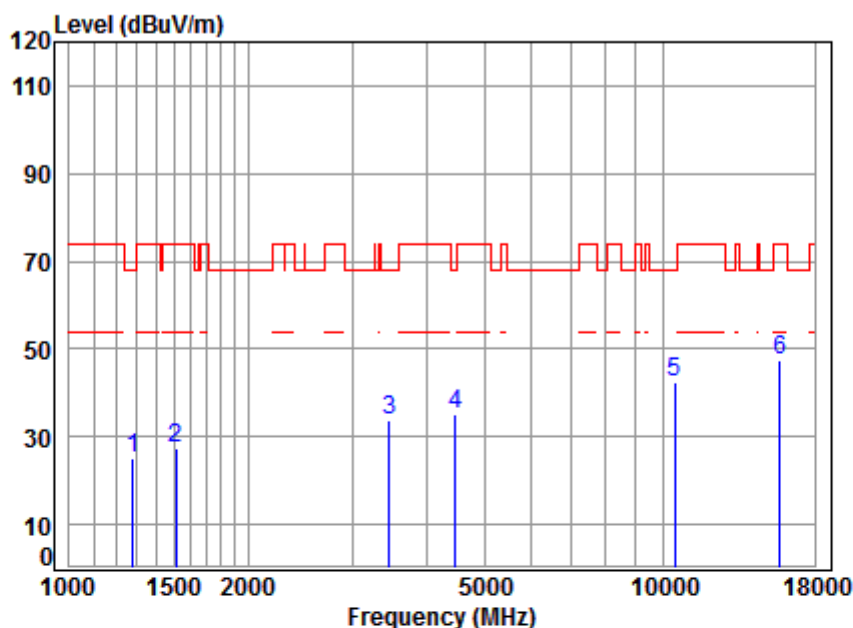


Site : chamber  
Condition: 3m VERTICAL  
Job No : 10092CR/10094CR  
Mode : 5220 TX RSE  
Note : 5G WIFI 11N20

		Cable	Ant	Preamp	Read		Limit	Over	
Freq		Loss	Factor	Factor	Level	Level	Line	Limit	Remark
MHz		dB	dB/m	dB	dBuV	dBuV/m	dBuV/m	dB	
1	1249.269	4.61	24.81	40.52	36.93	25.83	68.20	-42.37	peak
2	1578.822	5.38	26.16	40.76	38.28	29.06	74.00	-44.94	peak
3	3495.691	6.46	31.69	42.12	37.65	33.68	68.20	-34.52	peak
4	4367.058	7.41	33.37	43.16	38.38	36.00	74.00	-38.00	peak
5	10440.000	11.25	37.72	38.01	32.90	43.86	68.20	-24.34	peak
6	15660.000	14.48	40.80	40.58	32.73	47.43	74.00	-26.57	peak



Mode:c; Polarization:Horizontal; Modulation:802.11n; bandwidth:20MHz; Channel:High



Site : chamber  
Condition: 3m HORIZONTAL  
Job No : 10092CR/10094CR  
Mode : 5240 TX RSE  
Note : 5G WIFI 11N20

		Cable	Ant	Preamp	Read		Limit	Over	
Freq		Loss	Factor	Factor	Level	Level	Line	Limit	Remark
	MHz	dB	dB/m	dB	dBuV	dBuV/m	dBuV/m	dB	
1	1282.193	4.73	24.95	40.55	36.11	25.24	68.20	-42.96	peak
2	1511.833	5.46	25.85	40.71	36.62	27.22	74.00	-46.78	peak
3	3465.510	6.43	31.65	42.08	37.83	33.83	68.20	-34.37	peak
4	4469.214	7.53	33.55	43.27	37.33	35.14	68.20	-33.06	peak
5	10480.000	11.28	37.71	38.03	31.41	42.37	68.20	-25.83	peak
6	15720.000	14.57	40.83	40.57	32.79	47.62	74.00	-26.38	peak

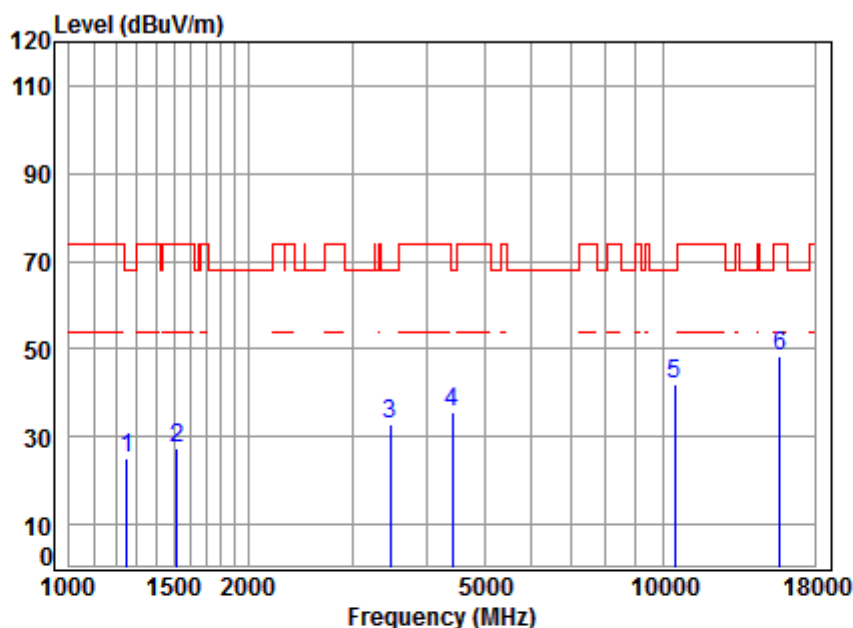


Unless otherwise agreed in writing, this document is issued by the Company subject to its General Conditions of Service printed overleaf, available on request or accessible at <http://www.sgs.com/en/Terms-and-Conditions.aspx> and, for electronic format documents, subject to Terms and Conditions for Electronic Documents at <http://www.sgs.com/en/Terms-and-Conditions/Terms-e-Documents.aspx>. Attention is drawn to the limitation of liability, indemnification and jurisdiction issues defined therein. Any holder of this document is advised that information contained hereon reflects the Company's findings at the time of its intervention only and within the limits of Client's instructions, if any. The Company's sole responsibility is to its Client and this document does not exonerate parties to a transaction from exercising all their rights and obligations under the transaction documents. This document cannot be reproduced except in full, without prior written approval of the Company. Any unauthorized alteration, forgery or falsification of the content or appearance of this document is unlawful and offenders may be prosecuted to the fullest extent of the law. Unless otherwise stated the results shown in this test report refer only to the sample(s) tested and such sample(s) are retained for 30 days only.  
Attention: To check the authenticity of testing / inspection report and certificate, please contact us at telephone: (86-755) 8307 1443, or email: [CN.Doccheck@sgs.com](mailto:CN.Doccheck@sgs.com)

SGS-CSTC Standards Technical Services Co., Ltd.  
Shenzhen Branch (China) EMC Laboratory

No.1 Workshop, M-10, Middle Section, Science & Technology Park, Shenzhen, China 518057 t (86-755) 26012053 f (86-755) 26710594 www.sgsgroup.com.cn  
中国·深圳·科技园中区M-10栋一号厂房 邮编: 518057 t (86-755) 26012053 f (86-755) 26710594 sgs.china@sgs.com

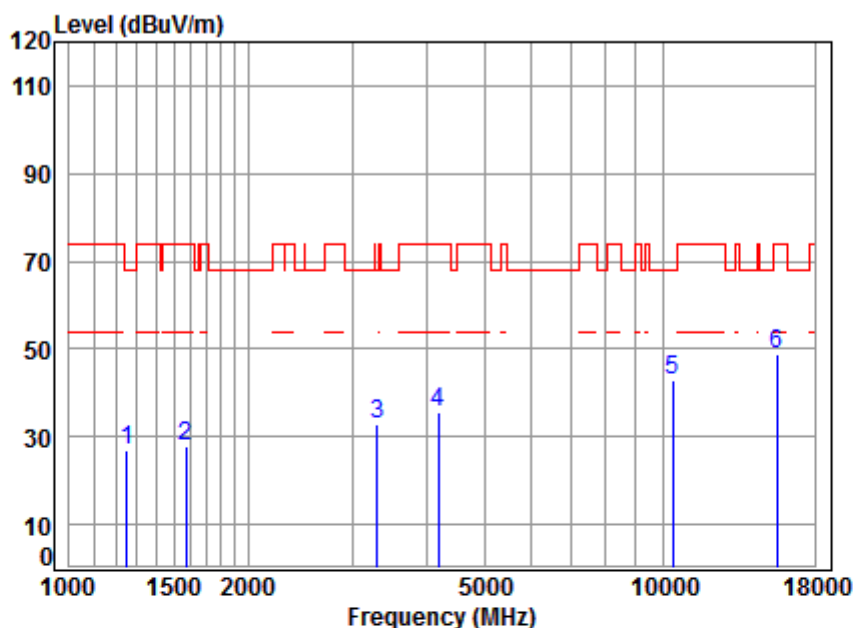
Mode:c; Polarization:Vertical; Modulation:802.11n; bandwidth:20MHz; Channel:High



Site : chamber  
Condition: 3m VERTICAL  
Job No : 10092CR/10094CR  
Mode : 5240 TX RSE  
Note : 5G WIFI 11N20

		Cable	Ant	Preamp	Read		Limit	Over	
	Freq	Loss	Factor	Factor	Level	Level	Line	Limit	Remark
	MHz	dB	dB/m	dB	dBuV	dBuV/m	dBuV/m	dB	
1	1252.885	4.62	24.82	40.53	36.15	25.06	68.20	-43.14	peak
2	1520.598	5.45	25.89	40.72	36.75	27.37	74.00	-46.63	peak
3	3475.541	6.44	31.66	42.09	37.05	33.06	68.20	-35.14	peak
4	4417.841	7.47	33.46	43.22	37.65	35.36	68.20	-32.84	peak
5	10480.000	11.28	37.71	38.03	31.06	42.02	68.20	-26.18	peak
6	15720.000	14.57	40.83	40.57	33.48	48.31	74.00	-25.69	peak

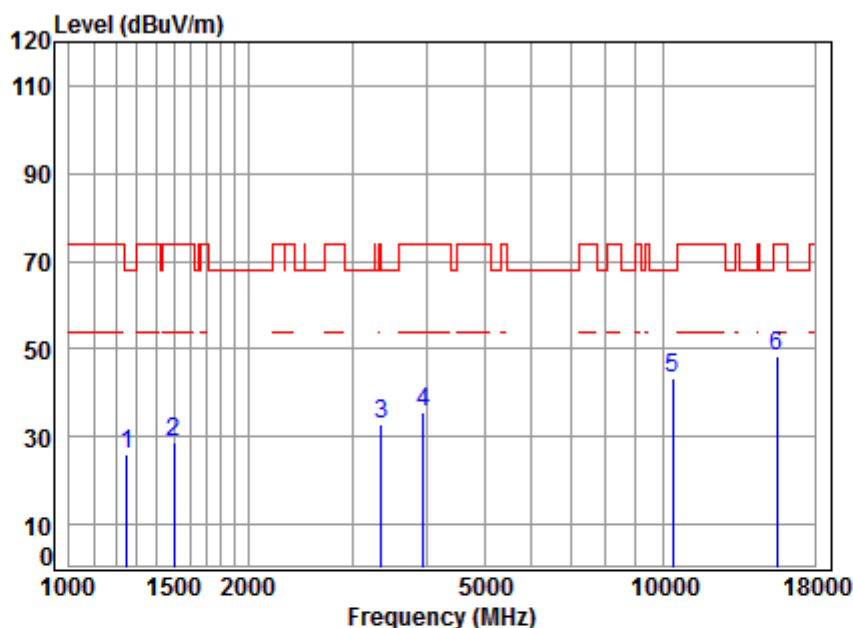
Mode:c; Polarization:Horizontal; Modulation:802.11n; bandwidth:40MHz; Channel:Low



Site : chamber  
Condition: 3m HORIZONTAL  
Job No : 10092CR/10094CR  
Mode : 5190 TX RSE  
Note : 5G WIFI 11N40

		Cable	Ant	Preamp	Read		Limit	Over	
Freq		Loss	Factor	Factor	Level	Level	Line	Limit	Remark
	MHz	dB	dB/m	dB	dBuV	dBuV/m	dBuV/m	dB	
1	1249.269	4.61	24.81	40.52	37.98	26.88	68.20	-41.32	peak
2	1574.265	5.38	26.14	40.75	36.91	27.68	74.00	-46.32	peak
3	3299.344	6.28	31.39	41.85	36.90	32.72	68.20	-35.48	peak
4	4181.768	7.20	33.04	42.96	38.16	35.44	74.00	-38.56	peak
5	10380.000	11.21	37.75	37.98	31.95	42.93	68.20	-25.27	peak
6	15570.000	14.35	40.74	40.60	34.25	48.74	74.00	-25.26	peak

Mode:c; Polarization:Vertical; Modulation:802.11n; bandwidth:40MHz; Channel:Low

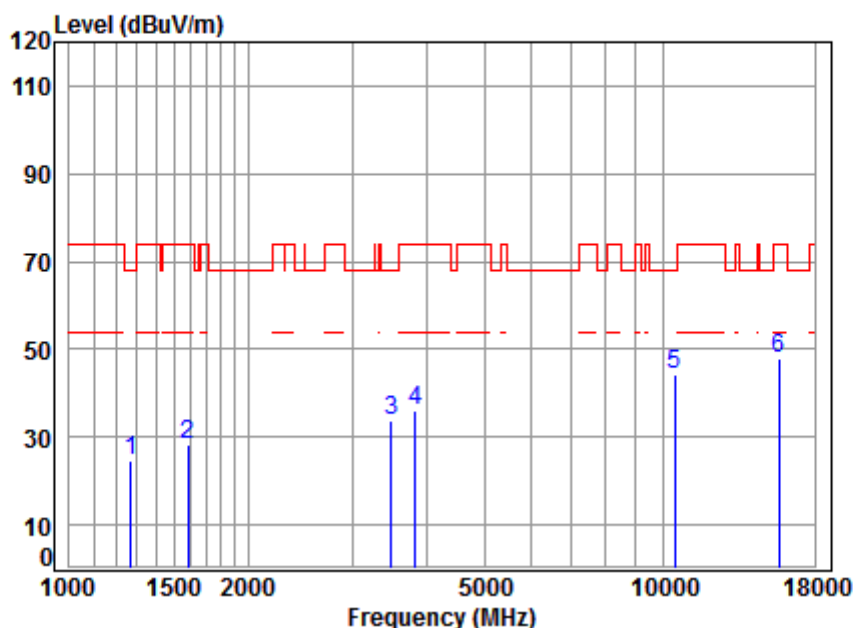


Site : chamber  
Condition: 3m VERTICAL  
Job No : 10092CR/10094CR  
Mode : 5190 TX RSE  
Note : 5G WIFI 11N40

		Cable	Ant	Preamp	Read		Limit	Over	
Freq		Loss	Factor	Factor	Level	Level	Line	Limit	Remark
	MHz	dB	dB/m	dB	dBuV	dBuV/m	dBuV/m	dB	
1	1249.269	4.61	24.81	40.52	37.05	25.95	68.20	-42.25	peak
2	1503.119	5.48	25.81	40.71	37.96	28.54	74.00	-45.46	peak
3	3357.061	6.33	31.48	41.93	36.86	32.74	74.00	-41.26	peak
4	3946.885	6.93	32.60	42.69	38.94	35.78	74.00	-38.22	peak
5	10380.000	11.21	37.75	37.98	32.18	43.16	68.20	-25.04	peak
6	15570.000	14.35	40.74	40.60	33.70	48.19	74.00	-25.81	peak



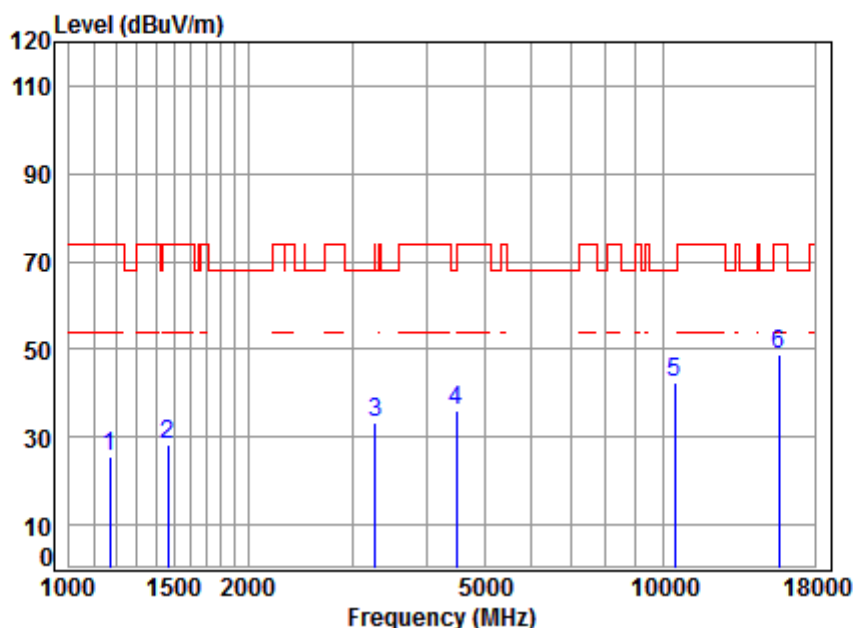
Mode:c; Polarization:Horizontal; Modulation:802.11n; bandwidth:40MHz; Channel:High



Site : chamber  
Condition: 3m HORIZONTAL  
Job No : 10092CR/10094CR  
Mode : 5230 TX RSE  
Note : 5G WIFI 11N40

		Cable	Ant	Preamp	Read		Limit	Over	
Freq		Loss	Factor	Factor	Level	Level	Line	Limit	Remark
	MHz	dB	dB/m	dB	dBuV	dBuV/m	dBuV/m	dB	
1	1271.123	4.69	24.90	40.54	35.73	24.78	68.20	-43.42	peak
2	1587.975	5.37	26.20	40.76	37.45	28.26	74.00	-45.74	peak
3	3485.601	6.45	31.68	42.10	37.72	33.75	68.20	-34.45	peak
4	3834.438	6.82	32.38	42.55	39.50	36.15	74.00	-37.85	peak
5	10460.000	11.26	37.72	38.02	33.52	44.48	68.20	-23.72	peak
6	15690.000	14.53	40.82	40.58	32.92	47.69	74.00	-26.31	peak

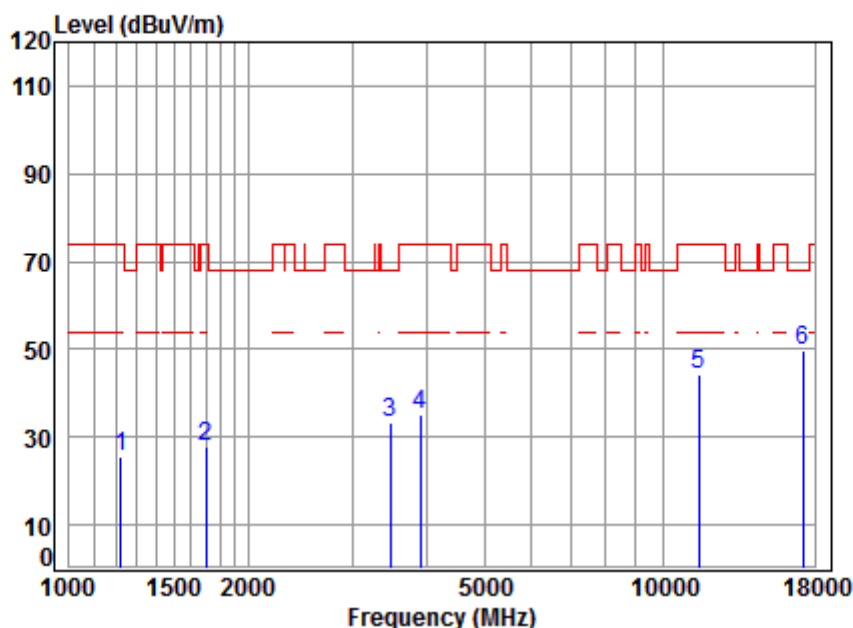
Mode:c; Polarization:Vertical; Modulation:802.11n; bandwidth:40MHz; Channel:High



Site : chamber  
Condition: 3m VERTICAL  
Job No : 10092CR/10094CR  
Mode : 5230 TX RSE  
Note : 5G WIFI 11N40

		Cable	Ant	Preamp	Read		Limit	Over	
Freq		Loss	Factor	Factor	Level	Level	Line	Limit	Remark
	MHz	dB	dB/m	dB	dBuV	dBuV/m	dBuV/m	dB	
1	1168.920	4.29	24.45	40.46	37.08	25.36	74.00	-48.64	peak
2	1468.761	5.38	25.69	40.68	37.71	28.10	74.00	-45.90	peak
3	3280.326	6.26	31.36	41.82	37.28	33.08	68.20	-35.12	peak
4	4495.125	7.55	33.59	43.30	38.22	36.06	68.20	-32.14	peak
5	10460.000	11.26	37.72	38.02	31.33	42.29	68.20	-25.91	peak
6	15690.000	14.53	40.82	40.58	33.93	48.70	74.00	-25.30	peak

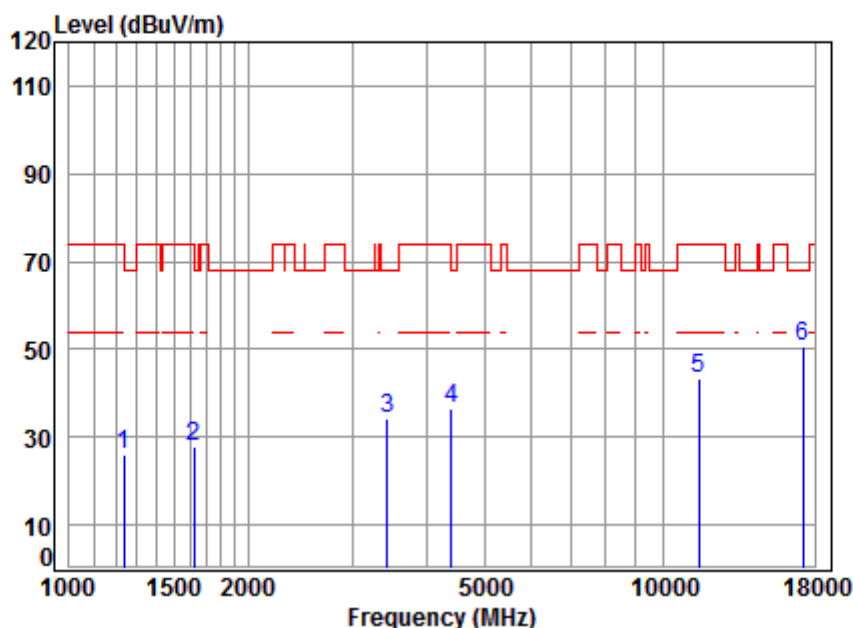
Mode:f; Polarization:Horizontal; Modulation:802.11a; bandwidth:20MHz; Channel:Low



Site : chamber  
Condition: 3m HORIZONTAL  
Job No : 10092CR/10094CR  
Mode : 5745 TX RSE  
Note : 5G WIFI 11A

		Cable	Ant	Preamp	Read		Limit	Over	
Freq		Loss	Factor	Factor	Level	Level	Line	Limit	Remark
MHz		dB	dB/m	dB	dBuV	dBuV/m	dBuV/m	dB	
1	1224.247	4.51	24.70	40.50	36.93	25.64	74.00	-48.36	peak
2	1702.042	5.23	26.68	40.83	36.74	27.82	74.00	-46.18	peak
3	3475.541	6.44	31.66	42.09	37.12	33.13	68.20	-35.07	peak
4	3901.516	6.88	32.51	42.63	38.59	35.35	74.00	-38.65	peak
5	11490.000	12.13	37.90	38.49	32.90	44.44	74.00	-29.56	peak
6	17235.000	16.18	42.74	40.32	31.25	49.85	68.20	-18.35	peak

Mode:f; Polarization:Vertical; Modulation:802.11a; bandwidth:20MHz; Channel:Low

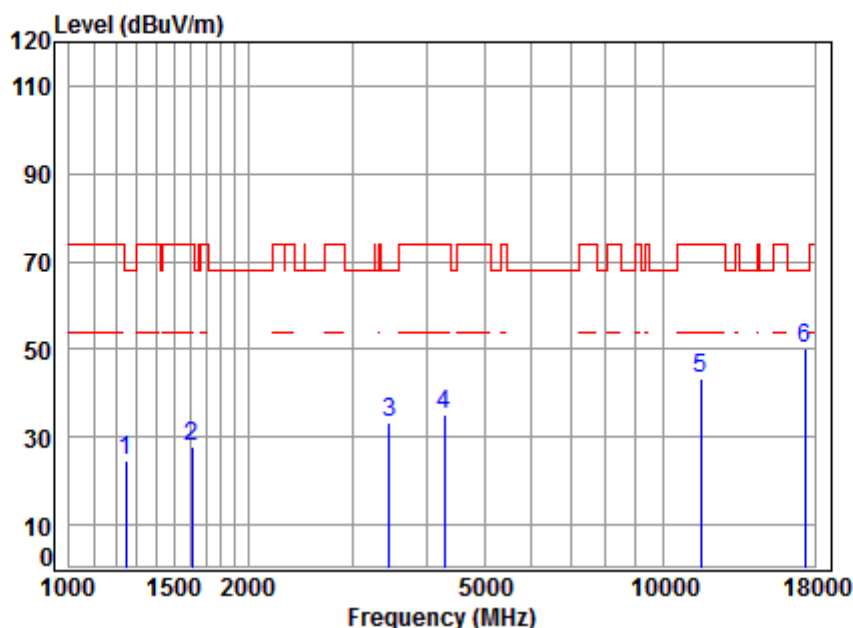


Site : chamber  
Condition: 3m VERTICAL  
Job No : 10092CR/10094CR  
Mode : 5745 TX RSE  
Note : 5G WIFI 11A

		Cable	Ant	Preamp	Read		Limit	Over	
	Freq	Loss	Factor	Factor	Level	Level	Line	Limit	Remark
	MHz	dB	dB/m	dB	dBuV	dBuV/m	dBuV/m	dB	
1	1234.909	4.55	24.74	40.51	37.29	26.07	74.00	-47.93	peak
2	1625.121	5.32	26.36	40.79	37.05	27.94	74.00	-46.06	peak
3	3435.590	6.40	31.60	42.04	38.12	34.08	68.20	-34.12	peak
4	4405.090	7.46	33.44	43.20	38.90	36.60	68.20	-31.60	peak
5	11490.000	12.13	37.90	38.49	31.76	43.30	74.00	-30.70	peak
6	17235.000	16.18	42.74	40.32	32.13	50.73	68.20	-17.47	peak



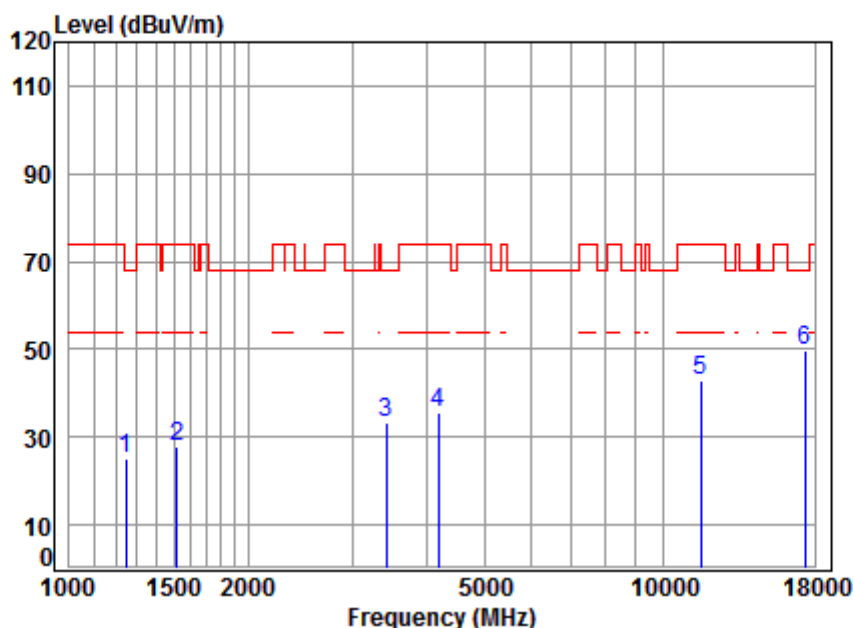
Mode:f; Polarization:Horizontal; Modulation:802.11a; bandwidth:20MHz; Channel:middle



Site : chamber  
Condition: 3m HORIZONTAL  
Job No : 10092CR/10094CR  
Mode : 5785 TX RSE  
Note : 5G WIFI 11A

		Cable	Ant	Preamp	Read		Limit	Over	
Freq		Loss	Factor	Factor	Level	Level	Line	Limit	Remark
	MHz	dB	dB/m	dB	dBuV	dBuV/m	dBuV/m	dB	
1	1245.663	4.60	24.79	40.52	35.75	24.62	68.20	-43.58	peak
2	1611.091	5.34	26.30	40.78	36.87	27.73	74.00	-46.27	peak
3	3465.510	6.43	31.65	42.08	37.43	33.43	68.20	-34.77	peak
4	4291.977	7.33	33.24	43.08	37.85	35.34	74.00	-38.66	peak
5	11570.000	12.17	37.87	38.52	31.75	43.27	74.00	-30.73	peak
6	17355.000	15.92	42.81	40.30	31.77	50.20	68.20	-18.00	peak

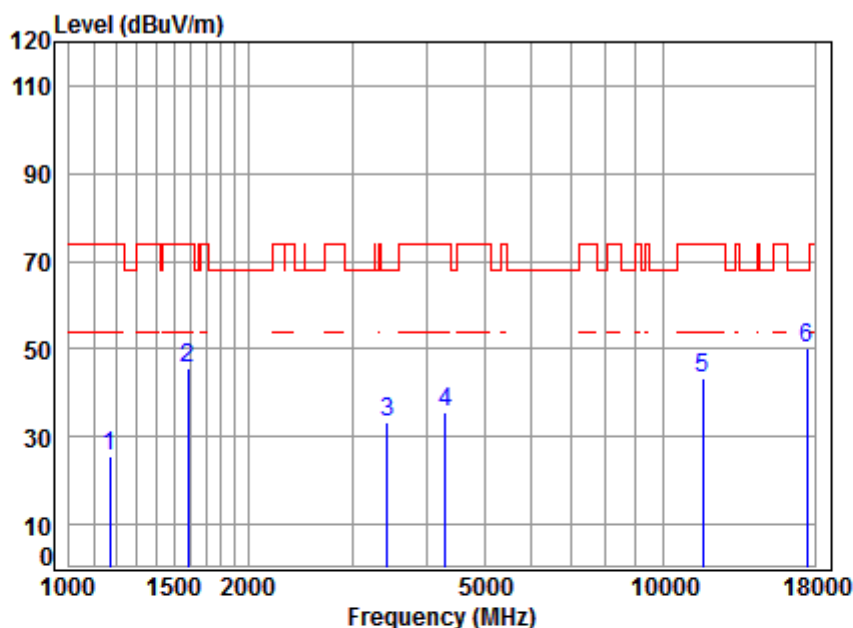
Mode:f; Polarization:Vertical; Modulation:802.11a; bandwidth:20MHz; Channel:middle



Site : chamber  
Condition: 3m VERTICAL  
Job No : 10092CR/10094CR  
Mode : 5785 TX RSE  
Note : 5G WIFI 11A

		Cable	Ant	Preamp	Read		Limit	Over	
Freq		Loss	Factor	Factor	Level	Level	Line	Limit	Remark
	MHz	dB	dB/m	dB	dBuV	dBuV/m	dBuV/m	dB	
1	1245.663	4.60	24.79	40.52	36.17	25.04	68.20	-43.16	peak
2	1516.210	5.46	25.87	40.72	37.26	27.87	74.00	-46.13	peak
3	3415.787	6.38	31.57	42.01	37.16	33.10	68.20	-35.10	peak
4	4181.768	7.20	33.04	42.96	38.52	35.80	74.00	-38.20	peak
5	11570.000	12.17	37.87	38.52	31.58	43.10	74.00	-30.90	peak
6	17355.000	15.92	42.81	40.30	31.19	49.62	68.20	-18.58	peak

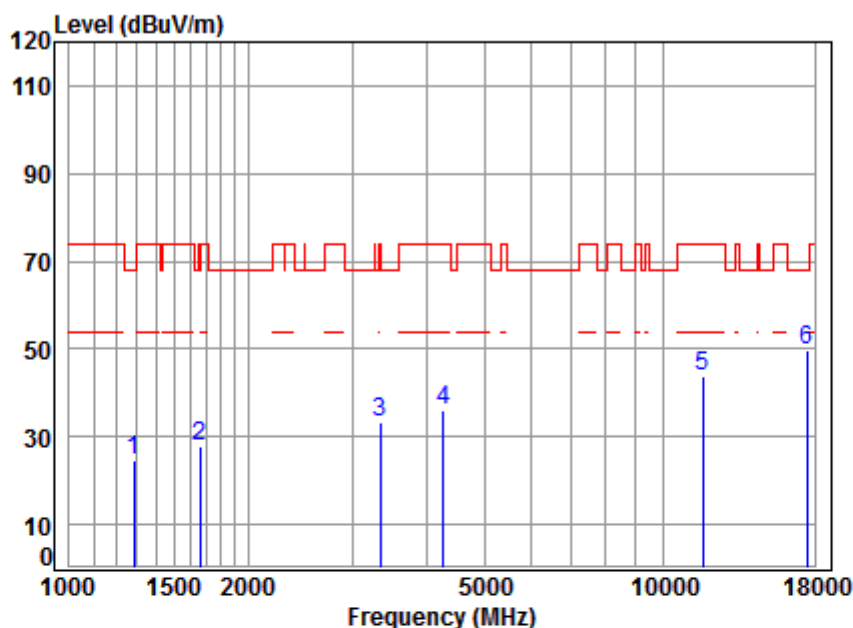
Mode:f; Polarization:Horizontal; Modulation:802.11a; bandwidth:20MHz; Channel:High



Site : chamber  
Condition: 3m HORIZONTAL  
Job No : 10092CR/10094CR  
Mode : 5825 TX RSE  
Note : 5G WIFI 11A

		Cable	Ant	Preamp	Read		Limit	Over	
	Freq	Loss	Factor	Factor	Level	Level	Line	Limit	Remark
	MHz	dB	dB/m	dB	dBuV	dBuV/m	dBuV/m	dB	
1	1168.920	4.29	24.45	40.46	37.08	25.36	74.00	-48.64	peak
2	1583.392	5.37	26.18	40.76	54.81	45.60	74.00	-28.40	peak
3	3435.590	6.40	31.60	42.04	37.22	33.18	68.20	-35.02	peak
4	4304.400	7.34	33.26	43.10	38.07	35.57	74.00	-38.43	peak
5	11650.000	12.20	37.84	38.55	31.94	43.43	74.00	-30.57	peak
6	17475.000	15.65	42.89	40.28	31.99	50.25	68.20	-17.95	peak

Mode:f; Polarization:Vertical; Modulation:802.11a; bandwidth:20MHz; Channel:High

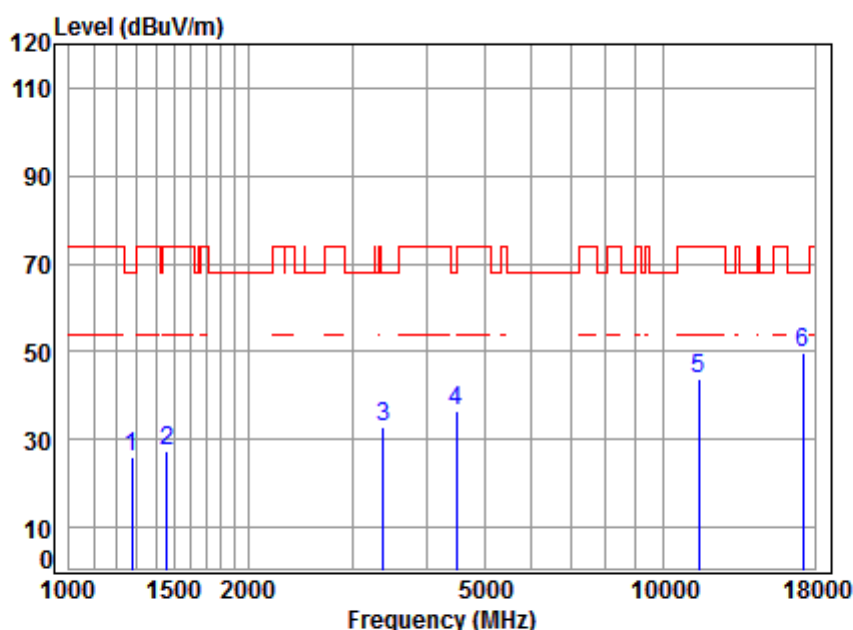


Site : chamber  
Condition: 3m VERTICAL  
Job No : 10092CR/10094CR  
Mode : 5825 TX RSE  
Note : 5G WIFI 11A

		Cable	Ant	Preamp	Read		Limit	Over	
	Freq	Loss	Factor	Factor	Level	Level	Line	Limit	Remark
	MHz	dB	dB/m	dB	dBuV	dBuV/m	dBuV/m	dB	
1	1285.904	4.75	24.96	40.55	35.34	24.50	68.20	-43.70	peak
2	1663.137	5.27	26.52	40.81	37.06	28.04	74.00	-45.96	peak
3	3337.710	6.31	31.45	41.90	37.58	33.44	74.00	-40.56	peak
4	4267.237	7.30	33.19	43.06	38.53	35.96	74.00	-38.04	peak
5	11650.000	12.20	37.84	38.55	32.35	43.84	74.00	-30.16	peak
6	17475.000	15.65	42.89	40.28	31.50	49.76	68.20	-18.44	peak



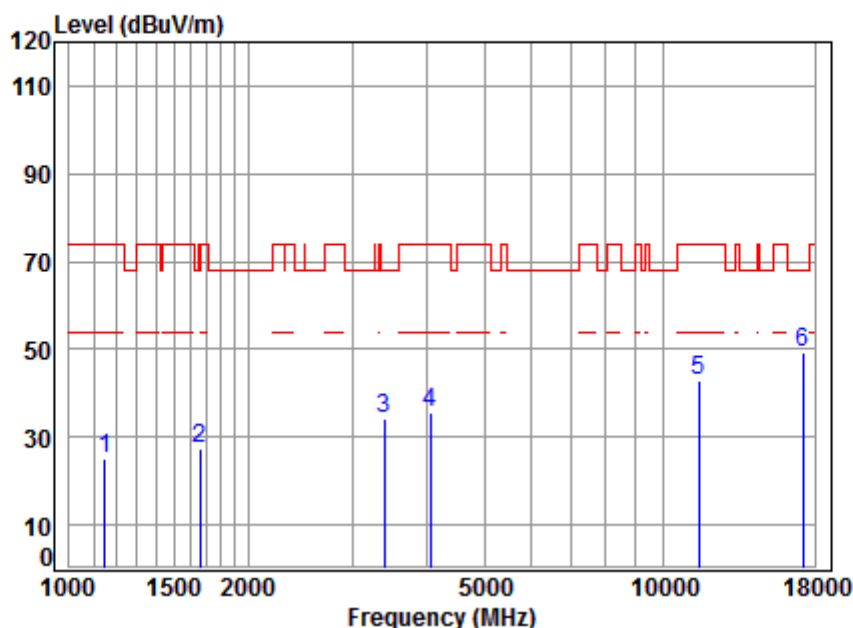
Mode:f; Polarization:Horizontal; Modulation:802.11ac; bandwidth:20MHz; Channel:Low



Site : chamber  
Condition: 3m HORIZONTAL  
Job No : 10092CR/10094CR  
Mode : 5745 TX RSE  
Note : 5G WIFI 11AC20

	Freq	Cable Loss	Ant Factor	Preamp Factor	Read Level	Level	Limit Line	Over Limit	Remark
	MHz	dB	dB/m	dB	dBuV	dBuV/m	dBuV/m	dB	
1	1274.802	4.71	24.92	40.54	36.70	25.79	68.20	-42.41	peak
2	1460.295	5.35	25.65	40.68	37.23	27.55	74.00	-46.45	peak
3	3386.297	6.36	31.53	41.97	37.04	32.96	68.20	-35.24	peak
4	4482.150	7.54	33.57	43.29	38.49	36.31	68.20	-31.89	peak
5	11490.000	12.13	37.90	38.49	32.16	43.70	74.00	-30.30	peak
6	17235.000	16.18	42.74	40.32	30.98	49.58	68.20	-18.62	peak

Mode:f; Polarization:Vertical; Modulation:802.11ac; bandwidth:20MHz; Channel:Low



Site : chamber  
Condition: 3m VERTICAL  
Job No : 10092CR/10094CR  
Mode : 5745 TX RSE  
Note : 5G WIFI 11AC20

		Cable	Ant	Preamp	Read		Limit	Over	
Freq		Loss	Factor	Factor	Level	Level	Line	Limit	Remark
MHz		dB	dB/m	dB	dBuV	dBuV/m	dBuV/m	dB	
1	1148.823	4.21	24.35	40.44	36.78	24.90	74.00	-49.10	peak
2	1663.137	5.27	26.52	40.81	36.46	27.44	74.00	-46.56	peak
3	3396.098	6.37	31.54	41.98	38.15	34.08	68.20	-34.12	peak
4	4050.904	7.04	32.80	42.81	38.71	35.74	74.00	-38.26	peak
5	11490.000	12.13	37.90	38.49	31.48	43.02	74.00	-30.98	peak
6	17235.000	16.18	42.74	40.32	30.80	49.40	68.20	-18.80	peak

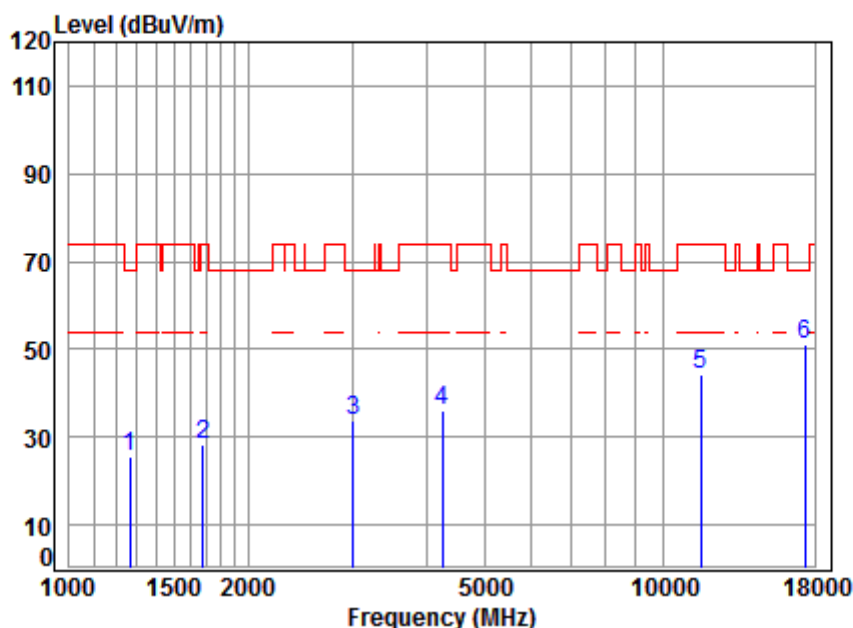


Unless otherwise agreed in writing, this document is issued by the Company subject to its General Conditions of Service printed overleaf, available on request or accessible at <http://www.sgs.com/en/Terms-and-Conditions.aspx> and, for electronic format documents, subject to Terms and Conditions for Electronic Documents at <http://www.sgs.com/en/Terms-and-Conditions/Terms-e-Documents.aspx>. Attention is drawn to the limitation of liability, indemnification and jurisdiction issues defined therein. Any holder of this document is advised that information contained hereon reflects the Company's findings at the time of its intervention only and within the limits of Client's instructions, if any. The Company's sole responsibility is to its Client and this document does not exonerate parties to a transaction from exercising all their rights and obligations under the transaction documents. This document cannot be reproduced except in full, without prior written approval of the Company. Any unauthorized alteration, forgery or falsification of the content or appearance of this document is unlawful and offenders may be prosecuted to the fullest extent of the law. Unless otherwise stated the results shown in this test report refer only to the sample(s) tested and such sample(s) are retained for 30 days only.  
Attention: To check the authenticity of testing / inspection report and certificate, please contact us at telephone: (86-755) 8307 1443, or email: [CN.Doccheck@sgs.com](mailto:CN.Doccheck@sgs.com)

SGS-CSTC Standards Technical Services Co., Ltd.  
Shenzhen Branch (China) SGS-CSTC Laboratory

No.1 Workshop, M-10, Middle Section, Science & Technology Park, Shenzhen, China 518057 t (86-755) 26012053 f (86-755) 26710594 www.sgs.com.cn  
中国·深圳·科技园中区M-10栋一号厂房 邮编: 518057 t (86-755) 26012053 f (86-755) 26710594 sgs.china@sgs.com

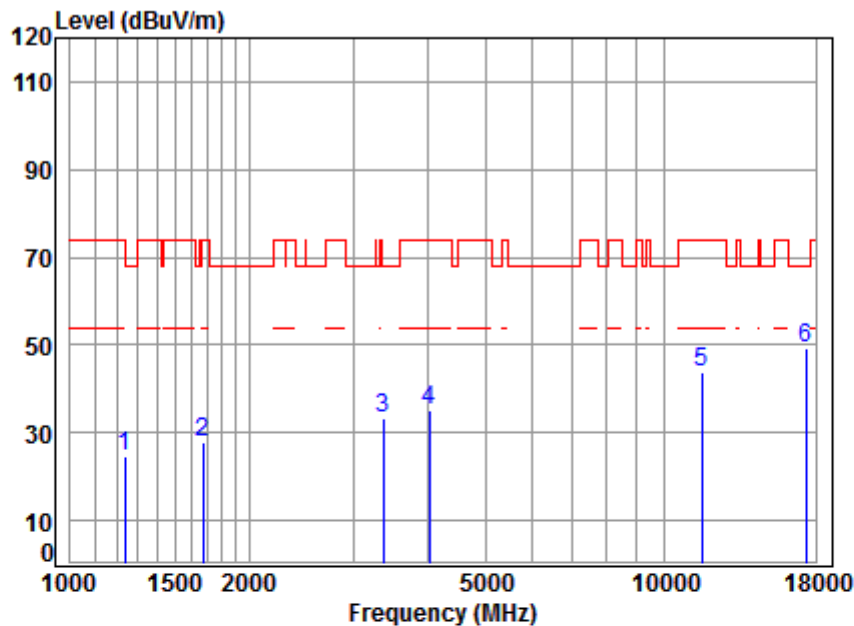
Mode:f; Polarization:Horizontal; Modulation:802.11ac; bandwidth:20MHz; Channel:middle



Site : chamber  
Condition: 3m HORIZONTAL  
Job No : 10092CR/10094CR  
Mode : 5785 TX RSE  
Note : 5G WIFI 11AC20

		Cable	Ant	Preamp	Read		Limit	Over	
	Freq	Loss	Factor	Factor	Level	Level	Line	Limit	Remark
	MHz	dB	dB/m	dB	dBuV	dBuV/m	dBuV/m	dB	
1	1263.796	4.66	24.87	40.53	36.38	25.38	68.20	-42.82	peak
2	1677.621	5.25	26.58	40.82	37.07	28.08	74.00	-45.92	peak
3	3007.868	5.99	30.91	41.41	38.15	33.64	68.20	-34.56	peak
4	4242.641	7.27	33.15	43.03	38.70	36.09	74.00	-37.91	peak
5	11570.000	12.17	37.87	38.52	32.89	44.41	74.00	-29.59	peak
6	17355.000	15.92	42.81	40.30	32.49	50.92	68.20	-17.28	peak

Mode:f; Polarization:Vertical; Modulation:802.11ac; bandwidth:20MHz; Channel:middle



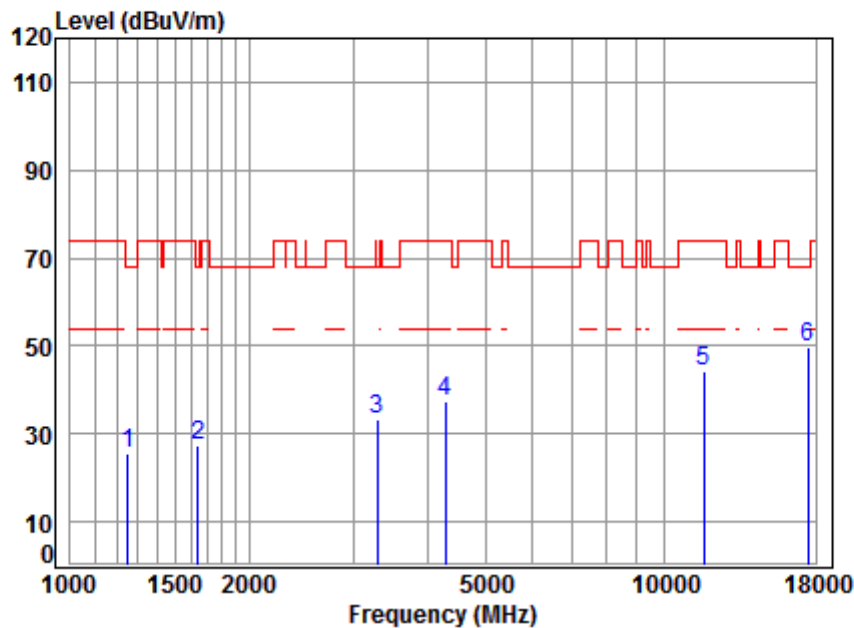
Site : chamber  
Condition: 3m VERTICAL  
Job No : 10092CR/10094CR  
Mode : 5785 TX RSE  
Note : 5G WIFI 11AC20

		Cable	Ant	Preamp	Read		Limit	Over	
Freq		Loss	Factor	Factor	Level	Level	Line	Limit	Remark
	MHz	dB	dB/m	dB	dBuV	dBuV/m	dBuV/m	dB	
1	1234.909	4.55	24.74	40.51	35.93	24.71	74.00	-49.29	peak
2	1672.779	5.26	26.56	40.82	36.87	27.87	74.00	-46.13	peak
3	3366.778	6.34	31.50	41.94	37.51	33.41	68.20	-34.79	peak
4	4027.554	7.01	32.75	42.78	38.10	35.08	74.00	-38.92	peak
5	11570.000	12.17	37.87	38.52	32.34	43.86	74.00	-30.14	peak
6	17355.000	15.92	42.81	40.30	30.92	49.35	68.20	-18.85	peak





Mode:f; Polarization:Horizontal; Modulation:802.11ac; bandwidth:20MHz; Channel:High

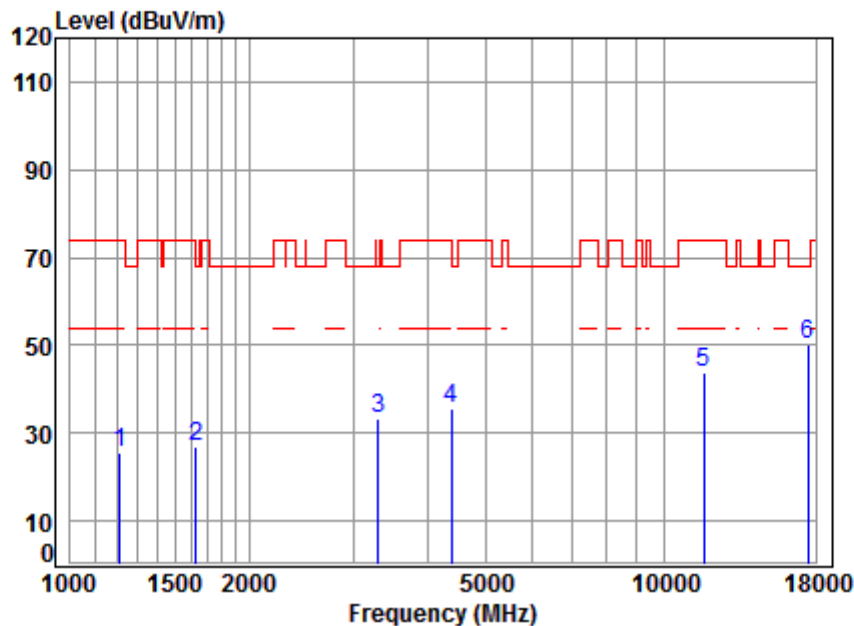


Site : chamber  
Condition: 3m HORIZONTAL  
Job No : 10092CR/10094CR  
Mode : 5825 TX RSE  
Note : 5G WIFI 11AC20

		Cable	Ant	Preamp	Read		Limit	Over	
Freq		Loss	Factor	Factor	Level	Level	Line	Limit	Remark
MHz		dB	dB/m	dB	dBuV	dBuV/m	dBuV/m	dB	
1	1249.269	4.61	24.81	40.52	36.75	25.65	68.20	-42.55	peak
2	1639.274	5.30	26.42	40.79	36.60	27.53	68.20	-40.67	peak
3	3289.821	6.27	31.38	41.83	37.53	33.35	68.20	-34.85	peak
4	4291.977	7.33	33.24	43.08	39.81	37.30	74.00	-36.70	peak
5	11650.000	12.20	37.84	38.55	32.57	44.06	74.00	-29.94	peak
6	17475.000	15.65	42.89	40.28	31.64	49.90	68.20	-18.30	peak



Mode:f; Polarization:Vertical; Modulation:802.11ac; bandwidth:20MHz; Channel:High

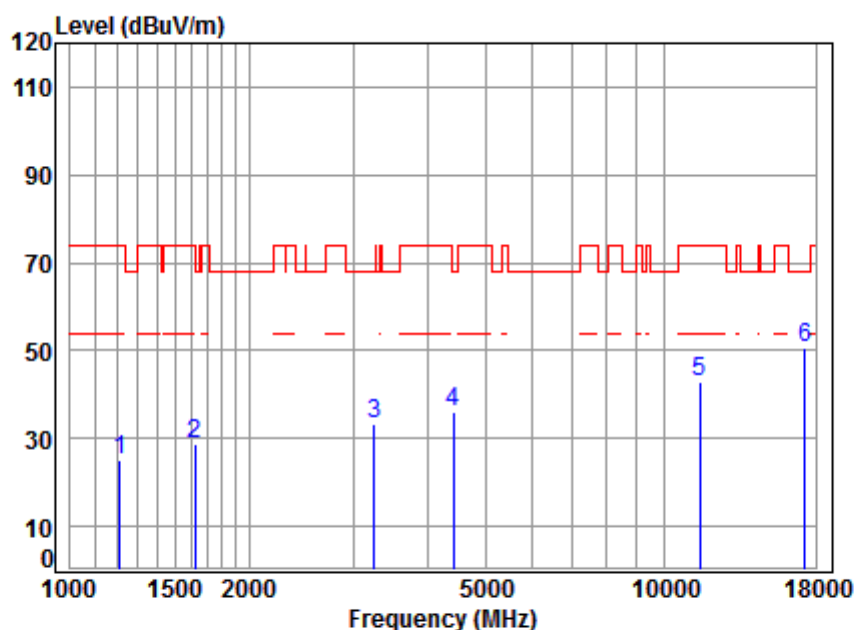


Site : chamber  
Condition: 3m VERTICAL  
Job No : 10092CR/10094CR  
Mode : 5825 TX RSE  
Note : 5G WIFI 11AC20

		Cable	Ant	Preamp	Read		Limit	Over	
	Freq	Loss	Factor	Factor	Level	Level	Line	Limit	Remark
	MHz	dB	dB/m	dB	dBuV	dBuV/m	dBuV/m	dB	
1	1213.677	4.47	24.65	40.49	37.07	25.70	74.00	-48.30	peak
2	1629.825	5.31	26.38	40.79	35.92	26.82	68.20	-41.38	peak
3	3299.344	6.28	31.39	41.85	37.68	33.50	68.20	-34.70	peak
4	4379.699	7.43	33.39	43.18	38.16	35.80	74.00	-38.20	peak
5	11650.000	12.20	37.84	38.55	32.22	43.71	74.00	-30.29	peak
6	17475.000	15.65	42.89	40.28	32.13	50.39	68.20	-17.81	peak



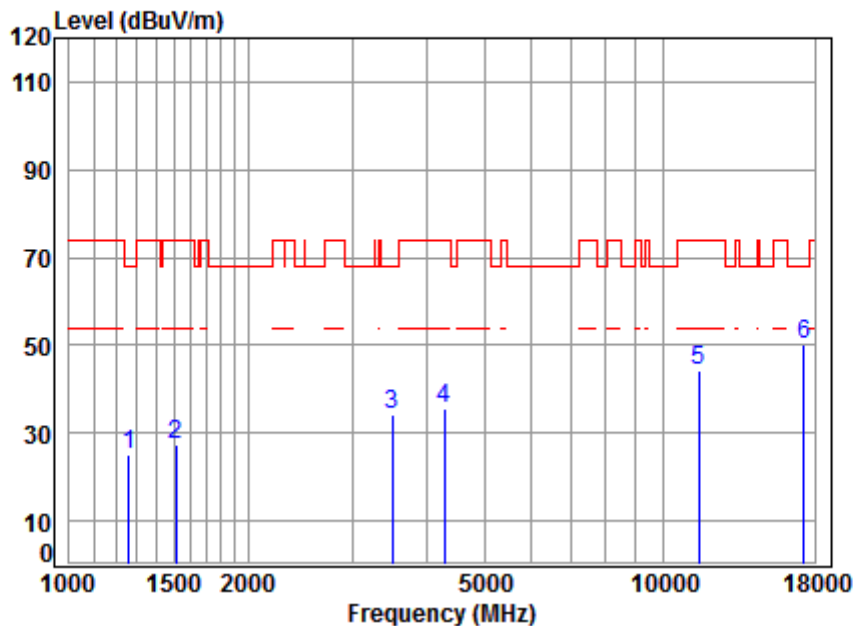
Mode:f; Polarization:Horizontal; Modulation:802.11ac; bandwidth:40MHz; Channel:Low



Site : chamber  
Condition: 3m HORIZONTAL  
Job No : 10092CR/10094CR  
Mode : 5755 TX RSE  
Note : 5G WIFI 11AC40

	Freq	Cable Loss	Ant Factor	Preamp Factor	Read Level	Level	Limit Line	Over Limit	Remark
	MHz	dB	dB/m	dB	dBuV	dBuV/m	dBuV/m	dB	
1	1213.677	4.47	24.65	40.49	36.62	25.25	74.00	-48.75	peak
2	1625.121	5.32	26.36	40.79	37.99	28.88	74.00	-45.12	peak
3	3252.005	6.23	31.32	41.78	37.68	33.45	68.20	-34.75	peak
4	4417.841	7.47	33.46	43.22	38.15	35.86	68.20	-32.34	peak
5	11510.000	12.14	37.90	38.49	31.28	42.83	74.00	-31.17	peak
6	17265.000	16.12	42.76	40.31	31.85	50.42	68.20	-17.78	peak

Mode:f; Polarization:Vertical; Modulation:802.11ac; bandwidth:40MHz; Channel:Low



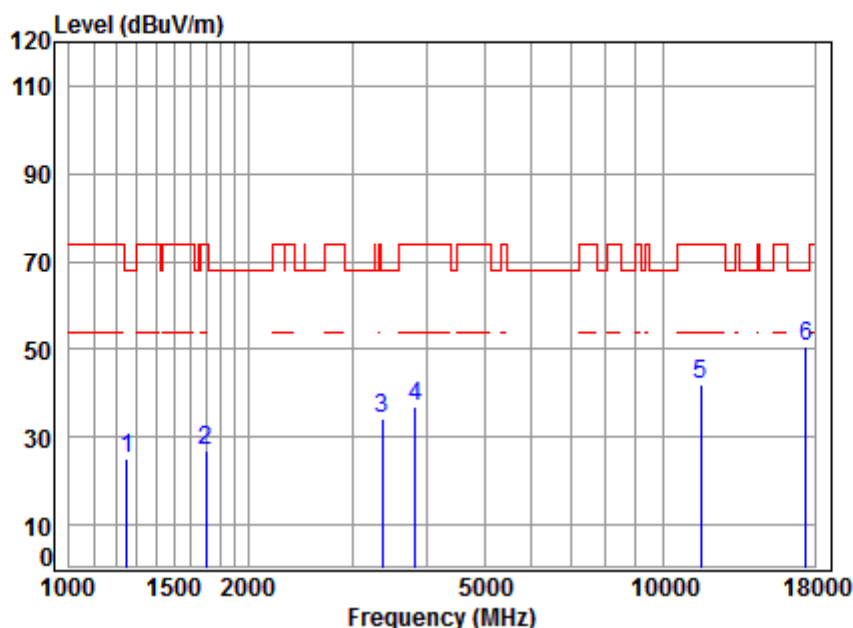
Site : chamber  
Condition: 3m VERTICAL  
Job No : 10092CR/10094CR  
Mode : 5755 TX RSE  
Note : 5G WIFI 11AC40

		Cable	Ant	Preamp	Read		Limit	Over	
Freq		Loss	Factor	Factor	Level	Level	Line	Limit	Remark
	MHz	dB	dB/m	dB	dBuV	dBuV/m	dBuV/m	dB	
1	1260.149	4.65	24.85	40.53	36.21	25.18	68.20	-43.02	peak
2	1511.833	5.46	25.85	40.71	36.88	27.48	74.00	-46.52	peak
3	3495.691	6.46	31.69	42.12	38.20	34.23	68.20	-33.97	peak
4	4291.977	7.33	33.24	43.08	38.11	35.60	74.00	-38.40	peak
5	11510.000	12.14	37.90	38.49	32.64	44.19	74.00	-29.81	peak
6	17265.000	16.12	42.76	40.31	31.51	50.08	68.20	-18.12	peak





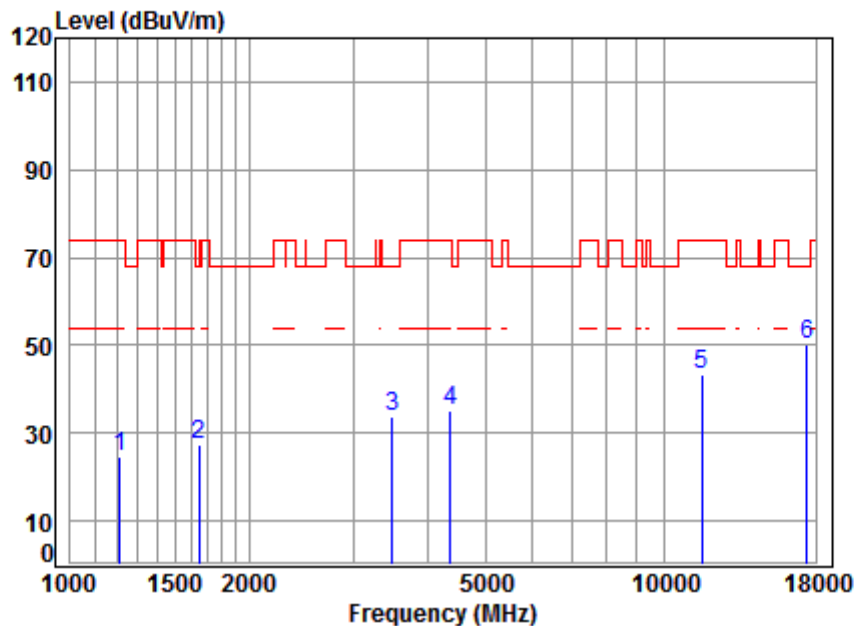
Mode:f; Polarization:Horizontal; Modulation:802.11ac; bandwidth:40MHz; Channel:High



Site : chamber  
Condition: 3m HORIZONTAL  
Job No : 10092CR/10094CR  
Mode : 5795 TX RSE  
Note : 5G WIFI 11AC40

		Cable	Ant	Preamp	Read		Limit	Over	
Freq		Loss	Factor	Factor	Level	Level	Line	Limit	Remark
MHz		dB	dB/m	dB	dBuV	dBuV/m	dBuV/m	dB	
1	1252.885	4.62	24.82	40.53	36.35	25.26	68.20	-42.94	peak
2	1702.042	5.23	26.68	40.83	35.90	26.98	74.00	-47.02	peak
3	3366.778	6.34	31.50	41.94	38.43	34.33	68.20	-33.87	peak
4	3823.371	6.80	32.36	42.54	40.11	36.73	74.00	-37.27	peak
5	11590.000	12.17	37.86	38.53	30.52	42.02	74.00	-31.98	peak
6	17385.000	15.85	42.83	40.30	32.09	50.47	68.20	-17.73	peak

Mode:f; Polarization:Vertical; Modulation:802.11ac; bandwidth:40MHz; Channel:High

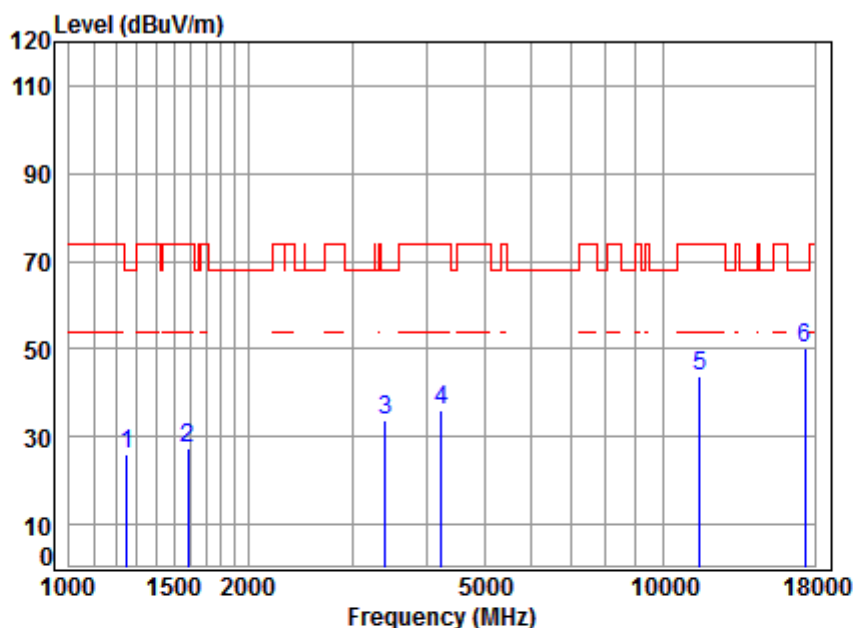


Site : chamber  
Condition: 3m VERTICAL  
Job No : 10092CR/10094CR  
Mode : 5795 TX RSE  
Note : 5G WIFI 11AC40

		Cable	Ant	Preamp	Read		Limit	Over	
Freq		Loss	Factor	Factor	Level	Level	Line	Limit	Remark
MHz		dB	dB/m	dB	dBuV	dBuV/m	dBuV/m	dB	
1	1210.174	4.46	24.64	40.49	36.01	24.62	74.00	-49.38	peak
2	1648.778	5.29	26.46	40.80	36.41	27.36	68.20	-40.84	peak
3	3485.601	6.45	31.68	42.10	37.67	33.70	68.20	-34.50	peak
4	4367.058	7.41	33.37	43.16	37.67	35.29	74.00	-38.71	peak
5	11590.000	12.17	37.86	38.53	31.70	43.20	74.00	-30.80	peak
6	17385.000	15.85	42.83	40.30	31.81	50.19	68.20	-18.01	peak



Mode:f; Polarization:Horizontal; Modulation:802.11ac; bandwidth:80MHz; Channel:middle



Site : chamber  
Condition: 3m HORIZONTAL  
Job No : 10092CR/10094CR  
Mode : 5775 TX RSE  
Note : 5G WIFI 11AC80

		Cable	Ant	Preamp	Read		Limit	Over	
	Freq	Loss	Factor	Factor	Level	Level	Line	Limit	Remark
	MHz	dB	dB/m	dB	dBuV	dBuV/m	dBuV/m	dB	
1	1249.269	4.61	24.81	40.52	37.03	25.93	68.20	-42.27	peak
2	1587.975	5.37	26.20	40.76	36.71	27.52	74.00	-46.48	peak
3	3405.929	6.38	31.56	42.00	37.73	33.67	68.20	-34.53	peak
4	4230.396	7.26	33.13	43.01	38.64	36.02	74.00	-37.98	peak
5	11550.000	12.16	37.88	38.51	32.20	43.73	74.00	-30.27	peak
6	17325.000	15.98	42.80	40.30	31.91	50.39	68.20	-17.81	peak

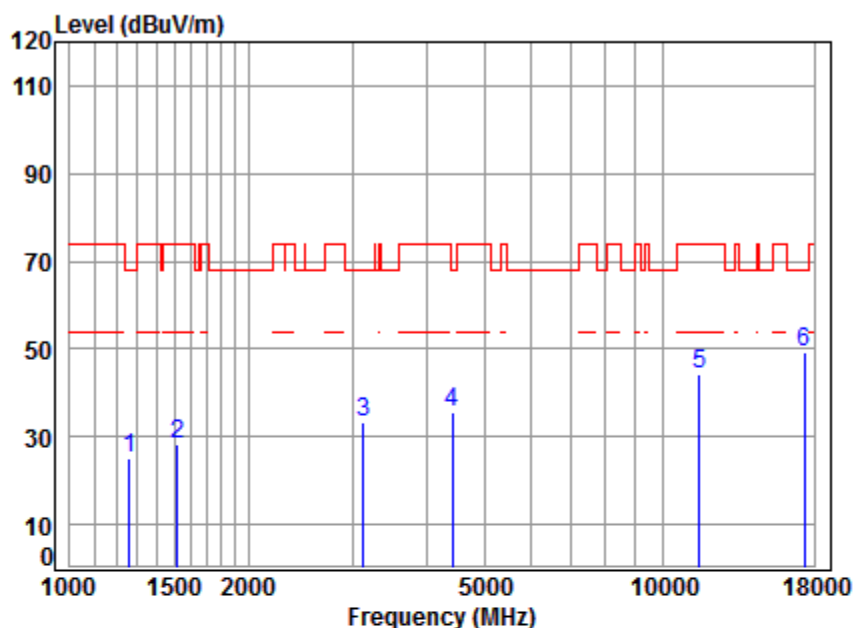


Unless otherwise agreed in writing, this document is issued by the Company subject to its General Conditions of Service printed overleaf, available on request or accessible at <http://www.sgs.com/en/Terms-and-Conditions.aspx> and, for electronic format documents, subject to Terms and Conditions for Electronic Documents at <http://www.sgs.com/en/Terms-and-Conditions/Terms-e-Documents.aspx>. Attention is drawn to the limitation of liability, indemnification and jurisdiction issues defined therein. Any holder of this document is advised that information contained hereon reflects the Company's findings at the time of its intervention only and within the limits of Client's instructions, if any. The Company's sole responsibility is to its Client and this document does not exonerate parties to a transaction from exercising all their rights and obligations under the transaction documents. This document cannot be reproduced except in full, without prior written approval of the Company. Any unauthorized alteration, forgery or falsification of the content or appearance of this document is unlawful and offenders may be prosecuted to the fullest extent of the law. Unless otherwise stated the results shown in this test report refer only to the sample(s) tested and such sample(s) are retained for 30 days only.  
Attention: To check the authenticity of testing / inspection report and certificate, please contact us at telephone: (86-755) 8307 1443, or email: [CN.Doccheck@sgs.com](mailto:CN.Doccheck@sgs.com)

SGS-CSTC Standards Technical Services Co., Ltd.  
Shenzhen Branch (SGS-CSTC Laboratory)

No.1 Workshop, M-10, Middle Section, Science & Technology Park, Shenzhen, China 518057 t (86-755) 26012053 f (86-755) 26710594 www.sgsgroup.com.cn  
中国·深圳·科技园中区M-10栋一号厂房 邮编: 518057 t (86-755) 26012053 f (86-755) 26710594 sgs.china@sgs.com

Mode:f; Polarization:Vertical; Modulation:802.11ac; bandwidth:80MHz; Channel:middle

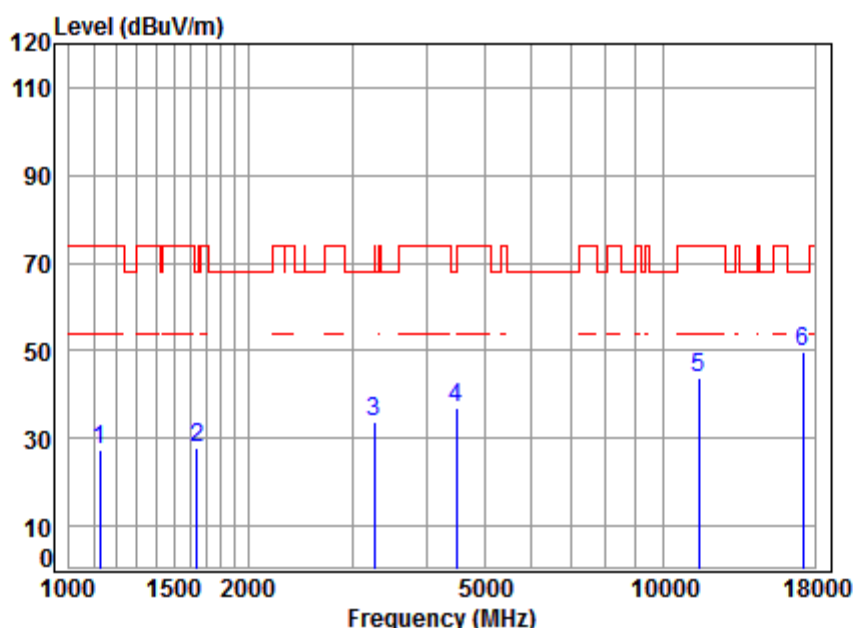


Site : chamber  
Condition: 3m VERTICAL  
Job No : 10092CR/10094CR  
Mode : 5775 TX RSE  
Note : 5G WIFI 11AC80

		Cable	Ant	Preamp	Read		Limit	Over	
Freq		Loss	Factor	Factor	Level	Level	Line	Limit	Remark
MHz		dB	dB/m	dB	dBuV	dBuV/m	dBuV/m	dB	
1	1260.149	4.65	24.85	40.53	36.01	24.98	68.20	-43.22	peak
2	1516.210	5.46	25.87	40.72	37.52	28.13	74.00	-45.87	peak
3	3132.079	6.11	31.12	41.60	37.52	33.15	68.20	-35.05	peak
4	4417.841	7.47	33.46	43.22	38.02	35.73	68.20	-32.47	peak
5	11550.000	12.16	37.88	38.51	32.55	44.08	74.00	-29.92	peak
6	17325.000	15.98	42.80	40.30	30.97	49.45	68.20	-18.75	peak



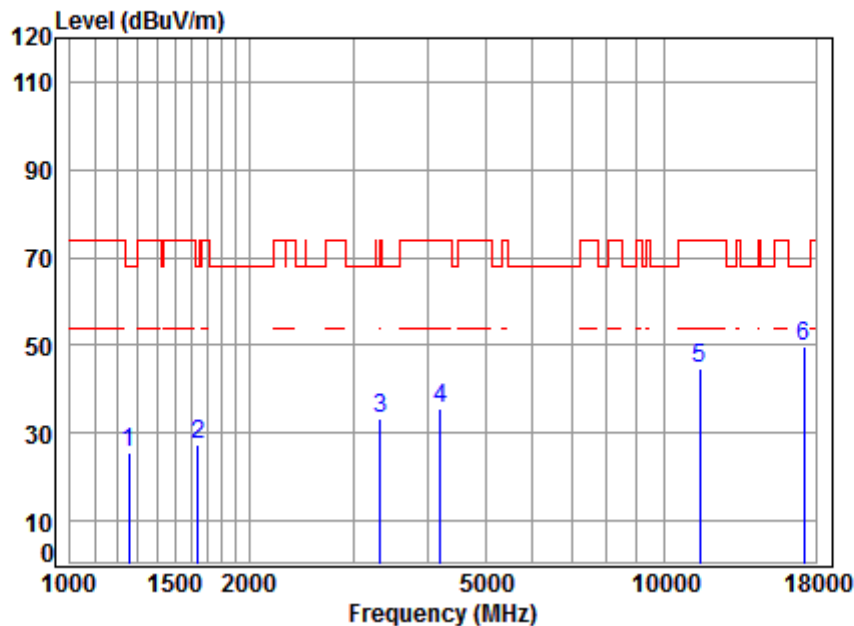
Mode:f; Polarization:Horizontal; Modulation:802.11n; bandwidth:20MHz; Channel:Low



Site : chamber  
Condition: 3m HORIZONTAL  
Job No : 10092CR/10094CR  
Mode : 5745 TX RSE  
Note : 5G WIFI 11N20

	Freq	Cable Loss	Ant Factor	Preamp Factor	Read Level	Level	Limit Line	Over Limit	Remark
	MHz	dB	dB/m	dB	dBuV	dBuV/m	dBuV/m	dB	
1	1125.813	4.11	24.24	40.42	39.30	27.23	74.00	-46.77	peak
2	1644.019	5.30	26.44	40.80	36.95	27.89	68.20	-40.31	peak
3	3261.418	6.24	31.33	41.79	37.97	33.75	74.00	-40.25	peak
4	4482.150	7.54	33.57	43.29	39.16	36.98	68.20	-31.22	peak
5	11490.000	12.13	37.90	38.49	32.48	44.02	74.00	-29.98	peak
6	17235.000	16.18	42.74	40.32	30.92	49.52	68.20	-18.68	peak

Mode:f; Polarization:Vertical; Modulation:802.11n; bandwidth:20MHz; Channel:Low

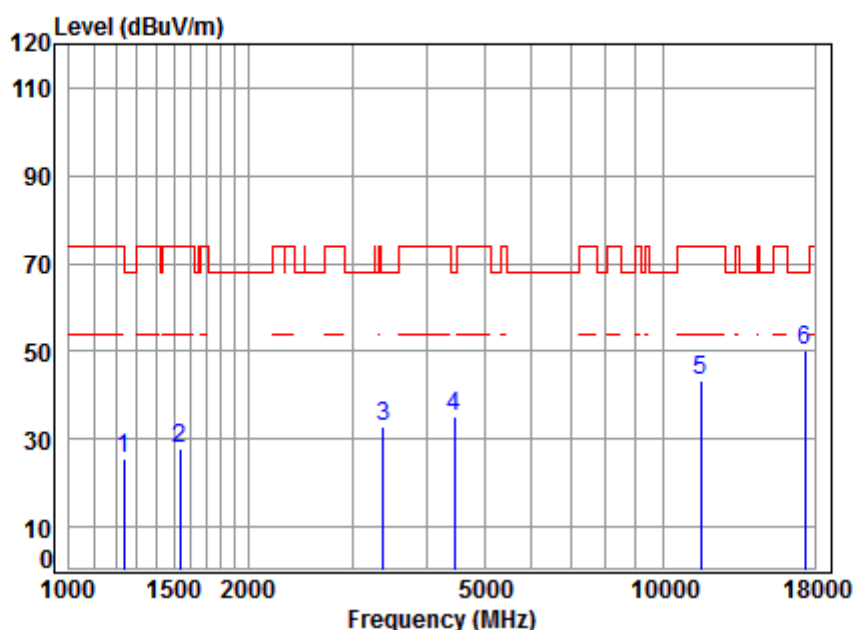


Site : chamber  
Condition: 3m VERTICAL  
Job No : 10092CR/10094CR  
Mode : 5745 TX RSE  
Note : 5G WIFI 11N20

		Cable	Ant	Preamp	Read		Limit	Over	
Freq		Loss	Factor	Factor	Level	Level	Line	Limit	Remark
MHz		dB	dB/m	dB	dBuV	dBuV/m	dBuV/m	dB	
1	1256.512	4.64	24.84	40.53	36.40	25.35	68.20	-42.85	peak
2	1639.274	5.30	26.42	40.79	36.63	27.56	68.20	-40.64	peak
3	3328.077	6.30	31.44	41.89	37.27	33.12	68.20	-35.08	peak
4	4206.011	7.23	33.08	42.99	38.39	35.71	74.00	-38.29	peak
5	11490.000	12.13	37.90	38.49	33.03	44.57	74.00	-29.43	peak
6	17235.000	16.18	42.74	40.32	30.95	49.55	68.20	-18.65	peak



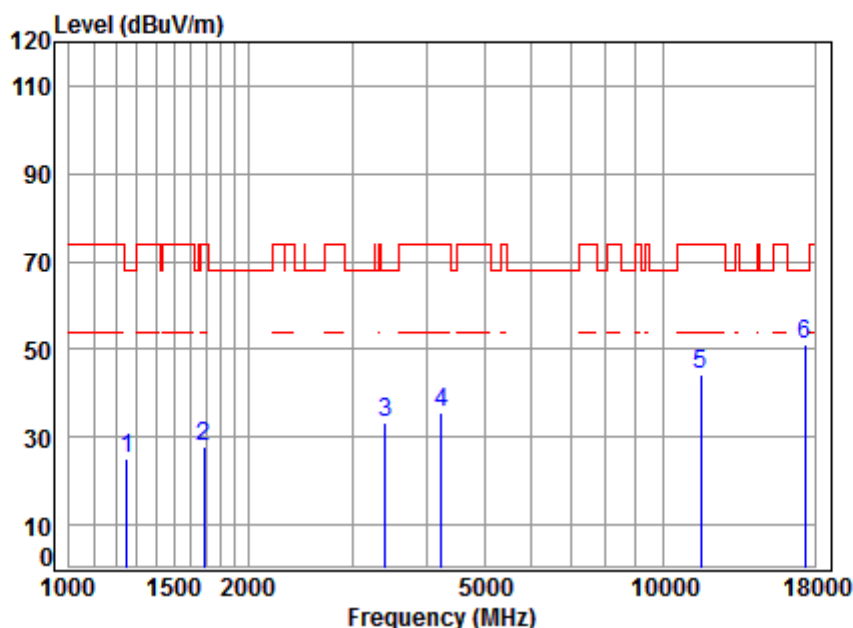
Mode:f; Polarization:Horizontal; Modulation:802.11n; bandwidth:20MHz; Channel:middle



Site : chamber  
Condition: 3m HORIZONTAL  
Job No : 10092CR/10094CR  
Mode : 5785 TX RSE  
Note : 5G WIFI 11N20

	Freq	Cable Loss	Ant Factor	Preamp Factor	Read Level	Level	Limit	Over Limit	Remark
	MHz	dB	dB/m	dB	dBuV	dBuV/m	dBuV/m	dB	
1	1238.483	4.57	24.76	40.51	36.82	25.64	74.00	-48.36	peak
2	1538.281	5.43	25.98	40.73	37.19	27.87	74.00	-46.13	peak
3	3376.523	6.35	31.51	41.96	36.89	32.79	68.20	-35.41	peak
4	4456.315	7.51	33.53	43.26	37.50	35.28	68.20	-32.92	peak
5	11570.000	12.17	37.87	38.52	31.69	43.21	74.00	-30.79	peak
6	17355.000	15.92	42.81	40.30	31.75	50.18	68.20	-18.02	peak

Mode:f; Polarization:Vertical; Modulation:802.11n; bandwidth:20MHz; Channel:middle

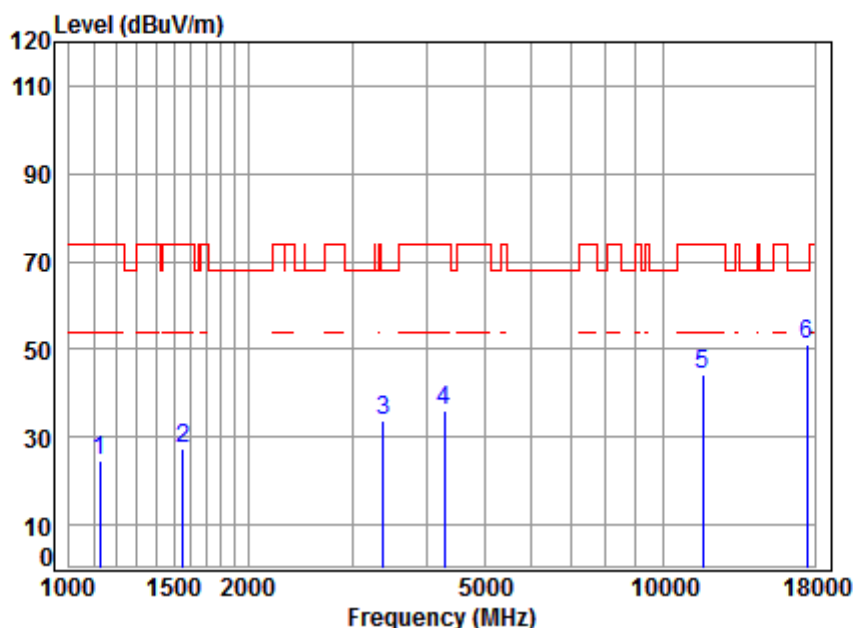


Site : chamber  
Condition: 3m VERTICAL  
Job No : 10092CR/10094CR  
Mode : 5785 TX RSE  
Note : 5G WIFI 11N20

		Cable	Ant	Preamp	Read		Limit	Over	
Freq		Loss	Factor	Factor	Level	Level	Line	Limit	Remark
MHz		dB	dB/m	dB	dBuV	dBuV/m	dBuV/m	dB	
1	1249.269	4.61	24.81	40.52	36.20	25.10	68.20	-43.10	peak
2	1687.347	5.24	26.62	40.82	36.69	27.73	74.00	-46.27	peak
3	3405.929	6.38	31.56	42.00	37.23	33.17	68.20	-35.03	peak
4	4230.396	7.26	33.13	43.01	38.18	35.56	74.00	-38.44	peak
5	11570.000	12.17	37.87	38.52	32.60	44.12	74.00	-29.88	peak
6	17355.000	15.92	42.81	40.30	32.45	50.88	68.20	-17.32	peak



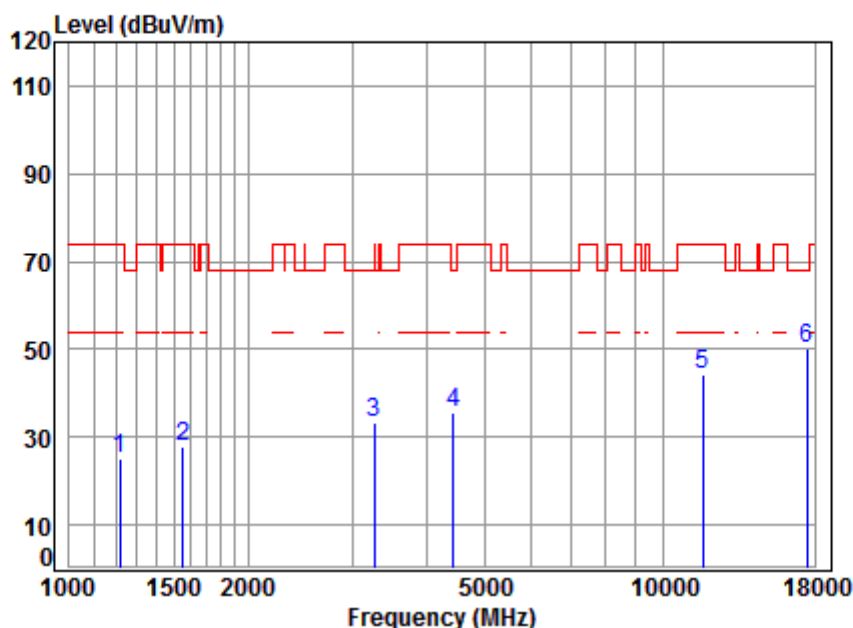
Mode:f; Polarization:Horizontal; Modulation:802.11n; bandwidth:20MHz; Channel:High



Site : chamber  
Condition: 3m HORIZONTAL  
Job No : 10092CR/10094CR  
Mode : 5825 TX RSE  
Note : 5G WIFI 11N20

		Cable	Ant	Preamp	Read		Limit	Over	
Freq		Loss	Factor	Factor	Level	Level	Line	Limit	Remark
	MHz	dB	dB/m	dB	dBuV	dBuV/m	dBuV/m	dB	
1	1125.813	4.11	24.24	40.42	36.70	24.63	74.00	-49.37	peak
2	1551.677	5.41	26.04	40.74	36.45	27.16	74.00	-46.84	peak
3	3386.297	6.36	31.53	41.97	37.88	33.80	68.20	-34.40	peak
4	4279.589	7.31	33.22	43.07	38.37	35.83	74.00	-38.17	peak
5	11650.000	12.20	37.84	38.55	32.78	44.27	74.00	-29.73	peak
6	17475.000	15.65	42.89	40.28	32.70	50.96	68.20	-17.24	peak

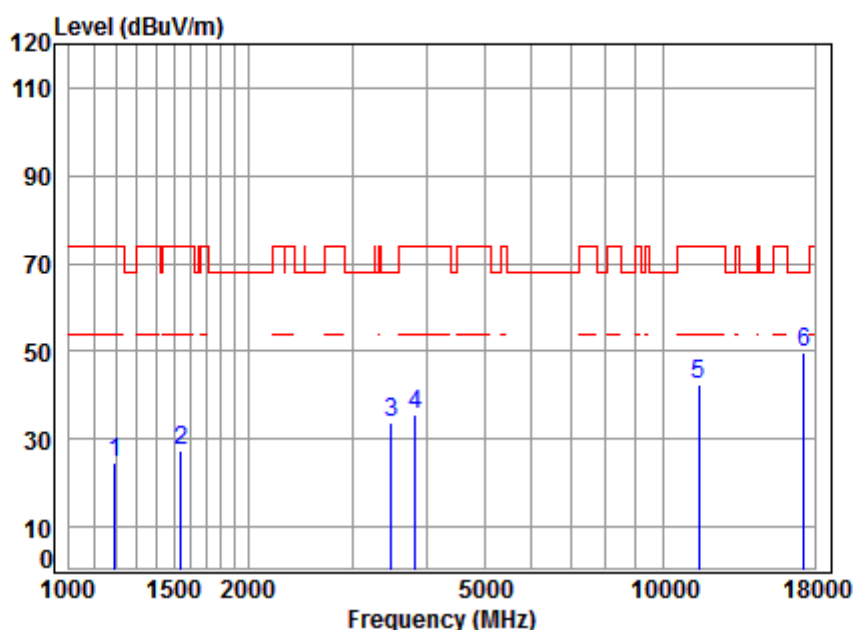
Mode:f; Polarization:Vertical; Modulation:802.11n; bandwidth:20MHz; Channel:High



Site : chamber  
Condition: 3m VERTICAL  
Job No : 10092CR/10094CR  
Mode : 5825 TX RSE  
Note : 5G WIFI 11N20

		Cable	Ant	Preamp	Read		Limit	Over	
Freq		Loss	Factor	Factor	Level	Level	Line	Limit	Remark
MHz		dB	dB/m	dB	dBuV	dBuV/m	dBuV/m	dB	
1	1217.190	4.49	24.67	40.50	36.27	24.93	74.00	-49.07	peak
2	1556.169	5.41	26.06	40.74	36.95	27.68	74.00	-46.32	peak
3	3261.418	6.24	31.33	41.79	37.35	33.13	74.00	-40.87	peak
4	4430.628	7.48	33.48	43.23	37.75	35.48	68.20	-32.72	peak
5	11650.000	12.20	37.84	38.55	32.74	44.23	74.00	-29.77	peak
6	17475.000	15.65	42.89	40.28	31.85	50.11	68.20	-18.09	peak

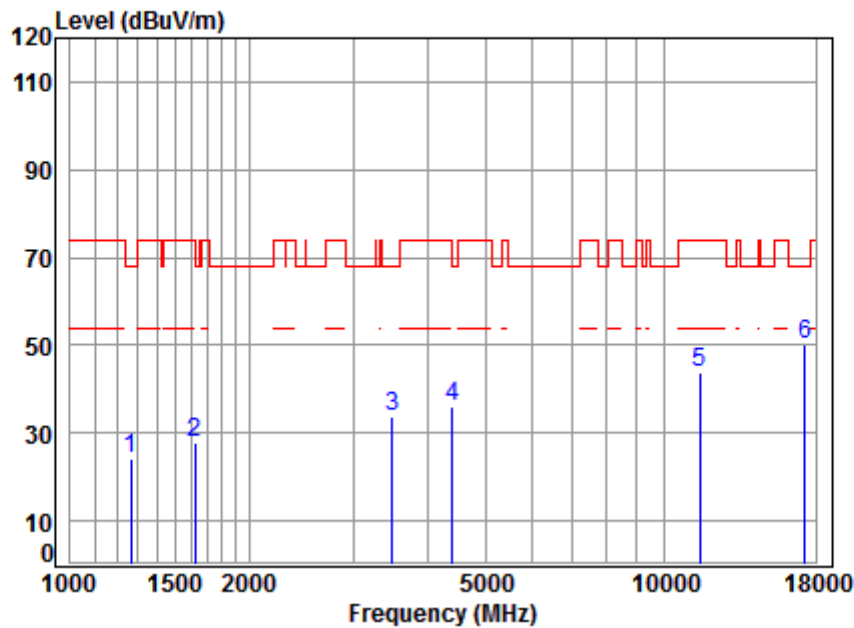
Mode:f; Polarization:Horizontal; Modulation:802.11n; bandwidth:40MHz; Channel:Low



Site : chamber  
Condition: 3m HORIZONTAL  
Job No : 10092CR/10094CR  
Mode : 5755 TX RSE  
Note : 5G WIFI 11N40

	Freq	Cable Loss	Ant Factor	Preamp Factor	Read Level	Level	Limit	Over Limit	Remark
	MHz	dB	dB/m	dB	dBuV	dBuV/m	dBuV/m	dB	
1	1192.811	4.39	24.56	40.48	36.17	24.64	74.00	-49.36	peak
2	1542.733	5.42	26.00	40.73	36.90	27.59	74.00	-46.41	peak
3	3485.601	6.45	31.68	42.10	37.63	33.66	68.20	-34.54	peak
4	3823.371	6.80	32.36	42.54	38.74	35.36	74.00	-38.64	peak
5	11510.000	12.14	37.90	38.49	31.09	42.64	74.00	-31.36	peak
6	17265.000	16.12	42.76	40.31	31.19	49.76	68.20	-18.44	peak

Mode:f; Polarization:Vertical; Modulation:802.11n; bandwidth:40MHz; Channel:Low



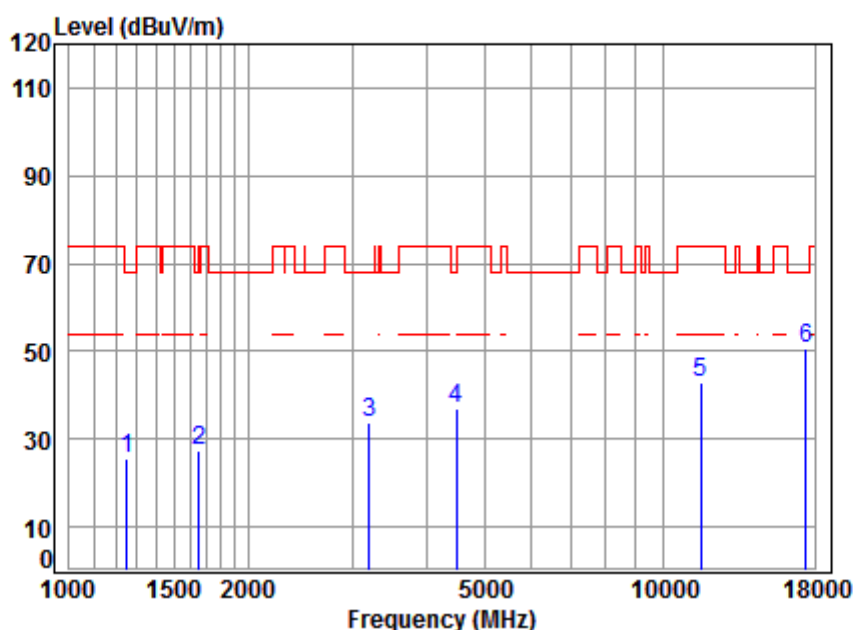
Site : chamber  
Condition: 3m VERTICAL  
Job No : 10092CR/10094CR  
Mode : 5755 TX RSE  
Note : 5G WIFI 11N40

		Cable	Ant	Preamp	Read		Limit	Over	
Freq		Loss	Factor	Factor	Level	Level	Line	Limit	Remark
MHz		dB	dB/m	dB	dBuV	dBuV/m	dBuV/m	dB	
1	1267.454	4.68	24.89	40.54	35.34	24.37	68.20	-43.83	peak
2	1620.431	5.32	26.34	40.78	36.91	27.79	74.00	-46.21	peak
3	3485.601	6.45	31.68	42.10	37.58	33.61	68.20	-34.59	peak
4	4405.090	7.46	33.44	43.20	38.22	35.92	68.20	-32.28	peak
5	11510.000	12.14	37.90	38.49	32.35	43.90	74.00	-30.10	peak
6	17265.000	16.12	42.76	40.31	31.53	50.10	68.20	-18.10	peak





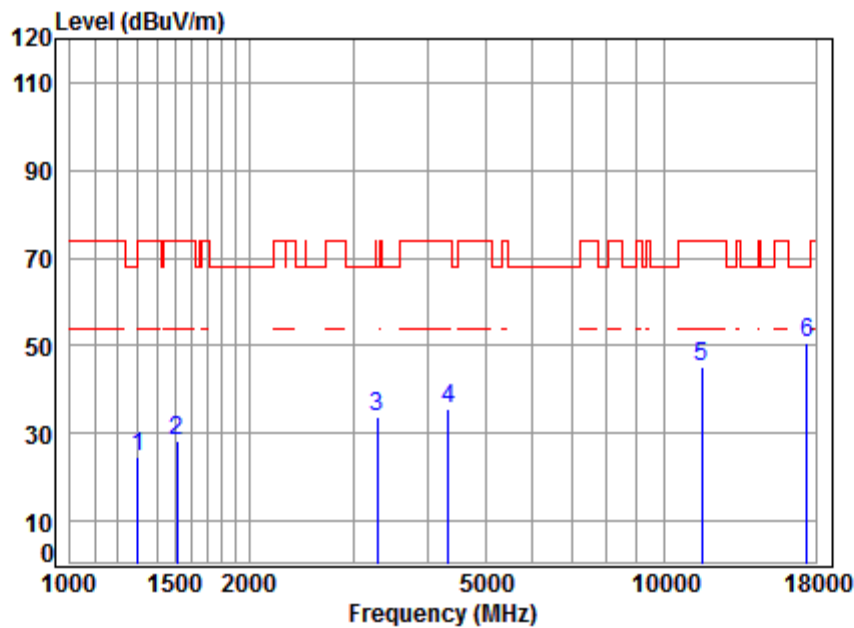
Mode:f; Polarization:Horizontal; Modulation:802.11n; bandwidth:40MHz; Channel:High



Site : chamber  
Condition: 3m HORIZONTAL  
Job No : 10092CR/10094CR  
Mode : 5795 TX RSE  
Note : 5G WIFI 11N40

	Freq	Cable Loss	Ant Factor	Preamp Factor	Read Level	Level	Limit Line	Over Limit	Remark
	MHz	dB	dB/m	dB	dBuV	dBuV/m	dBuV/m	dB	
1	1249.269	4.61	24.81	40.52	36.85	25.75	68.20	-42.45	peak
2	1653.550	5.28	26.48	40.80	36.42	27.38	68.20	-40.82	peak
3	3205.345	6.19	31.24	41.71	37.93	33.65	68.20	-34.55	peak
4	4495.125	7.55	33.59	43.30	39.22	37.06	68.20	-31.14	peak
5	11590.000	12.17	37.86	38.53	31.24	42.74	74.00	-31.26	peak
6	17385.000	15.85	42.83	40.30	32.30	50.68	68.20	-17.52	peak

Mode:f; Polarization:Vertical; Modulation:802.11n; bandwidth:40MHz; Channel:High



Site : chamber  
Condition: 3m VERTICAL  
Job No : 10092CR/10094CR  
Mode : 5795 TX RSE  
Note : 5G WIFI 11N40

	Freq	Cable Loss	Ant Factor	Preamp Factor	Read Level	Level	Limit Line	Over Limit	Remark
	MHz	dB	dB/m	dB	dBuV	dBuV/m	dBuV/m	dB	
1	1300.858	4.80	25.03	40.56	35.39	24.66	74.00	-49.34	peak
2	1511.833	5.46	25.85	40.71	37.46	28.06	74.00	-45.94	peak
3	3289.821	6.27	31.38	41.83	37.76	33.58	68.20	-34.62	peak
4	4341.886	7.38	33.33	43.14	38.24	35.81	74.00	-38.19	peak
5	11590.000	12.17	37.86	38.53	33.66	45.16	74.00	-28.84	peak
6	17385.000	15.85	42.83	40.30	32.40	50.78	68.20	-17.42	peak



## 7.7 Radiated Emissions which fall in the restricted bands

Test Requirement: 47 CFR Part 15, Subpart C 15.209 & 15.407(b)  
Test Method: KDB 789033 D02 II G  
Measurement Distance: 3m  
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:

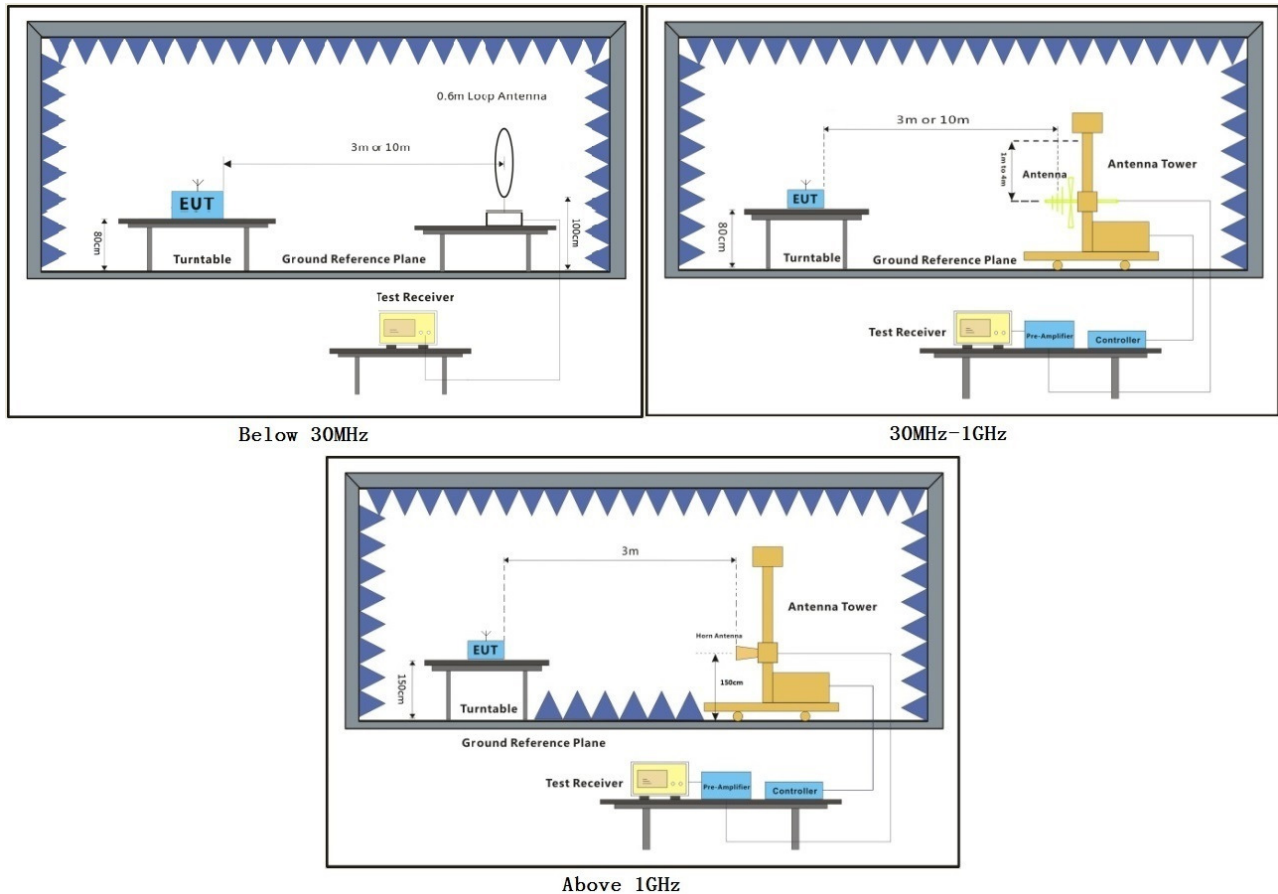
Temperature: 21.5 °C Humidity: 38.6 % RH Atmospheric Pressure: 1020 mbar

Test mode: c:TX mode (Band 1)\_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 @ 6Mbps is the worst case of IEEE 802.11a; data rate @ MCS0 is the worst case of IEEE 802.11n(HT20); data rate @ MCS0 is the worst case of IEEE 802.11n(HT40); data rate @ MCS0 is the worst case of IEEE 802.11ac(VHT20); data rate @ MCS0 is the worst case of IEEE 802.11ac(VHT40); data rate @ MCS0 is the worst case of IEEE 802.11ac(VHT80). Only the data of worst case is recorded in the report.

f:TX mode (Band 3)\_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 @ 6Mbps is the worst case of IEEE 802.11a; data rate @ MCS0 is the worst case of IEEE 802.11n(HT20); data rate @ MCS0 is the worst case of IEEE 802.11n(HT40); data rate @ MCS0 is the worst case of IEEE 802.11ac(VHT20); data rate @ MCS0 is the worst case of IEEE 802.11ac(VHT40); data rate @ MCS0 is the worst case of IEEE 802.11ac(VHT80). Only the data of worst case is recorded in the report.



### 7.7.2 Test Setup Diagram





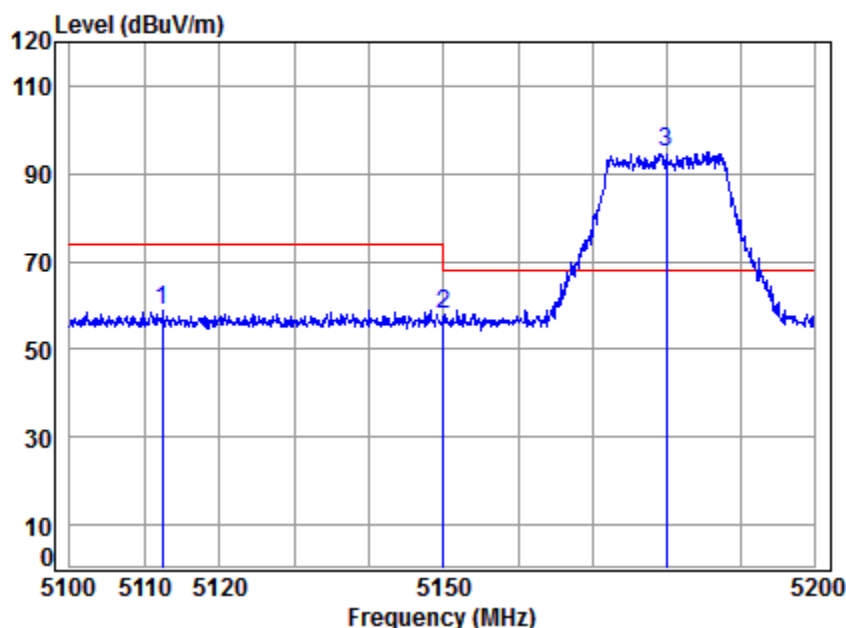
### 7.7.3 Measurement Procedure and Data

- 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: Level= Read Level+ Cable Loss+ Antenna Factor- Preamp Factor

Remark: Pretest the EUT at antenna 1, antenna 2, antenna 3, antenna 4 found the antenna 1 which is worst case for 802.11a mode, Pretest the EUT at antenna 1, antenna 2, antenna 3, antenna 4 MIMO mode and found the MIMO mode which is worst case for 802.11n/ac mode; So, Only the worst test data is recorded in the report.

Mode:c; Polarization:Horizontal; Modulation:802.11a; bandwidth:20MHz; Channel:Low



Site : chamber  
Condition: 3m HORIZONTAL  
Job No : 10092CR/10094CR  
Mode : 5180 Band edge  
NOTE : 5G WIFI 11A

		Cable	Ant	Preamp	Read		Limit	Over	
	Freq	Loss	Factor	Factor	Level	Level	Line	Limit	Remark
	MHz	dB	dB/m	dB	dBuV	dBuV/m	dBuV/m	dB	
1	5112.394	8.27	34.29	43.68	59.96	58.84	74.00	-15.16	peak
2	5149.980	8.33	34.32	43.64	58.85	57.86	74.00	-16.14	peak
3 *	5180.000	8.37	34.35	43.61	95.88	94.99	68.20	26.79	peak

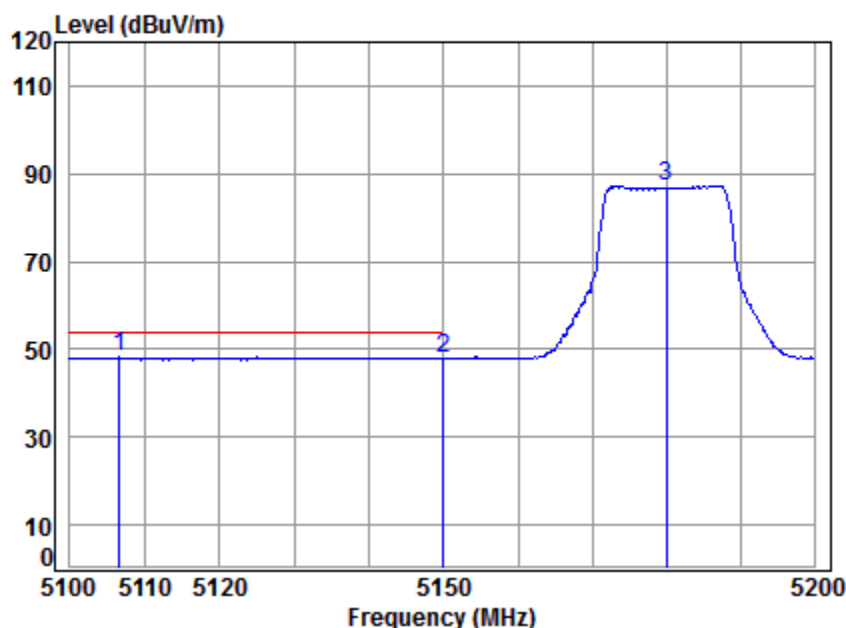


Unless otherwise agreed in writing, this document is issued by the Company subject to its General Conditions of Service printed overleaf, available on request or accessible at <http://www.sgs.com/en/Terms-and-Conditions.aspx> and, for electronic format documents, subject to Terms and Conditions for Electronic Documents at <http://www.sgs.com/en/Terms-and-Conditions/Terms-e-Documents.aspx>. Attention is drawn to the limitation of liability, indemnification and jurisdiction issues defined therein. Any holder of this document is advised that information contained hereon reflects the Company's findings at the time of its intervention only and within the limits of Client's instructions, if any. The Company's sole responsibility is to its Client and this document does not exonerate parties to a transaction from exercising all their rights and obligations under the transaction documents. This document cannot be reproduced except in full, without prior written approval of the Company. Any unauthorized alteration, forgery or falsification of the content or appearance of this document is unlawful and offenders may be prosecuted to the fullest extent of the law. Unless otherwise stated the results shown in this test report refer only to the sample(s) tested and such sample(s) are retained for 30 days only.  
Attention: To check the authenticity of testing / inspection report & certificate, please contact us at telephone: (86-755) 8307 1443, or email: [CN.Doccheck@sgs.com](mailto:CN.Doccheck@sgs.com)

SGS-CSTC Standards Technical Services Co., Ltd.  
Shenzhen Branch (China) SGS-CSTC Laboratory

No.1 Workshop, M-10, Middle Section, Science & Technology Park, Shenzhen, China 518057 t (86-755) 26012053 f (86-755) 26710594 www.sgsgroup.com.cn  
中国·深圳·科技园中区M-10栋一号厂房 邮编: 518057 t (86-755) 26012053 f (86-755) 26710594 sgs.china@sgs.com

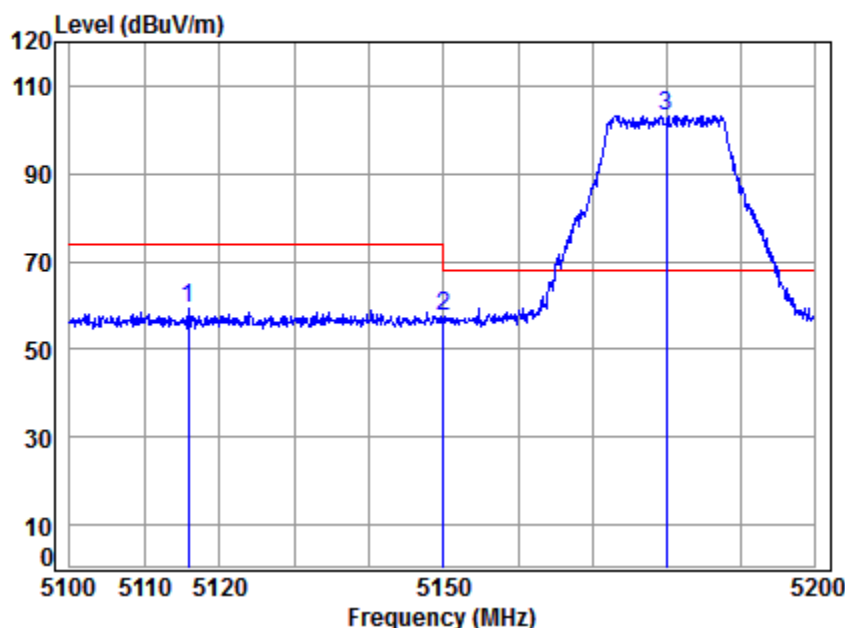
Mode:c; Polarization:Horizontal; Modulation:802.11a; bandwidth:20MHz; Channel:Low



Site : chamber  
Condition: 3m HORIZONTAL  
Job No : 10092CR/10094CR  
Mode : 5180 Band edge  
NOTE : 5G WIFI 11A

		Cable	Ant	Preamp	Read		Limit	Over	
	Freq	Loss	Factor	Factor	Level	Level	Line	Limit	Remark
	MHz	dB	dB/m	dB	dBuV	dBuV/m	dBuV/m	dB	
1	5106.541	8.26	34.29	43.69	49.31	48.17	54.00	-5.83	Average
2	5149.980	8.33	34.32	43.64	49.03	48.04	54.00	-5.96	Average
3	5180.000	8.37	34.35	43.61	88.14	87.25	-----	-----	Average

Mode:c; Polarization:Vertical; Modulation:802.11a; bandwidth:20MHz; Channel:Low



Site : chamber  
Condition: 3m VERTICAL  
Job No : 10092CR/10094CR  
Mode : 5180 Band edge  
NOTE : 5G WIFI 11A

		Cable	Ant	Preamp	Read		Limit	Over	
	Freq	Loss	Factor	Factor	Level	Level	Line	Limit	Remark
	MHz	dB	dB/m	dB	dBuV	dBuV/m	dBuV/m	dB	
1	5115.771	8.27	34.30	43.68	60.61	59.50	74.00	-14.50	Peak
2	5149.980	8.33	34.32	43.64	58.63	57.64	74.00	-16.36	Peak
3 *	5180.000	8.37	34.35	43.61	104.22	103.33	68.20	35.13	Peak



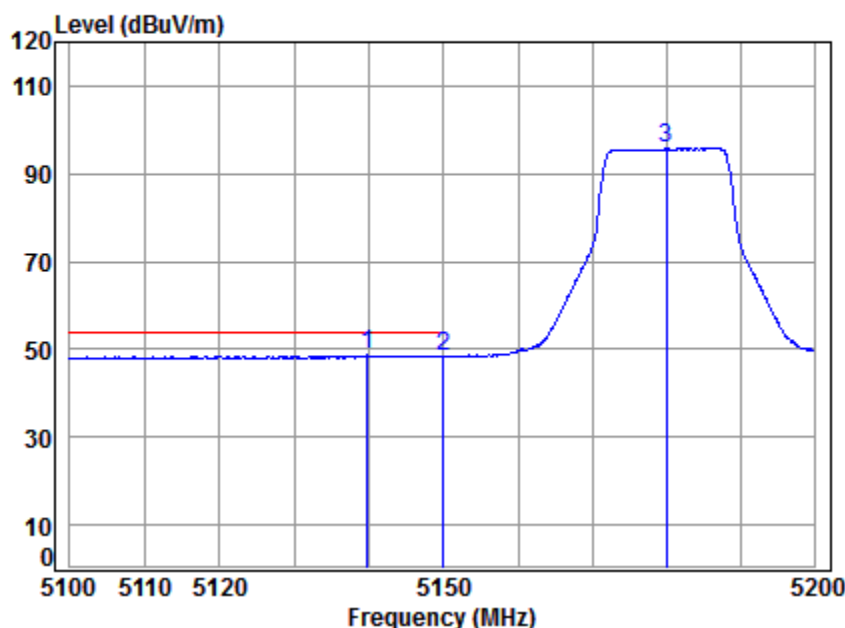
Unless otherwise agreed in writing, this document is issued by the Company subject to its General Conditions of Service printed overleaf, available on request or accessible at <http://www.sgs.com/en/Terms-and-Conditions.aspx> and, for electronic format documents, subject to Terms and Conditions for Electronic Documents at <http://www.sgs.com/en/Terms-and-Conditions/Terms-e-Documents.aspx>. Attention is drawn to the limitation of liability, indemnification and jurisdiction issues defined therein. Any holder of this document is advised that information contained hereon reflects the Company's findings at the time of its intervention only and within the limits of Client's instructions, if any. The Company's sole responsibility is to its Client and this document does not exonerate parties to a transaction from exercising all their rights and obligations under the transaction documents. This document cannot be reproduced except in full, without prior written approval of the Company. Any unauthorized alteration, forgery or falsification of the content or appearance of this document is unlawful and offenders may be prosecuted to the fullest extent of the law. Unless otherwise stated the results shown in this test report refer only to the sample(s) tested and such sample(s) are retained for 30 days only.  
Attention: To check the authenticity of testing / inspection report and certificate, please contact us at telephone: (86-755) 8307 1443, or email: [CN.Doccheck@sgs.com](mailto:CN.Doccheck@sgs.com)

SGS-CSTC Standards Technical Services Co., Ltd.  
Shenzhen Branch (China) SGS-CSTC Laboratory

No.1 Workshop, M-10, Middle Section, Science & Technology Park, Shenzhen, China 518057 t (86-755) 26012053 f (86-755) 26710594 www.sgs.com.cn  
中国·深圳·科技园中区M-10栋一号厂房 邮编: 518057 t (86-755) 26012053 f (86-755) 26710594 sgs.china@sgs.com



Mode:c; Polarization:Vertical; Modulation:802.11a; bandwidth:20MHz; Channel:Low



Site : chamber  
Condition: 3m VERTICAL  
Job No : 10092CR/10094CR  
Mode : 5180 Band edge  
NOTE : 5G WIFI 11A

		Cable	Ant	Preamp	Read		Limit	Over	
	Freq	Loss	Factor	Factor	Level	Level	Line	Limit	Remark
	MHz	dB	dB/m	dB	dBuV	dBuV/m	dBuV/m	dB	
1	5139.767	8.31	34.32	43.65	49.67	48.65	54.00	-5.35	Average
2	5149.980	8.33	34.32	43.64	49.51	48.52	54.00	-5.48	Average
3	5180.000	8.37	34.35	43.61	96.71	95.82	-----	-----	Average

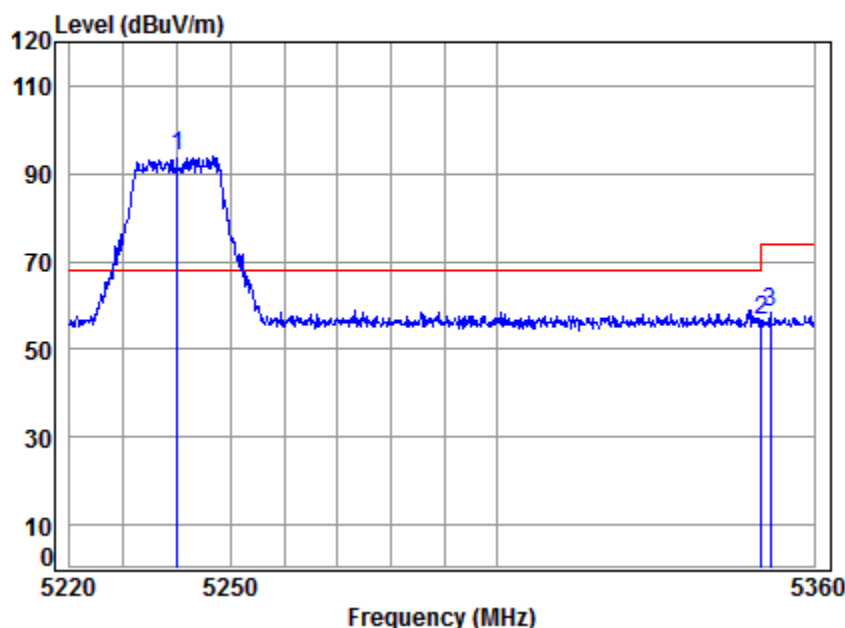


Unless otherwise agreed in writing, this document is issued by the Company subject to its General Conditions of Service printed overleaf, available on request or accessible at <http://www.sgs.com/en/Terms-and-Conditions.aspx> and, for electronic format documents, subject to Terms and Conditions for Electronic Documents at <http://www.sgs.com/en/Terms-and-Conditions/Terms-e-Documents.aspx>. Attention is drawn to the limitation of liability, indemnification and jurisdiction issues defined therein. Any holder of this document is advised that information contained hereon reflects the Company's findings at the time of its intervention only and within the limits of Client's instructions, if any. The Company's sole responsibility is to its Client and this document does not exonerate parties to a transaction from exercising all their rights and obligations under the transaction documents. This document cannot be reproduced except in full, without prior written approval of the Company. Any unauthorized alteration, forgery or falsification of the content or appearance of this document is unlawful and offenders may be prosecuted to the fullest extent of the law. Unless otherwise stated the results shown in this test report refer only to the sample(s) tested and such sample(s) are retained for 30 days only.  
Attention: To check the authenticity of testing / inspection report & certificate, please contact us at telephone: (86-755) 8307 1443, or email: [CN.Doccheck@sgs.com](mailto:CN.Doccheck@sgs.com)

SGS-CSTC Standards Technical Services Co., Ltd.  
Shenzhen Branch (China) SGS-CSTC Laboratory

No.1 Workshop, M-10, Middle Section, Science & Technology Park, Shenzhen, China 518057 t (86-755) 26012053 f (86-755) 26710594 www.sgs.com.cn  
中国·深圳·科技园中区M-10栋一号厂房 邮编: 518057 t (86-755) 26012053 f (86-755) 26710594 sgs.china@sgs.com

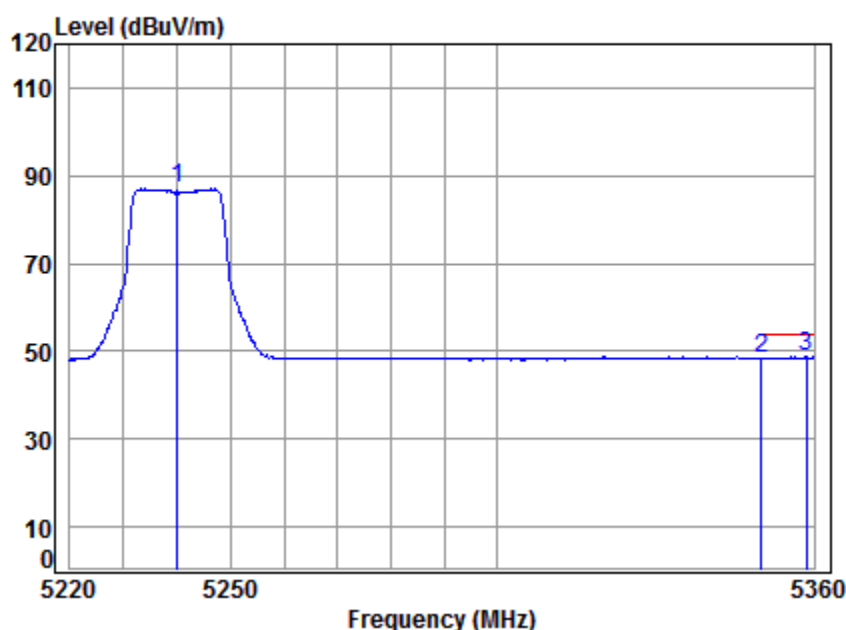
Mode:c; Polarization:Horizontal; Modulation:802.11a; bandwidth:20MHz; Channel:High



Site : chamber  
Condition: 3m HORIZONTAL  
Job No : 10092CR/10094CR  
Mode : 5240 Band edge  
NOTE : 5G WIFI 11A

		Cable	Ant	Preamp	Read		Limit	Over	
	Freq	Loss	Factor	Factor	Level	Level	Line	Limit	Remark
	MHz	dB	dB/m	dB	dBuV	dBuV/m	dBuV/m	dB	
1 *	5240.000	8.46	34.40	43.55	94.71	94.02	68.20	25.82	peak
2	5350.020	8.63	34.48	43.44	56.84	56.51	74.00	-17.49	peak
3	5351.778	8.63	34.49	43.44	58.73	58.41	74.00	-15.59	peak

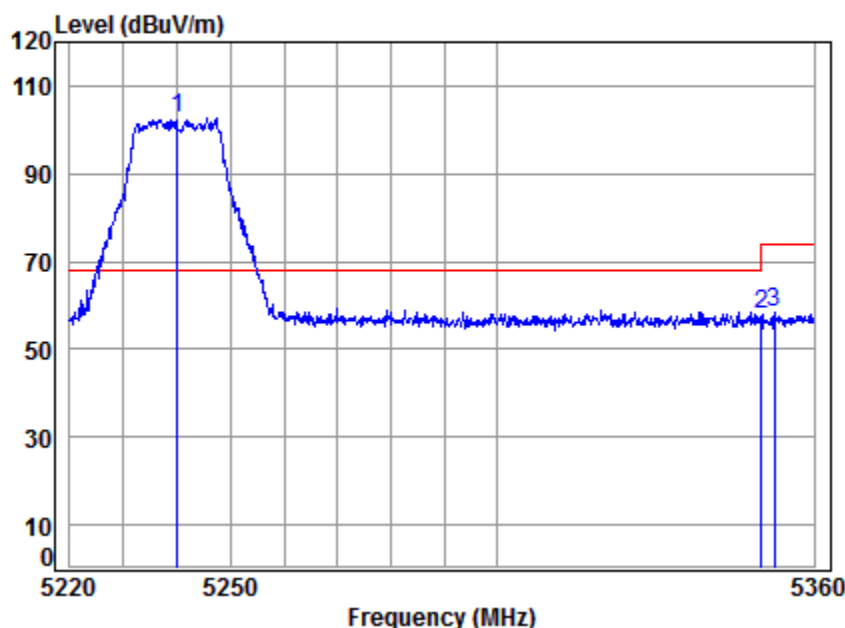
Mode:c; Polarization:Horizontal; Modulation:802.11a; bandwidth:20MHz; Channel:High



Site : chamber  
Condition: 3m HORIZONTAL  
Job No : 10092CR/10094CR  
Mode : 5240 Band edge  
NOTE : 5G WIFI 11A

	Freq	Cable Loss	Ant Factor	Preamp Factor	Read Level	Limit Level	Limit Line	Over Limit	Remark
	MHz	dB	dB/m	dB	dBuV	dBuV/m	dBuV/m	dB	
1	5240.000	8.46	34.40	43.55	87.63	86.94	-----	-----	Average
2	5350.020	8.63	34.48	43.44	48.75	48.42	54.00	-5.58	Average
3	5358.582	8.64	34.49	43.43	49.02	48.72	54.00	-5.28	Average

Mode:c; Polarization:Vertical; Modulation:802.11a; bandwidth:20MHz; Channel:High

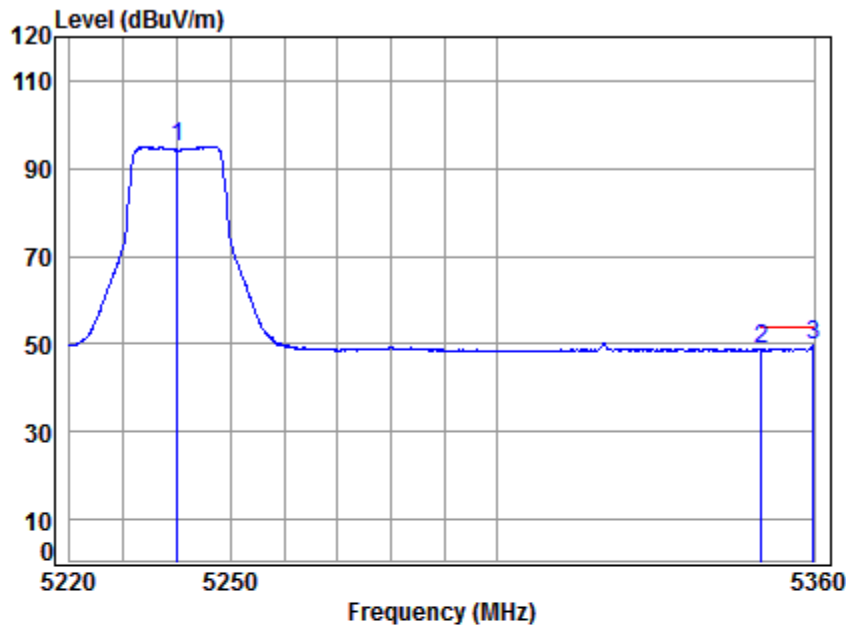


Site : chamber  
Condition: 3m VERTICAL  
Job No : 10092CR/10094CR  
Mode : 5240 Band edge  
NOTE : 5G WIFI 11A

		Cable	Ant	Preamp	Read		Limit	Over	
	Freq	Loss	Factor	Factor	Level	Level	Line	Limit	Remark
	MHz	dB	dB/m	dB	dBuV	dBuV/m	dBuV/m	dB	
1 *	5240.000	8.46	34.40	43.55	103.27	102.58	68.20	34.38	Peak
2	5350.020	8.63	34.48	43.44	58.45	58.12	74.00	-15.88	Peak
3	5352.487	8.63	34.49	43.44	58.59	58.27	74.00	-15.73	Peak



Mode:c; Polarization:Vertical; Modulation:802.11a; bandwidth:20MHz; Channel:High

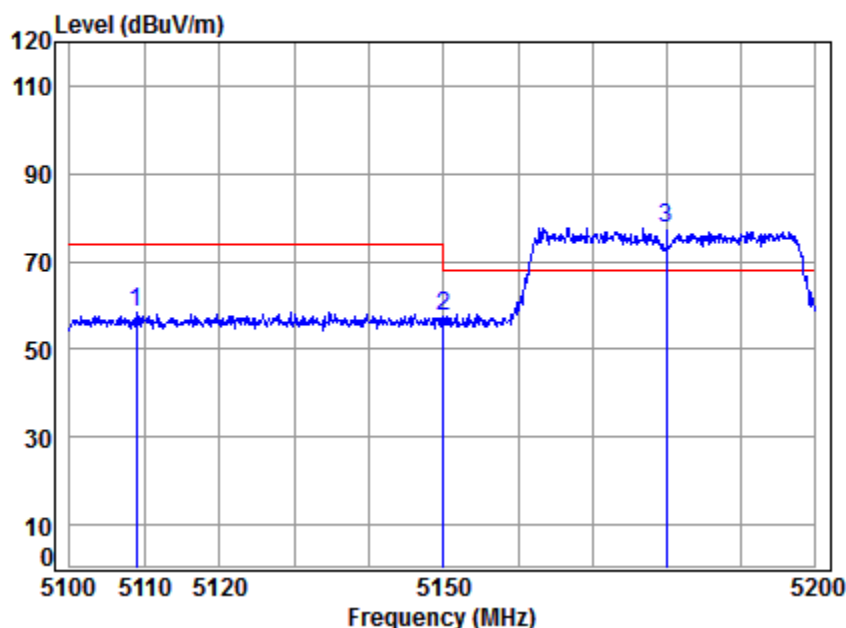


Site : chamber  
Condition: 3m VERTICAL  
Job No : 10092CR/10094CR  
Mode : 5240 Band edge  
NOTE : 5G WIFI 11A

	Freq	Cable Loss	Ant Factor	Preamp Factor	Read Level	Level	Limit Line	Over Limit	Remark
	MHz	dB	dB/m	dB	dBuV	dBuV/m	dBuV/m	dB	
1	5240.000	8.46	34.40	43.55	95.68	94.99	-----	-----	Average
2	5350.020	8.63	34.48	43.44	49.01	48.68	54.00	-5.32	Average
3	5359.858	8.64	34.49	43.43	50.05	49.75	54.00	-4.25	Average



Mode:c; Polarization:Horizontal; Modulation:802.11ac; bandwidth:20MHz; Channel:Low



Site : chamber  
Condition: 3m HORIZONTAL  
Job No : 10092CR/10094CR  
Mode : 5180 Band edge  
NOTE : 5G WIFI 11AC 20

		Cable	Ant	Preamp	Read		Limit	Over	
	Freq	Loss	Factor	Factor	Level	Level	Line	Limit	Remark
	MHz	dB	dB/m	dB	dBuV	dBuV/m	dBuV/m	dB	
1	5108.821	8.26	34.29	43.69	59.75	58.61	74.00	-15.39	peak
2	5149.980	8.33	34.32	43.64	58.59	57.60	74.00	-16.40	peak
3 *	5180.000	8.37	34.35	43.61	78.67	77.78	68.20	9.58	peak

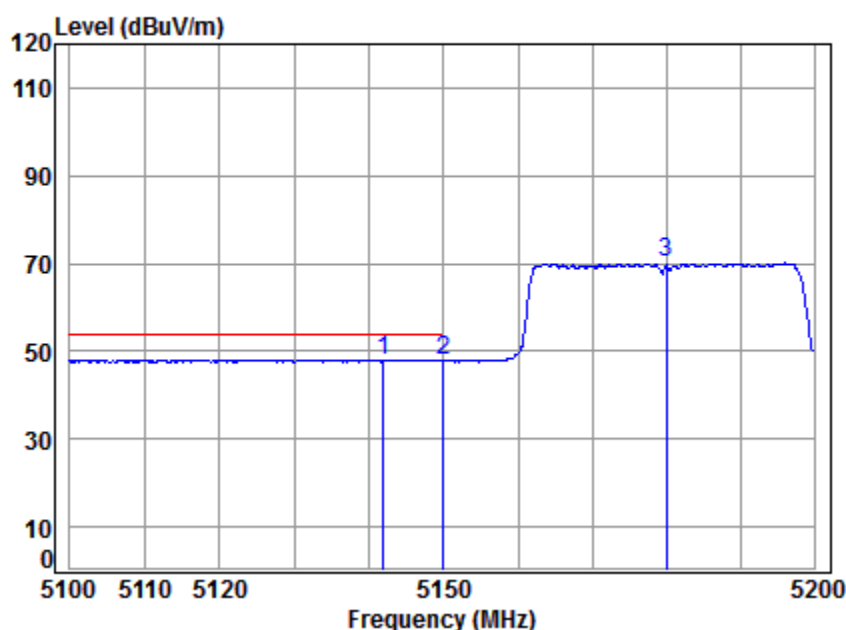


Unless otherwise agreed in writing, this document is issued by the Company subject to its General Conditions of Service printed overleaf, available on request or accessible at <http://www.sgs.com/en/Terms-and-Conditions.aspx> and, for electronic format documents, subject to Terms and Conditions for Electronic Documents at <http://www.sgs.com/en/Terms-and-Conditions/Terms-e-Documents.aspx>. Attention is drawn to the limitation of liability, indemnification and jurisdiction issues defined therein. Any holder of this document is advised that information contained hereon reflects the Company's findings at the time of its intervention only and within the limits of Client's instructions, if any. The Company's sole responsibility is to its Client and this document does not exonerate parties to a transaction from exercising all their rights and obligations under the transaction documents. This document cannot be reproduced except in full, without prior written approval of the Company. Any unauthorized alteration, forgery or falsification of the content or appearance of this document is unlawful and offenders may be prosecuted to the fullest extent of the law. Unless otherwise stated the results shown in this test report refer only to the sample(s) tested and such sample(s) are retained for 30 days only.  
Attention: To check the authenticity of testing / inspection report and certificate, please contact us at telephone: (86-755) 8307 1443, or email: [CN.Doccheck@sgs.com](mailto:CN.Doccheck@sgs.com)

SGS-CSTC Standards Technical Services Co., Ltd.  
Shenzhen Branch (China) SGS-CSTC Laboratory

No.1 Workshop, M-10, Middle Section, Science & Technology Park, Shenzhen, China 518057 t (86-755) 26012053 f (86-755) 26710594 www.sgs.com.cn  
中国·深圳·科技园中区M-10栋一号厂房 邮编: 518057 t (86-755) 26012053 f (86-755) 26710594 sgs.china@sgs.com

Mode:c; Polarization:Horizontal; Modulation:802.11ac; bandwidth:20MHz; Channel:Low



Site : chamber  
Condition: 3m HORIZONTAL  
Job No : 10092CR/10094CR  
Mode : 5180 Band edge  
NOTE : 5G WIFI 11AC 20

	Freq	Cable Loss	Ant Factor	Preamp Factor	Read Level	Limit Level	Limit Line	Over Limit	Remark
	MHz	dB	dB/m	dB	dBuV	dBuV/m	dBuV/m	dB	
1	5141.863	8.31	34.32	43.65	49.13	48.11	54.00	-5.89	Average
2	5149.980	8.33	34.32	43.64	48.82	47.83	54.00	-6.17	Average
3	5180.000	8.37	34.35	43.61	70.93	70.04	-----	-----	Average

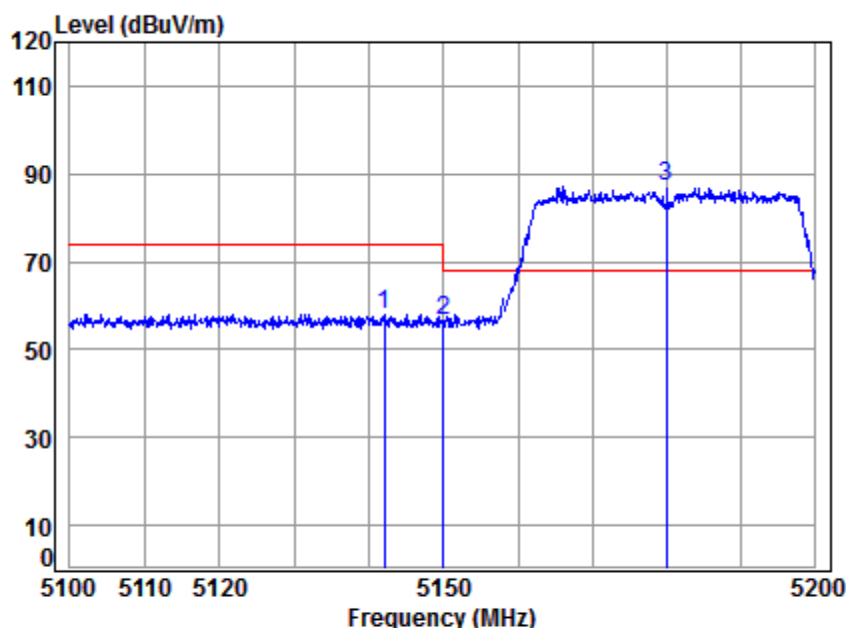


Unless otherwise agreed in writing, this document is issued by the Company subject to its General Conditions of Service printed overleaf, available on request or accessible at <http://www.sgs.com/en/Terms-and-Conditions.aspx> and, for electronic format documents, subject to Terms and Conditions for Electronic Documents at <http://www.sgs.com/en/Terms-and-Conditions/Terms-e-Documents.aspx>. Attention is drawn to the limitation of liability, indemnification and jurisdiction issues defined therein. Any holder of this document is advised that information contained hereon reflects the Company's findings at the time of its intervention only and within the limits of Client's instructions, if any. The Company's sole responsibility is to its Client and this document does not exonerate parties to a transaction from exercising all their rights and obligations under the transaction documents. This document cannot be reproduced except in full, without prior written approval of the Company. Any unauthorized alteration, forgery or falsification of the content or appearance of this document is unlawful and offenders may be prosecuted to the fullest extent of the law. Unless otherwise stated the results shown in this test report refer only to the sample(s) tested and such sample(s) are retained for 30 days only.  
Attention: To check the authenticity of testing / inspection report and certificate, please contact us at telephone: (86-755) 8307 1443, or email: [CN.Doccheck@sgs.com](mailto:CN.Doccheck@sgs.com)

SGS-CSTC Standards Technical Services Co., Ltd.  
Shenzhen Branch (China) EMC Laboratory

No.1 Workshop, M-10, Middle Section, Science & Technology Park, Shenzhen, China 518057 t (86-755) 26012053 f (86-755) 26710594 www.sgsgroup.com.cn  
中国·深圳·科技园中区M-10栋一号厂房 邮编: 518057 t (86-755) 26012053 f (86-755) 26710594 sgs.china@sgs.com

Mode:c; Polarization:Vertical; Modulation:802.11ac; bandwidth:20MHz; Channel:Low



Site : chamber  
Condition: 3m VERTICAL  
Job No : 10092CR/10094CR  
Mode : 5180 Band edge  
NOTE : 5G WIFI 11AC 20

		Cable	Ant	Preamp	Read		Limit	Over	
Freq		Loss	Factor	Factor	Level	Level	Line	Limit	Remark
	MHz	dB	dB/m	dB	dBuV	dBuV/m	dBuV/m	dB	
1	5142.063	8.31	34.32	43.65	59.18	58.16	74.00	-15.84	Peak
2	5149.980	8.33	34.32	43.64	57.69	56.70	74.00	-17.30	Peak
3 *	5180.000	8.37	34.35	43.61	88.07	87.18	68.20	18.98	Peak



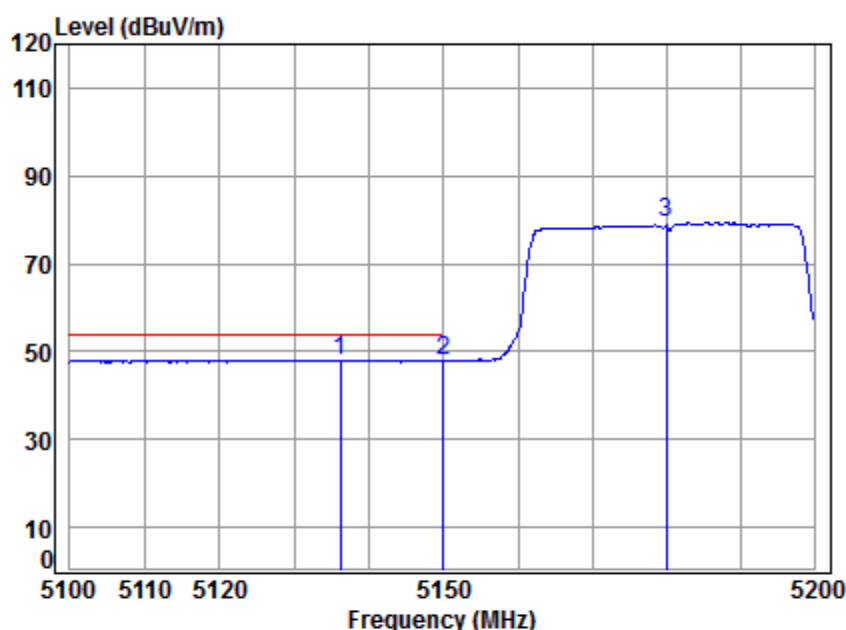
Unless otherwise agreed in writing, this document is issued by the Company subject to its General Conditions of Service printed overleaf, available on request or accessible at <http://www.sgs.com/en/Terms-and-Conditions.aspx> and, for electronic format documents, subject to Terms and Conditions for Electronic Documents at <http://www.sgs.com/en/Terms-and-Conditions/Terms-e-Documents.aspx>. Attention is drawn to the limitation of liability, indemnification and jurisdiction issues defined therein. Any holder of this document is advised that information contained hereon reflects the Company's findings at the time of its intervention only and within the limits of Client's instructions, if any. The Company's sole responsibility is to its Client and this document does not exonerate parties to a transaction from exercising all their rights and obligations under the transaction documents. This document cannot be reproduced except in full, without prior written approval of the Company. Any unauthorized alteration, forgery or falsification of the content or appearance of this document is unlawful and offenders may be prosecuted to the fullest extent of the law. Unless otherwise stated the results shown in this test report refer only to the sample(s) tested and such sample(s) are retained for 30 days only.  
Attention: To check the authenticity of testing / inspection report and certificate, please contact us at telephone: (86-755) 8307 1443, or email: [CN.Doccheck@sgs.com](mailto:CN.Doccheck@sgs.com)

SGS-CSTC Standards Technical Services Co., Ltd.  
Shenzhen Branch (China) SGS-CSTC Laboratory

No.1 Workshop, M-10, Middle Section, Science & Technology Park, Shenzhen, China 518057 t (86-755) 26012053 f (86-755) 26710594 www.sgsgroup.com.cn  
中国·深圳·科技园中区M-10栋一号厂房 邮编: 518057 t (86-755) 26012053 f (86-755) 26710594 sgs.china@sgs.com



Mode:c; Polarization:Vertical; Modulation:802.11ac; bandwidth:20MHz; Channel:Low



Site : chamber  
Condition: 3m VERTICAL  
Job No : 10092CR/10094CR  
Mode : 5180 Band edge  
NOTE : 5G WIFI 11AC 20

	Freq	Cable Loss	Ant Factor	Preamp Factor	Read Level	Limit Level	Limit Line	Over Limit	Remark
	MHz	dB	dB/m	dB	dBuV	dBuV/m	dBuV/m	dB	
1	5136.076	8.30	34.31	43.66	49.14	48.09	54.00	-5.91	Average
2	5149.980	8.33	34.32	43.64	48.99	48.00	54.00	-6.00	Average
3	5180.000	8.37	34.35	43.61	80.29	79.40	-----	-----	Average

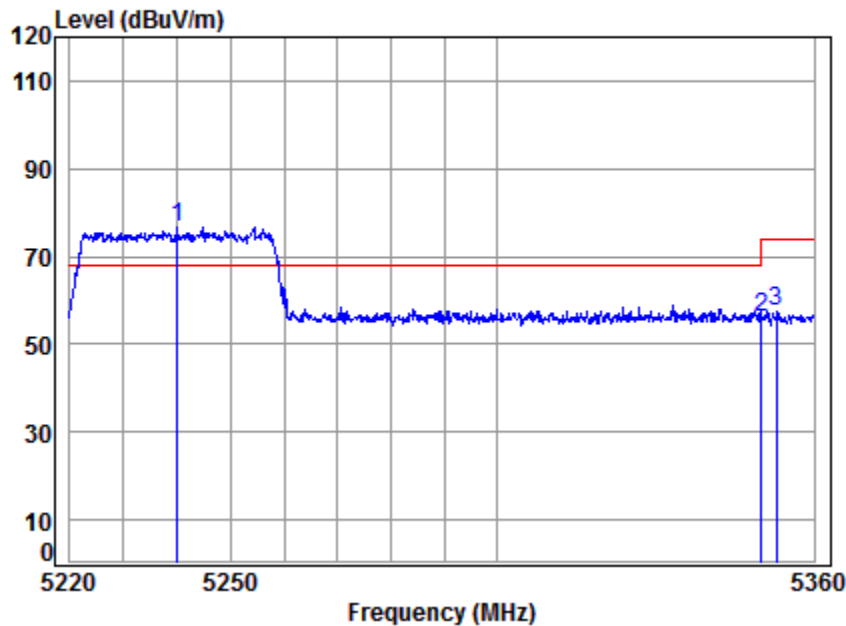


Unless otherwise agreed in writing, this document is issued by the Company subject to its General Conditions of Service printed overleaf, available on request or accessible at <http://www.sgs.com/en/Terms-and-Conditions.aspx> and, for electronic format documents, subject to Terms and Conditions for Electronic Documents at <http://www.sgs.com/en/Terms-and-Conditions/Terms-e-Documents.aspx>. Attention is drawn to the limitation of liability, indemnification and jurisdiction issues defined therein. Any holder of this document is advised that information contained hereon reflects the Company's findings at the time of its intervention only and within the limits of Client's instructions, if any. The Company's sole responsibility is to its Client and this document does not exonerate parties to a transaction from exercising all their rights and obligations under the transaction documents. This document cannot be reproduced except in full, without prior written approval of the Company. Any unauthorized alteration, forgery or falsification of the content or appearance of this document is unlawful and offenders may be prosecuted to the fullest extent of the law. Unless otherwise stated the results shown in this test report refer only to the sample(s) tested and such sample(s) are retained for 30 days only.  
Attention: To check the authenticity of testing / inspection report and certificate, please contact us at telephone: (86-755) 8307 1443, or email: [CN.Doccheck@sgs.com](mailto:CN.Doccheck@sgs.com)

SGS-CSTC Standards Technical Services Co., Ltd.  
Shenzhen Branch (China) - CSTC Laboratory

No.1 Workshop, M-10, Middle Section, Science & Technology Park, Shenzhen, China 518057 t (86-755) 26012053 f (86-755) 26710594 www.sgs.com.cn  
中国·深圳·科技园中区M-10栋一号厂房 邮编: 518057 t (86-755) 26012053 f (86-755) 26710594 sgs.china@sgs.com

Mode:c; Polarization:Horizontal; Modulation:802.11ac; bandwidth:20MHz; Channel:High

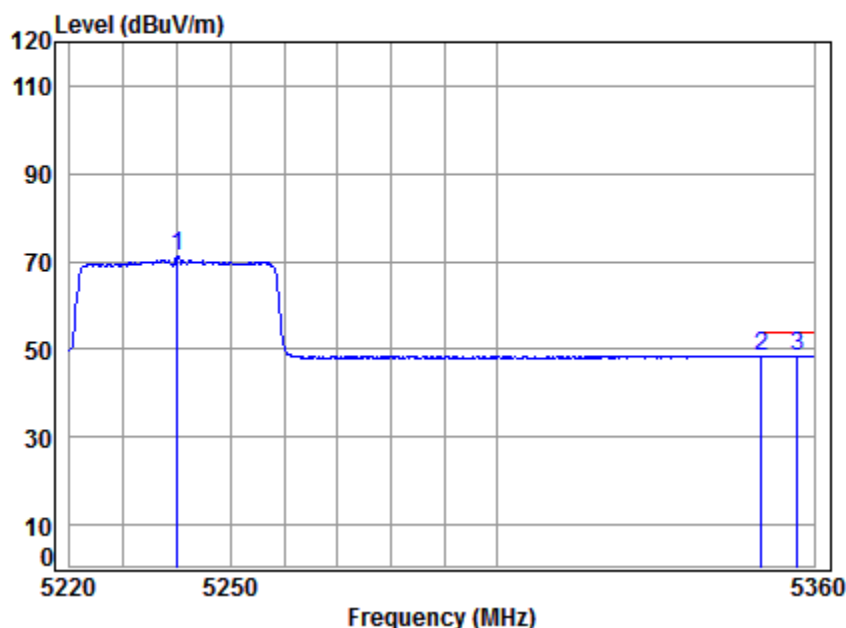


Site : chamber  
Condition: 3m HORIZONTAL  
Job No : 10092CR/10094CR  
Mode : 5240 Band edge  
NOTE : 5G WIFI 11AC 20

	Cable	Ant	Preamp	Read		Limit	Over	
Freq	Loss	Factor	Factor	Level	Level	Line	Limit	Remark
MHz	dB	dB/m	dB	dBuV	dBuV/m	dBuV/m	dB	
1 * 5240.000	8.46	34.40	43.55	77.57	76.88	68.20	8.68	peak
2 5350.020	8.63	34.48	43.44	56.49	56.16	74.00	-17.84	peak
3 5352.912	8.63	34.49	43.44	57.91	57.59	74.00	-16.41	peak



Mode:c; Polarization:Horizontal; Modulation:802.11ac; bandwidth:20MHz; Channel:High



Site : chamber  
Condition: 3m HORIZONTAL  
Job No : 10092CR/10094CR  
Mode : 5240 Band edge  
NOTE : 5G WIFI 11AC 20

		Cable	Ant	Preamp	Read		Limit	Over	
	Freq	Loss	Factor	Factor	Level	Level	Line	Limit	Remark
	MHz	dB	dB/m	dB	dBuV	dBuV/m	dBuV/m	dB	
1	5240.000	8.46	34.40	43.55	71.84	71.15	-----	-----	Average
2	5350.020	8.63	34.48	43.44	48.68	48.35	54.00	-5.65	Average
3	5356.880	8.64	34.49	43.43	48.84	48.54	54.00	-5.46	Average

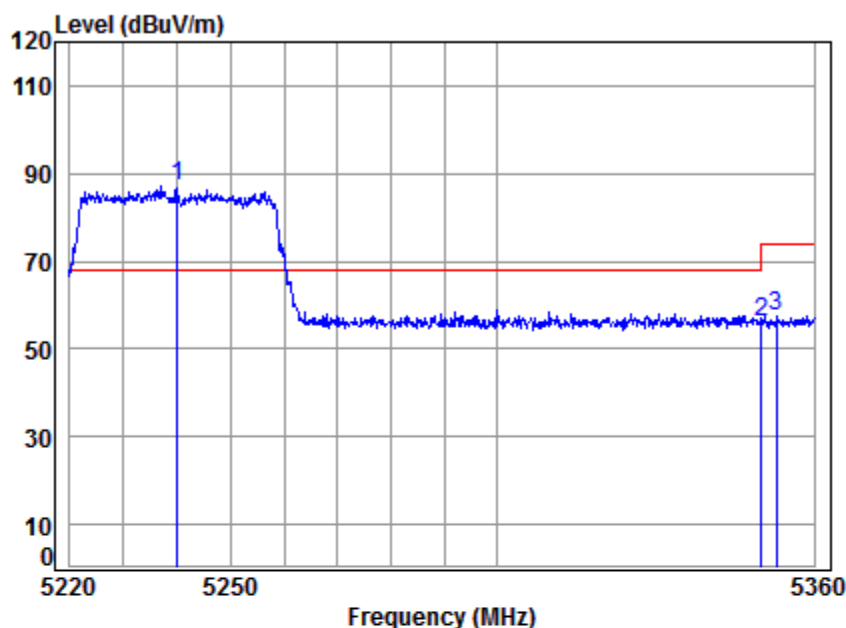


Unless otherwise agreed in writing, this document is issued by the Company subject to its General Conditions of Service printed overleaf, available on request or accessible at <http://www.sgs.com/en/Terms-and-Conditions.aspx> and, for electronic format documents, subject to Terms and Conditions for Electronic Documents at <http://www.sgs.com/en/Terms-and-Conditions/Terms-e-Documents.aspx>. Attention is drawn to the limitation of liability, indemnification and jurisdiction issues defined therein. Any holder of this document is advised that information contained hereon reflects the Company's findings at the time of its intervention only and within the limits of Client's instructions, if any. The Company's sole responsibility is to its Client and this document does not exonerate parties to a transaction from exercising all their rights and obligations under the transaction documents. This document cannot be reproduced except in full, without prior written approval of the Company. Any unauthorized alteration, forgery or falsification of the content or appearance of this document is unlawful and offenders may be prosecuted to the fullest extent of the law. Unless otherwise stated the results shown in this test report refer only to the sample(s) tested and such sample(s) are retained for 30 days only.  
Attention: To check the authenticity of testing / inspection report and certificate, please contact us at telephone: (86-755) 8307 1443, or email: [CN.Doccheck@sgs.com](mailto:CN.Doccheck@sgs.com)

SGS-CSTC Standards Technical Services Co., Ltd.  
Shenzhen Branch (China) SGS-CSTC Laboratory

No.1 Workshop, M-10, Middle Section, Science & Technology Park, Shenzhen, China 518057 t (86-755) 26012053 f (86-755) 26710594 www.sgs.com.cn  
中国·深圳·科技园中区M-10栋一号厂房 邮编: 518057 t (86-755) 26012053 f (86-755) 26710594 sgs.china@sgs.com

Mode:c; Polarization:Vertical; Modulation:802.11ac; bandwidth:20MHz; Channel:High



Site : chamber  
Condition: 3m VERTICAL  
Job No : 10092CR/10094CR  
Mode : 5240 Band edge  
NOTE : 5G WIFI 11AC 20

		Cable	Ant	Preamp	Read		Limit	Over	
Freq		Loss	Factor	Factor	Level	Level	Line	Limit	Remark
MHz		dB	dB/m	dB	dBuV	dBuV/m	dBuV/m	dB	
1 *	5240.000	8.46	34.40	43.55	87.65	86.96	68.20	18.76	Peak
2	5350.020	8.63	34.48	43.44	56.66	56.33	74.00	-17.67	Peak
3	5352.912	8.63	34.49	43.44	57.94	57.62	74.00	-16.38	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 <http://www.sgs.com/en/Terms-and-Conditions.aspx> and, for electronic format documents, subject to Terms and Conditions for Electronic Documents at <http://www.sgs.com/en/Terms-and-Conditions/Terms-e-Documents.aspx>. Attention is drawn to the limitation of liability, indemnification and jurisdiction issues defined therein. Any holder of this document is advised that information contained hereon reflects the Company's findings at the time of its intervention only and within the limits of Client's instructions, if any. The Company's sole responsibility is to its Client and this document does not exonerate parties to a transaction from exercising all their rights and obligations under the transaction documents. This document cannot be reproduced except in full, without prior written approval of the Company. Any unauthorized alteration, forgery or falsification of the content or appearance of this document is unlawful and offenders may be prosecuted to the fullest extent of the law. Unless otherwise stated the results shown in this test report refer only to the sample(s) tested and such sample(s) are retained for 30 days only.

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

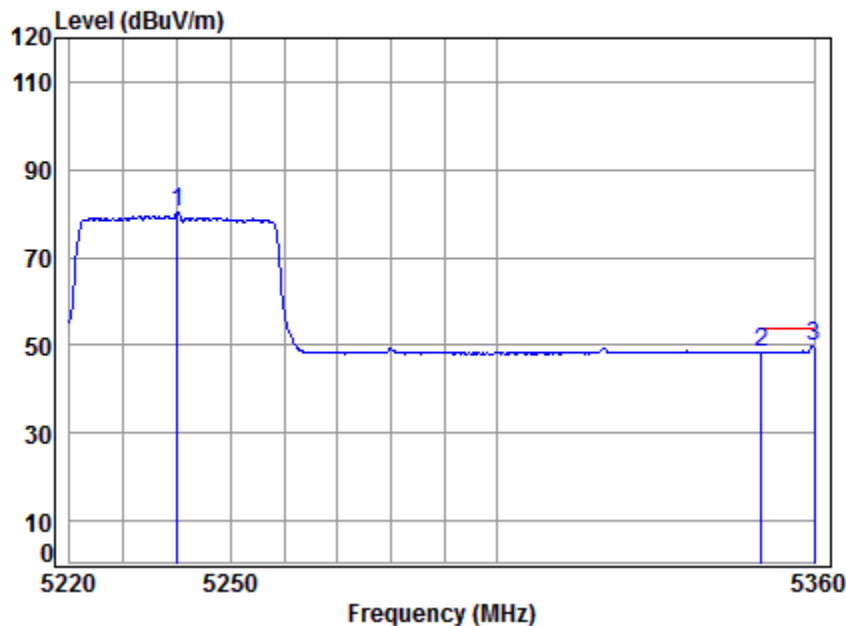
SGS-CSTC Standards Technical Services Co., Ltd.  
Shenzhen Branch (China) SGS-CSTC Laboratory

No.1 Workshop, M-10, Middle Section, Science & Technology Park, Shenzhen, China 518057  
中国·深圳·科技园中区M-10栋一号厂房

t (86-755) 26012053 f (86-755) 26710594 www.sgs.com.cn  
t (86-755) 26012053 f (86-755) 26710594 sgs.china@sgs.com



Mode:c; Polarization:Vertical; Modulation:802.11ac; bandwidth:20MHz; Channel:High

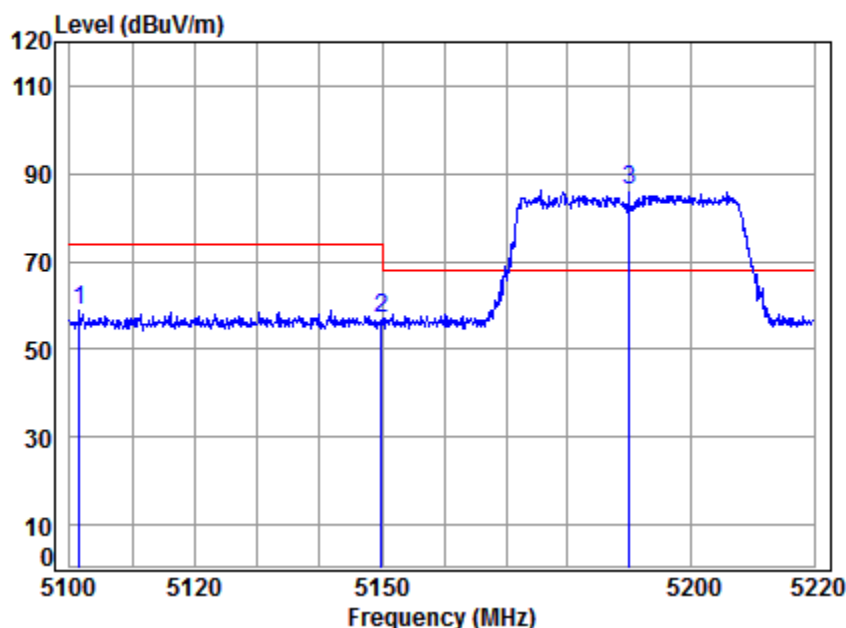


Site : chamber  
Condition: 3m VERTICAL  
Job No : 10092CR/10094CR  
Mode : 5240 Band edge  
NOTE : 5G WIFI 11AC 20

		Cable	Ant	Preamp	Read		Limit	Over	
	Freq	Loss	Factor	Factor	Level	Level	Line	Limit	Remark
	MHz	dB	dB/m	dB	dBuV	dBuV/m	dBuV/m	dB	
1	5240.000	8.46	34.40	43.55	81.13	80.44	-----	-----	Average
2	5350.020	8.63	34.48	43.44	48.67	48.34	54.00	-5.66	Average
3	5360.000	8.64	34.49	43.43	50.18	49.88	54.00	-4.12	Average



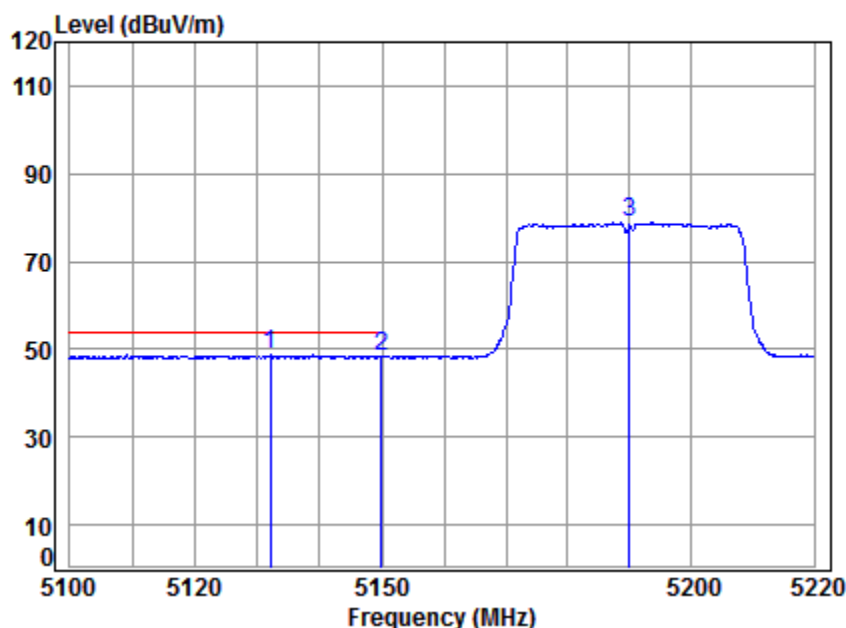
Mode:c; Polarization:Horizontal; Modulation:802.11ac; bandwidth:40MHz; Channel:Low



Site : chamber  
Condition: 3m HORIZONTAL  
Job No : 10092CR/10094CR  
Mode : 5190 Band edge  
NOTE : 5G WIFI 11AC 40

		Cable	Ant	Preamp	Read		Limit	Over	
Freq		Loss	Factor	Factor	Level	Level	Line	Limit	Remark
MHz		dB	dB/m	dB	dBuV	dBuV/m	dBuV/m	dB	
1	5101.542	8.25	34.28	43.69	60.14	58.98	74.00	-15.02	peak
2	5149.980	8.33	34.32	43.64	58.20	57.21	74.00	-16.79	peak
3 *	5190.000	8.39	34.36	43.60	86.93	86.08	68.20	17.88	peak

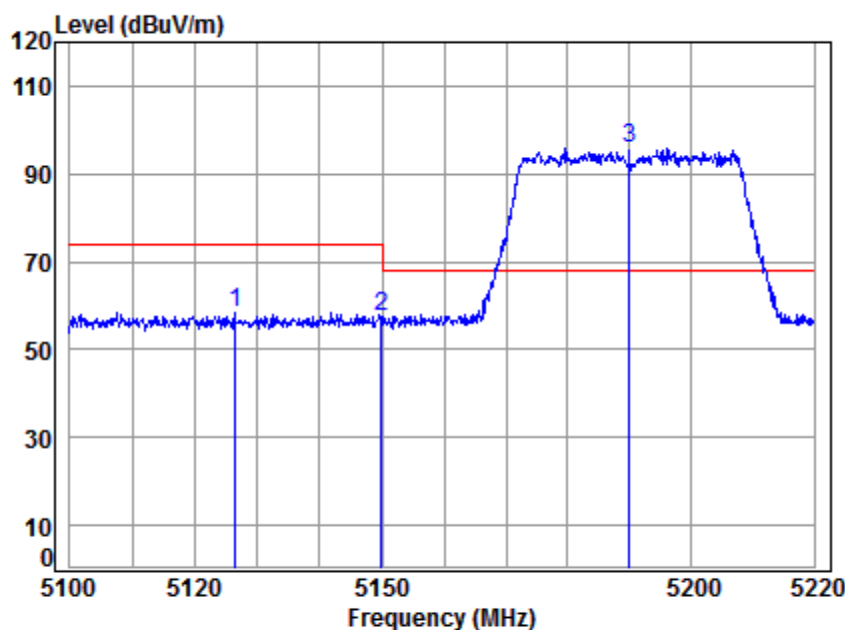
Mode:c; Polarization:Horizontal; Modulation:802.11ac; bandwidth:40MHz; Channel:Low



Site : chamber  
Condition: 3m HORIZONTAL  
Job No : 10092CR/10094CR  
Mode : 5190 Band edge  
NOTE : 5G WIFI 11AC 40

		Cable	Ant	Preamp	Read		Limit	Over	
	Freq	Loss	Factor	Factor	Level	Level	Line	Limit	Remark
	MHz	dB	dB/m	dB	dBuV	dBuV/m	dBuV/m	dB	
1	5132.006	8.30	34.31	43.66	49.74	48.69	54.00	-5.31	Average
2	5149.980	8.33	34.32	43.64	49.41	48.42	54.00	-5.58	Average
3	5190.000	8.39	34.36	43.60	79.62	78.77	-----	-----	Average

Mode:c; Polarization:Vertical; Modulation:802.11ac; bandwidth:40MHz; Channel:Low

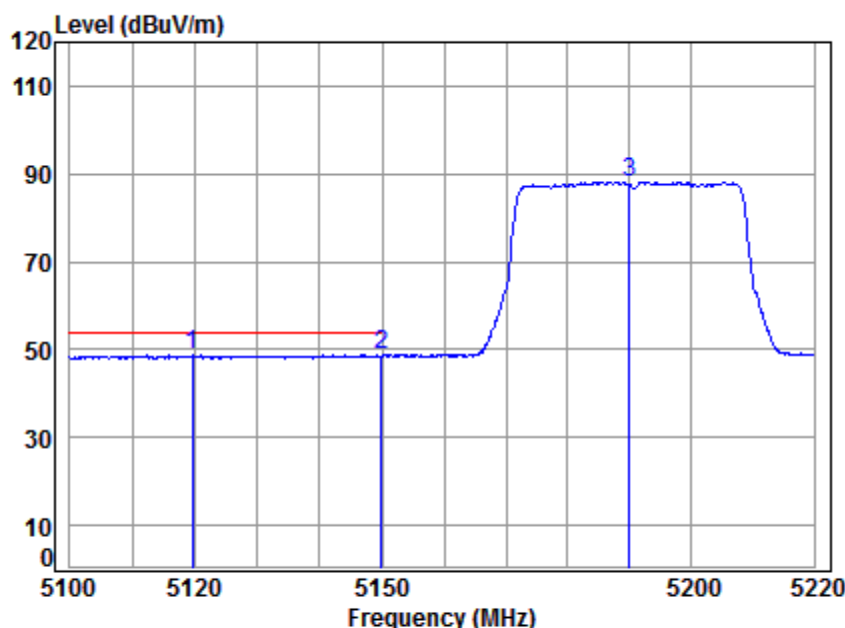


Site : chamber  
Condition: 3m VERTICAL  
Job No : 10092CR/10094CR  
Mode : 5190 Band edge  
NOTE : 5G WIFI 11AC 40

		Cable	Ant	Preamp	Read	Limit	Over	
	Freq	Loss	Factor	Factor	Level	Line	Limit	Remark
	MHz	dB	dB/m	dB	dBuV	dBuV/m	dBuV/m	dB
1	5126.399	8.29	34.30	43.67	59.38	58.30	74.00	-15.70 Peak
2	5149.980	8.33	34.32	43.64	58.59	57.60	74.00	-16.40 Peak
3 *	5190.000	8.39	34.36	43.60	96.73	95.88	68.20	27.68 Peak



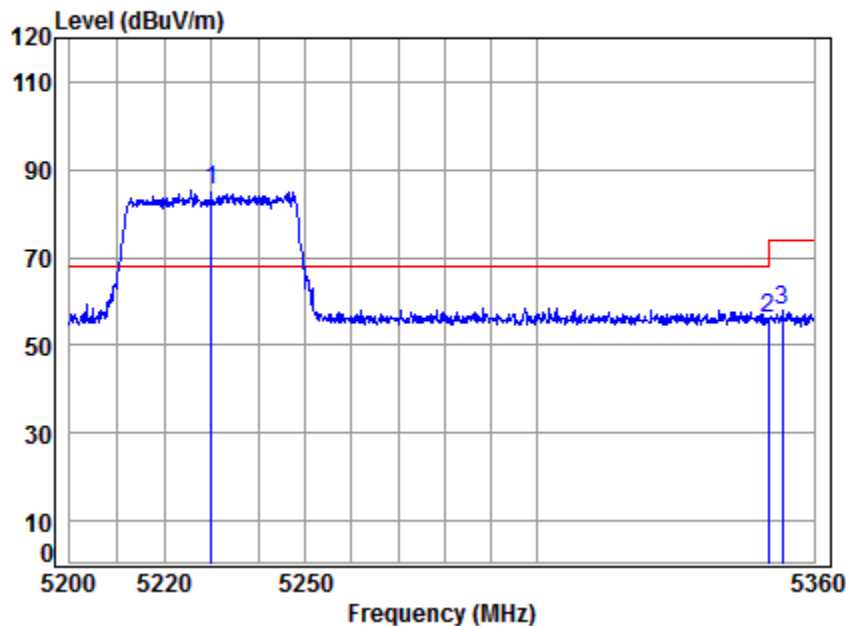
Mode:c; Polarization:Vertical; Modulation:802.11ac; bandwidth:40MHz; Channel:Low



Site : chamber  
Condition: 3m VERTICAL  
Job No : 10092CR/10094CR  
Mode : 5190 Band edge  
NOTE : 5G WIFI 11AC 40

		Cable	Ant	Preamp	Read		Limit	Over	
	Freq	Loss	Factor	Factor	Level	Level	Line	Limit	Remark
	MHz	dB	dB/m	dB	dBuV	dBuV/m	dBuV/m	dB	
1	5119.608	8.28	34.30	43.67	49.79	48.70	54.00	-5.30	Average
2	5149.980	8.33	34.32	43.64	49.82	48.83	54.00	-5.17	Average
3	5190.000	8.39	34.36	43.60	89.01	88.16	-----	-----	Average

Mode:c; Polarization:Horizontal; Modulation:802.11ac; bandwidth:40MHz; Channel:High

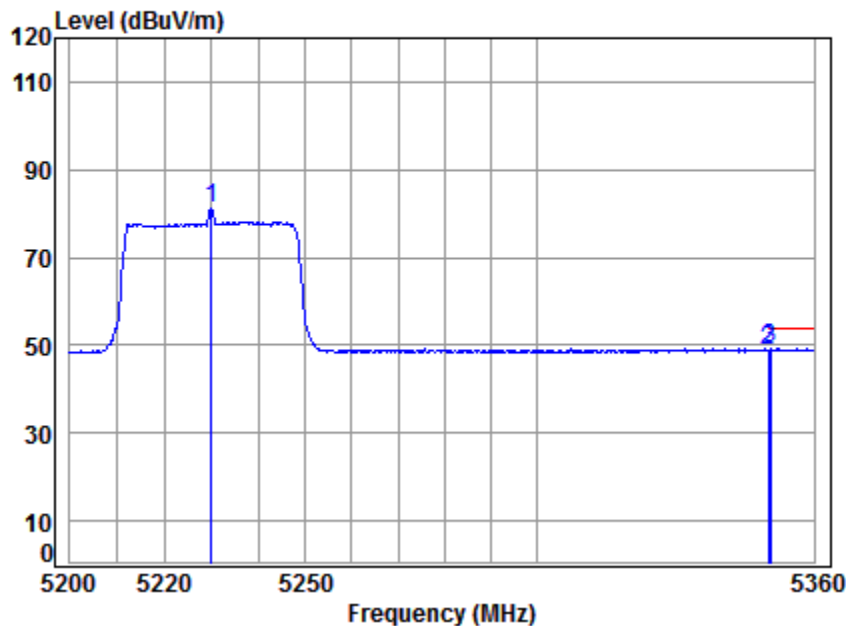


Site : chamber  
Condition: 3m HORIZONTAL  
Job No : 10092CR/10094CR  
Mode : 5230 Band edge  
NOTE : 5G WIFI 11AC 40

		Cable	Ant	Preamp	Read		Limit	Over	
	Freq	Loss	Factor	Factor	Level	Level	Line	Limit	Remark
	MHz	dB	dB/m	dB	dBuV	dBuV/m	dBuV/m	dB	
1 *	5230.000	8.45	34.39	43.56	86.22	85.50	68.20	17.30	peak
2	5350.020	8.63	34.48	43.44	56.35	56.02	74.00	-17.98	peak
3	5353.020	8.63	34.49	43.44	58.23	57.91	74.00	-16.09	peak



Mode:c; Polarization:Horizontal; Modulation:802.11ac; bandwidth:40MHz; Channel:High

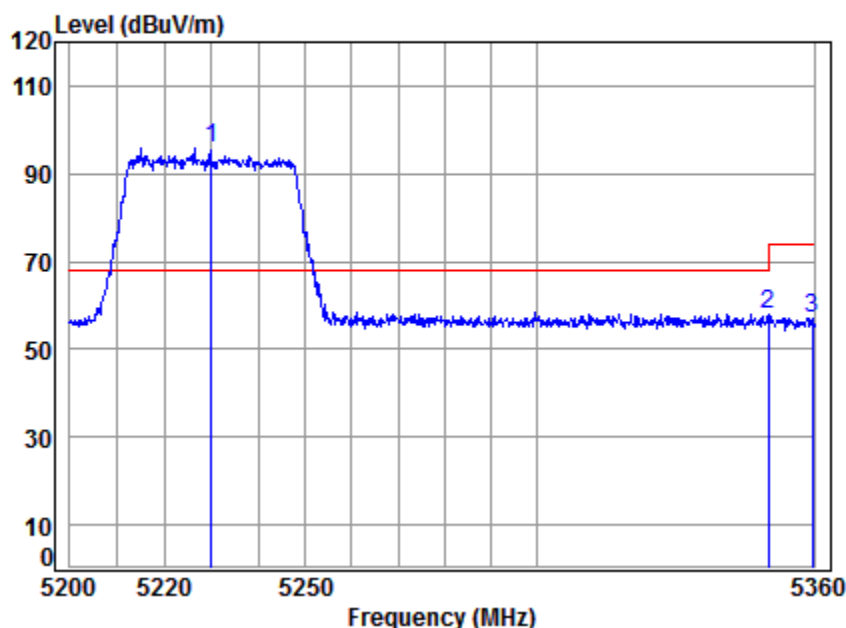


Site : chamber  
Condition: 3m HORIZONTAL  
Job No : 10092CR/10094CR  
Mode : 5230 Band edge  
NOTE : 5G WIFI 11AC 40

		Cable	Ant	Preamp	Read		Limit	Over	
	Freq	Loss	Factor	Factor	Level	Level	Line	Limit	Remark
	MHz	dB	dB/m	dB	dBuV	dBuV/m	dBuV/m	dB	
1	5230.000	8.45	34.39	43.56	81.73	81.01	-----	-----	Average
2	5350.020	8.63	34.48	43.44	49.31	48.98	54.00	-5.02	Average
3	5350.587	8.63	34.48	43.44	49.55	49.22	54.00	-4.78	Average



Mode:c; Polarization:Vertical; Modulation:802.11ac; bandwidth:40MHz; Channel:High

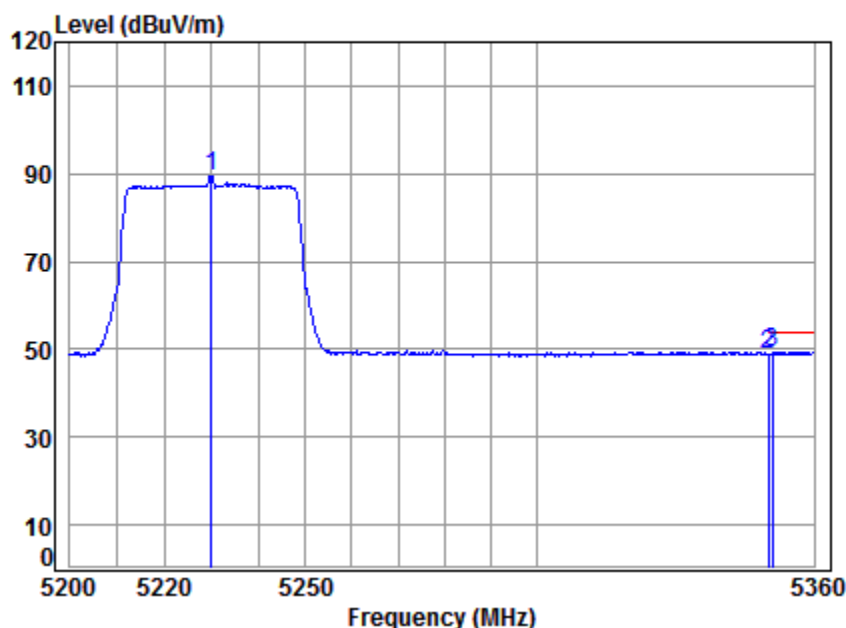


Site : chamber  
Condition: 3m VERTICAL  
Job No : 10092CR/10094CR  
Mode : 5230 Band edge  
NOTE : 5G WIFI 11AC 40

		Cable	Ant	Preamp	Read		Limit	Over	
	Freq	Loss	Factor	Factor	Level	Level	Line	Limit	Remark
	MHz	dB	dB/m	dB	dBuV	dBuV/m	dBuV/m	dB	
1 *	5230.000	8.45	34.39	43.56	96.70	95.98	68.20	27.78	Peak
2	5350.020	8.63	34.48	43.44	58.12	57.79	74.00	-16.21	Peak
3	5359.675	8.64	34.49	43.43	57.56	57.26	74.00	-16.74	Peak



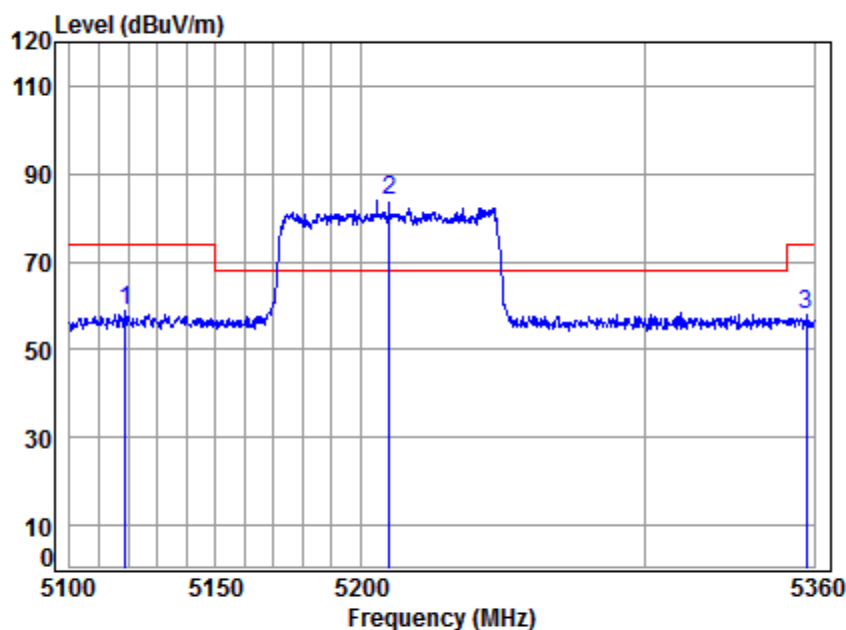
Mode:c; Polarization:Vertical; Modulation:802.11ac; bandwidth:40MHz; Channel:High



Site : chamber  
Condition: 3m VERTICAL  
Job No : 10092CR/10094CR  
Mode : 5230 Band edge  
NOTE : 5G WIFI 11AC 40

		Cable	Ant	Preamp	Read		Limit	Over	
	Freq	Loss	Factor	Factor	Level	Level	Line	Limit	Remark
	MHz	dB	dB/m	dB	dBuV	dBuV/m	dBuV/m	dB	
1	5230.000	8.45	34.39	43.56	90.24	89.52	-----	-----	Average
2	5350.020	8.63	34.48	43.44	49.28	48.95	54.00	-5.05	Average
3	5350.911	8.63	34.48	43.44	49.70	49.37	54.00	-4.63	Average

Mode:c; Polarization:Horizontal; Modulation:802.11ac; bandwidth:80MHz; Channel:Middle



Site : chamber  
Condition: 3m HORIZONTAL  
Job No : 10092CR/10094CR  
Mode : 5210 Band edge  
NOTE : 5G WIFI 11AC 80

		Cable	Ant	Preamp	Read		Limit	Over	
	Freq	Loss	Factor	Factor	Level	Level	Line	Limit	Remark
	MHz	dB	dB/m	dB	dBuV	dBuV/m	dBuV/m	dB	
1	5119.055	8.28	34.30	43.67	60.08	58.99	74.00	-15.01	peak
2 *	5210.000	8.42	34.37	43.58	84.69	83.90	68.20	15.70	peak
3	5357.335	8.64	34.49	43.43	58.31	58.01	74.00	-15.99	peak

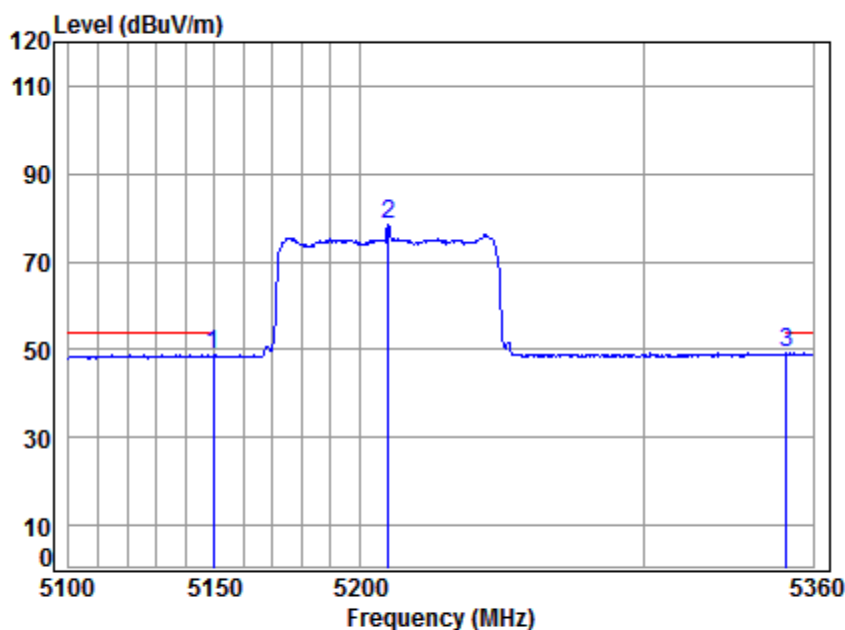


Unless otherwise agreed in writing, this document is issued by the Company subject to its General Conditions of Service printed overleaf, available on request or accessible at <http://www.sgs.com/en/Terms-and-Conditions.aspx> and, for electronic format documents, subject to Terms and Conditions for Electronic Documents at <http://www.sgs.com/en/Terms-and-Conditions/Terms-e-Documents.aspx>. Attention is drawn to the limitation of liability, indemnification and jurisdiction issues defined therein. Any holder of this document is advised that information contained hereon reflects the Company's findings at the time of its intervention only and within the limits of Client's instructions, if any. The Company's sole responsibility is to its Client and this document does not exonerate parties to a transaction from exercising all their rights and obligations under the transaction documents. This document cannot be reproduced except in full, without prior written approval of the Company. Any unauthorized alteration, forgery or falsification of the content or appearance of this document is unlawful and offenders may be prosecuted to the fullest extent of the law. Unless otherwise stated the results shown in this test report refer only to the sample(s) tested and such sample(s) are retained for 30 days only.  
Attention: To check the authenticity of testing / inspection report and certificate, please contact us at telephone: (86-755) 8307 1443, or email: [CN.Doccheck@sgs.com](mailto:CN.Doccheck@sgs.com)

SGS-CSTC Standards Technical Services Co., Ltd.  
Shenzhen Branch Laboratory

No.1 Workshop, M-10, Middle Section, Science & Technology Park, Shenzhen, China 518057 t (86-755) 26012053 f (86-755) 26710594 www.sgs.com.cn  
中国·深圳·科技园中区M-10栋一号厂房 邮编: 518057 t (86-755) 26012053 f (86-755) 26710594 sgs.china@sgs.com

Mode:c; Polarization:Horizontal; Modulation:802.11ac; bandwidth:80MHz; Channel: Middle



Site : chamber  
Condition: 3m HORIZONTAL  
Job No : 10092CR/10094CR  
Mode : 5210 Band edge  
NOTE : 5G WIFI 11AC 80

		Cable	Ant	Preamp	Read		Limit	Over	
	Freq	Loss	Factor	Factor	Level	Level	Line	Limit	Remark
	MHz	dB	dB/m	dB	dBuV	dBuV/m	dBuV/m	dB	
1	5149.435	8.32	34.32	43.64	49.70	48.70	54.00	-5.30	Average
2	5210.000	8.42	34.37	43.58	79.35	78.56	-----	-----	Average
3	5350.414	8.63	34.48	43.44	49.55	49.22	54.00	-4.78	Average

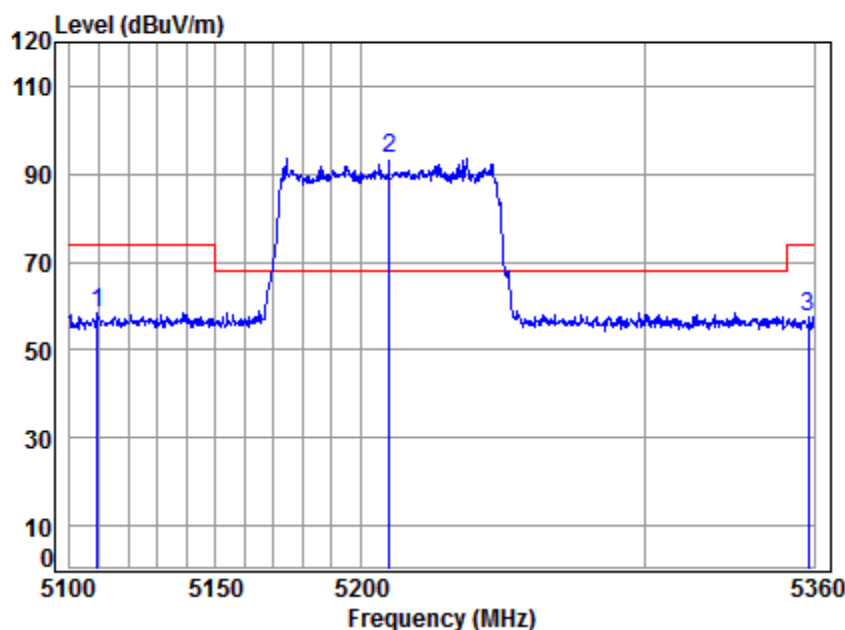


Unless otherwise agreed in writing, this document is issued by the Company subject to its General Conditions of Service printed overleaf, available on request or accessible at <http://www.sgs.com/en/Terms-and-Conditions.aspx> and, for electronic format documents, subject to Terms and Conditions for Electronic Documents at <http://www.sgs.com/en/Terms-and-Conditions/Terms-e-Documents.aspx>. Attention is drawn to the limitation of liability, indemnification and jurisdiction issues defined therein. Any holder of this document is advised that information contained hereon reflects the Company's findings at the time of its intervention only and within the limits of Client's instructions, if any. The Company's sole responsibility is to its Client and this document does not exonerate parties to a transaction from exercising all their rights and obligations under the transaction documents. This document cannot be reproduced except in full, without prior written approval of the Company. Any unauthorized alteration, forgery or falsification of the content or appearance of this document is unlawful and offenders may be prosecuted to the fullest extent of the law. Unless otherwise stated the results shown in this test report refer only to the sample(s) tested and such sample(s) are retained for 30 days only.  
Attention: To check the authenticity of testing / inspection report and certificate, please contact us at telephone: (86-755) 8307 1443, or email: [CN.Doccheck@sgs.com](mailto:CN.Doccheck@sgs.com)

SGS-CSTC Standards Technical Services Co., Ltd.  
Shenzhen Branch (China) SGS-CSTC Laboratory

No.1 Workshop, M-10, Middle Section, Science & Technology Park, Shenzhen, China 518057 t (86-755) 26012053 f (86-755) 26710594 www.sgs.com.cn  
中国·深圳·科技园中区M-10栋一号厂房 邮编: 518057 t (86-755) 26012053 f (86-755) 26710594 sgs.china@sgs.com

Mode:c; Polarization: Vertical; Modulation:802.11ac; bandwidth:80MHz; Channel: Middle



Site : chamber  
Condition: 3m VERTICAL  
Job No : 10092CR/10094CR  
Mode : 5210 Band edge  
NOTE : 5G WIFI 11AC 80

		Cable	Ant	Preamp	Read		Limit	Over	
	Freq	Loss	Factor	Factor	Level	Level	Line	Limit	Remark
	MHz	dB	dB/m	dB	dBuV	dBuV/m	dBuV/m	dB	
1	5109.392	8.26	34.29	43.68	59.54	58.41	74.00	-15.59	Peak
2 *	5210.000	8.42	34.37	43.58	94.40	93.61	68.20	25.41	Peak
3	5358.135	8.64	34.49	43.43	57.95	57.65	74.00	-16.35	Peak



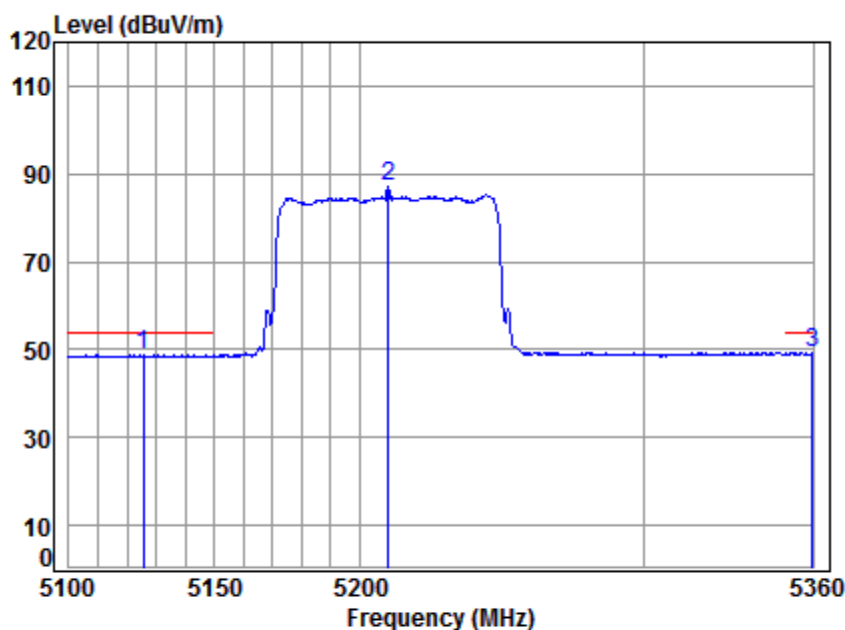
Unless otherwise agreed in writing, this document is issued by the Company subject to its General Conditions of Service printed overleaf, available on request or accessible at <http://www.sgs.com/en/Terms-and-Conditions.aspx> and, for electronic format documents, subject to Terms and Conditions for Electronic Documents at <http://www.sgs.com/en/Terms-and-Conditions/Terms-e-Documents.aspx>. Attention is drawn to the limitation of liability, indemnification and jurisdiction issues defined therein. Any holder of this document is advised that information contained hereon reflects the Company's findings at the time of its intervention only and within the limits of Client's instructions, if any. The Company's sole responsibility is to its Client and this document does not exonerate parties to a transaction from exercising all their rights and obligations under the transaction documents. This document cannot be reproduced except in full, without prior written approval of the Company. Any unauthorized alteration, forgery or falsification of the content or appearance of this document is unlawful and offenders may be prosecuted to the fullest extent of the law. Unless otherwise stated the results shown in this test report refer only to the sample(s) tested and such sample(s) are retained for 30 days only.  
Attention: To check the authenticity of testing / inspection report and certificate, please contact us at telephone: (86-755) 8307 1443, or email: [CN.Doccheck@sgs.com](mailto:CN.Doccheck@sgs.com)

SGS-CSTC Standards Technical Services Co., Ltd.  
Shenzhen Branch (China) SGS-CSTC Laboratory

No.1 Workshop, M-10, Middle Section, Science & Technology Park, Shenzhen, China 518057 t (86-755) 26012053 f (86-755) 26710594 www.sgsgroup.com.cn  
中国·深圳·科技园中区M-10栋一号厂房 邮编: 518057 t (86-755) 26012053 f (86-755) 26710594 sgs.china@sgs.com



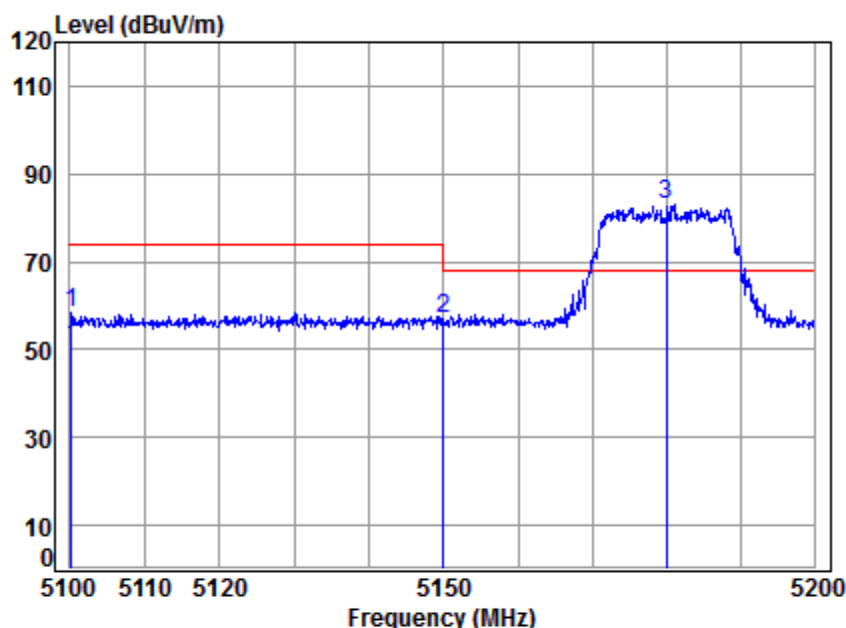
Mode:c; Polarization: Vertical; Modulation:802.11ac; bandwidth:80MHz; Channel: Middle



Site : chamber  
Condition: 3m VERTICAL  
Job No : 10092CR/10094CR  
Mode : 5210 Band edge  
NOTE : 5G WIFI 11AC 80

		Cable	Ant	Preamp	Read		Limit	Over	
	Freq	Loss	Factor	Factor	Level	Level	Line	Limit	Remark
	MHz	dB	dB/m	dB	dBuV	dBuV/m	dBuV/m	dB	
1	5125.422	8.29	34.30	43.67	49.89	48.81	54.00	-5.19	Average
2	5210.000	8.42	34.37	43.58	87.90	87.11	-----	-----	Average
3	5359.733	8.64	34.49	43.43	49.71	49.41	54.00	-4.59	Average

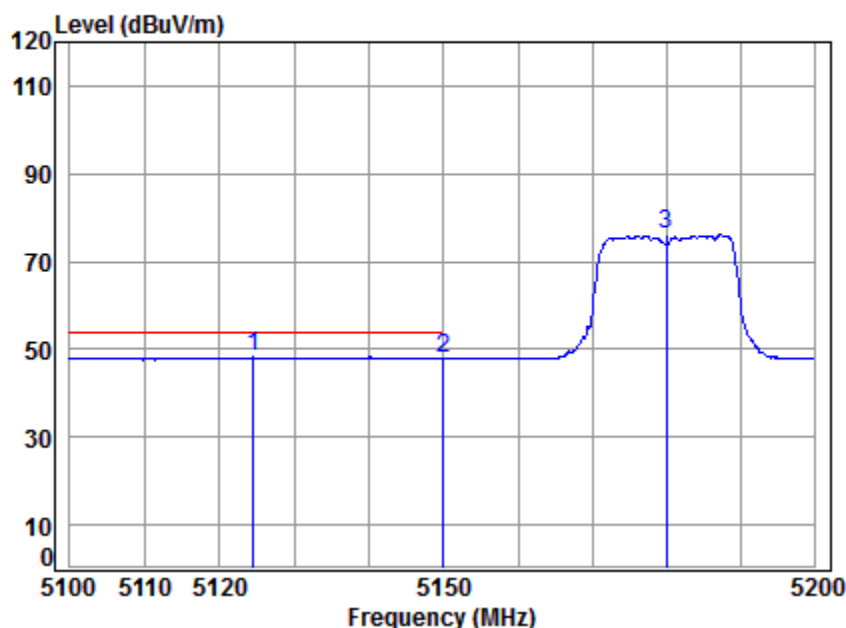
Mode:c; Polarization:Horizontal; Modulation:802.11n; bandwidth:20MHz; Channel:Low



Site : chamber  
Condition: 3m HORIZONTAL  
Job No : 10092CR/10094CR  
Mode : 5180 Band edge  
NOTE : 5G WIFI 11N 20

		Cable	Ant	Preamp	Read		Limit	Over	
	Freq	Loss	Factor	Factor	Level	Level	Line	Limit	Remark
	MHz	dB	dB/m	dB	dBuV	dBuV/m	dBuV/m	dB	
1	5100.198	8.25	34.28	43.69	59.48	58.32	74.00	-15.68	peak
2	5149.980	8.33	34.32	43.64	58.16	57.17	74.00	-16.83	peak
3 *	5180.000	8.37	34.35	43.61	83.95	83.06	68.20	14.86	peak

Mode:c; Polarization:Horizontal; Modulation:802.11n; bandwidth:20MHz; Channel:Low



Site : chamber  
Condition: 3m HORIZONTAL  
Job No : 10092CR/10094CR  
Mode : 5180 Band edge  
NOTE : 5G WIFI 11N 20

		Cable	Ant	Preamp	Read		Limit	Over	
	Freq	Loss	Factor	Factor	Level	Level	Line	Limit	Remark
	MHz	dB	dB/m	dB	dBuV	dBuV/m	dBuV/m	dB	
1	5124.520	8.29	34.30	43.67	49.26	48.18	54.00	-5.82	Average
2	5149.980	8.33	34.32	43.64	48.97	47.98	54.00	-6.02	Average
3	5180.000	8.37	34.35	43.61	77.00	76.11	-----	-----	Average

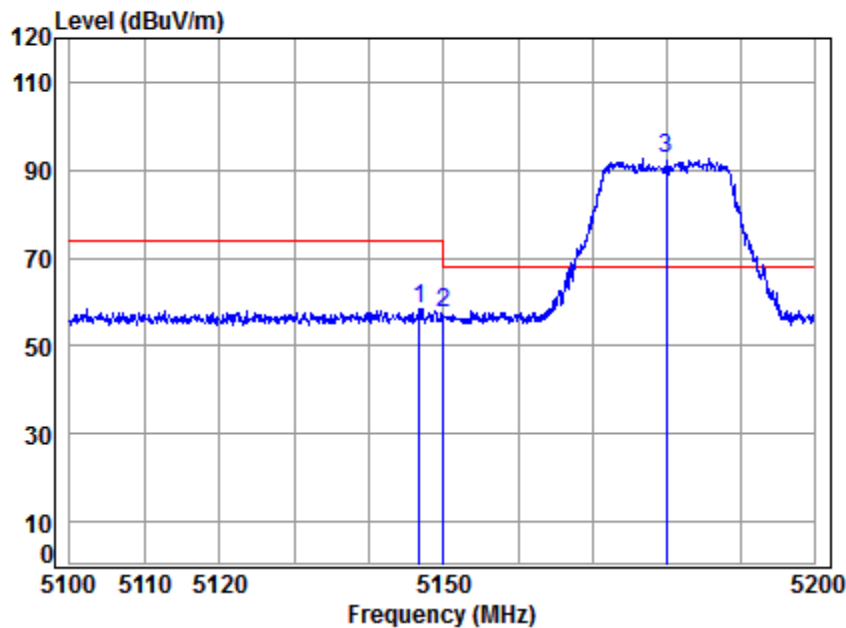


Unless otherwise agreed in writing, this document is issued by the Company subject to its General Conditions of Service printed overleaf, available on request or accessible at <http://www.sgs.com/en/Terms-and-Conditions.aspx> and, for electronic format documents, subject to Terms and Conditions for Electronic Documents at <http://www.sgs.com/en/Terms-and-Conditions/Terms-e-Documents.aspx>. Attention is drawn to the limitation of liability, indemnification and jurisdiction issues defined therein. Any holder of this document is advised that information contained hereon reflects the Company's findings at the time of its intervention only and within the limits of Client's instructions, if any. The Company's sole responsibility is to its Client and this document does not exonerate parties to a transaction from exercising all their rights and obligations under the transaction documents. This document cannot be reproduced except in full, without prior written approval of the Company. Any unauthorized alteration, forgery or falsification of the content or appearance of this document is unlawful and offenders may be prosecuted to the fullest extent of the law. Unless otherwise stated the results shown in this test report refer only to the sample(s) tested and such sample(s) are retained for 30 days only.  
Attention: To check the authenticity of testing / inspection report and certificate, please contact us at telephone: (86-755) 8307 1443, or email: [CN.Doccheck@sgs.com](mailto:CN.Doccheck@sgs.com)

SGS-CSTC Standards Technical Services Co., Ltd.  
Shenzhen Branch (China) SGS-CSTC Laboratory

No.1 Workshop, M-10, Middle Section, Science & Technology Park, Shenzhen, China 518057 t (86-755) 26012053 f (86-755) 26710594 www.sgs.com.cn  
中国·深圳·科技园中区M-10栋一号厂房 邮编: 518057 t (86-755) 26012053 f (86-755) 26710594 sgs.china@sgs.com

Mode:c; Polarization:Vertical; Modulation:802.11n; bandwidth:20MHz; Channel:Low



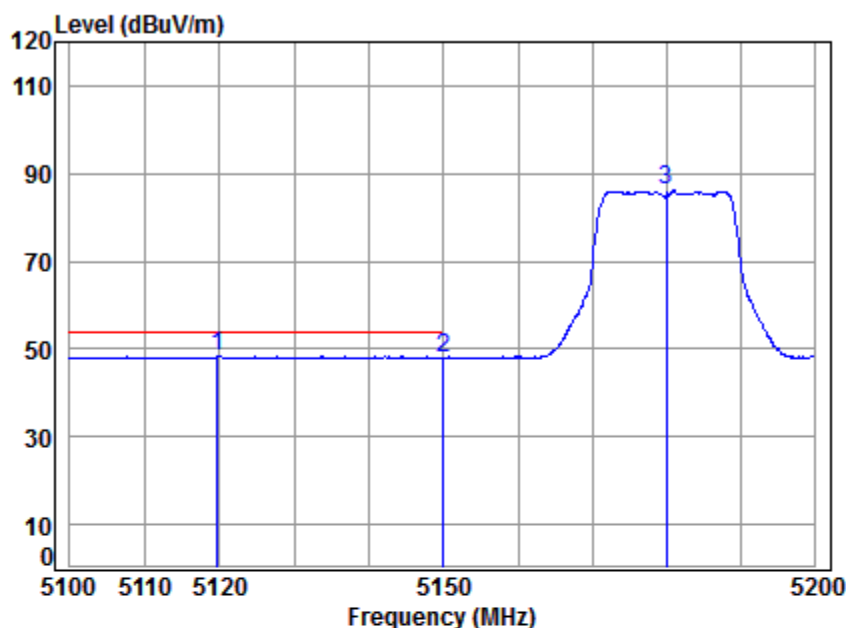
Site : chamber  
Condition: 3m VERTICAL  
Job No : 10092CR/10094CR  
Mode : 5180 Band edge  
NOTE : 5G WIFI 11N 20

		Cable	Ant	Preamp	Read		Limit	Over	
	Freq	Loss	Factor	Factor	Level	Level	Line	Limit	Remark
	MHz	dB	dB/m	dB	dBuV	dBuV/m	dBuV/m	dB	
1	5146.758	8.32	34.32	43.65	59.59	58.58	74.00	-15.42	Peak
2	5149.980	8.33	34.32	43.64	58.48	57.49	74.00	-16.51	Peak
3 *	5180.000	8.37	34.35	43.61	93.49	92.60	68.20	24.40	Peak





Mode:c; Polarization:Vertical; Modulation:802.11n; bandwidth:20MHz; Channel:Low



Site : chamber  
Condition: 3m VERTICAL  
Job No : 10092CR/10094CR  
Mode : 5180 Band edge  
NOTE : 5G WIFI 11N 20

		Cable	Ant	Preamp	Read		Limit	Over	
	Freq	Loss	Factor	Factor	Level	Level	Line	Limit	Remark
	MHz	dB	dB/m	dB	dBuV	dBuV/m	dBuV/m	dB	
1	5119.646	8.28	34.30	43.67	49.51	48.42	54.00	-5.58	Average
2	5149.980	8.33	34.32	43.64	48.98	47.99	54.00	-6.01	Average
3	5180.000	8.37	34.35	43.61	87.03	86.14	-----	-----	Average

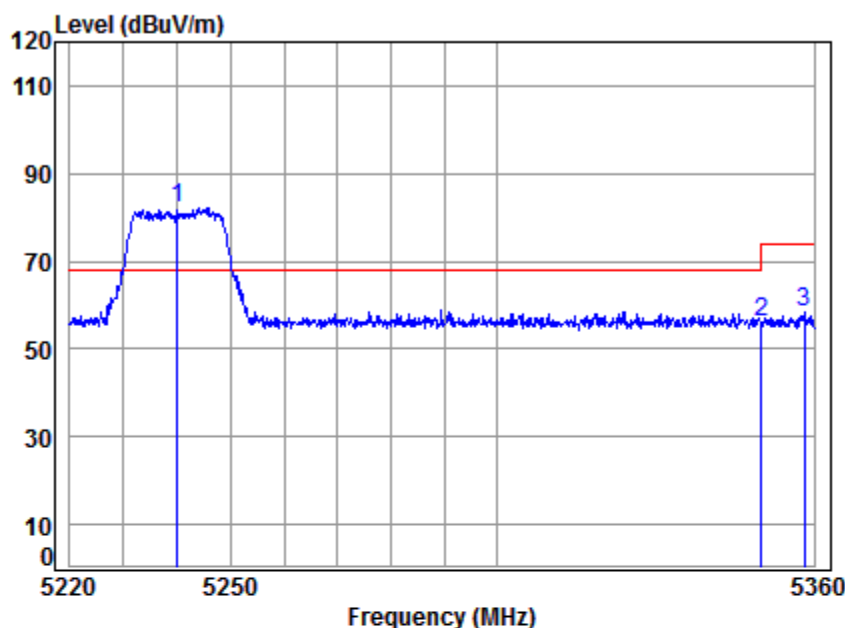


Unless otherwise agreed in writing, this document is issued by the Company subject to its General Conditions of Service printed overleaf, available on request or accessible at <http://www.sgs.com/en/Terms-and-Conditions.aspx> and, for electronic format documents, subject to Terms and Conditions for Electronic Documents at <http://www.sgs.com/en/Terms-and-Conditions/Terms-e-Documents.aspx>. Attention is drawn to the limitation of liability, indemnification and jurisdiction issues defined therein. Any holder of this document is advised that information contained hereon reflects the Company's findings at the time of its intervention only and within the limits of Client's instructions, if any. The Company's sole responsibility is to its Client and this document does not exonerate parties to a transaction from exercising all their rights and obligations under the transaction documents. This document cannot be reproduced except in full, without prior written approval of the Company. Any unauthorized alteration, forgery or falsification of the content or appearance of this document is unlawful and offenders may be prosecuted to the fullest extent of the law. Unless otherwise stated the results shown in this test report refer only to the sample(s) tested and such sample(s) are retained for 30 days only.  
Attention: To check the authenticity of testing / inspection report & certificate, please contact us at telephone: (86-755) 8307 1443, or email: [CN.Doccheck@sgs.com](mailto:CN.Doccheck@sgs.com)

SGS-CSTC Standards Technical Services Co., Ltd.  
Shenzhen Branch Laboratory

No.1 Workshop, M-10, Middle Section, Science & Technology Park, Shenzhen, China 518057 t (86-755) 26012053 f (86-755) 26710594 www.sgs.com.cn  
中国·深圳·科技园中区M-10栋一号厂房 邮编: 518057 t (86-755) 26012053 f (86-755) 26710594 sgs.china@sgs.com

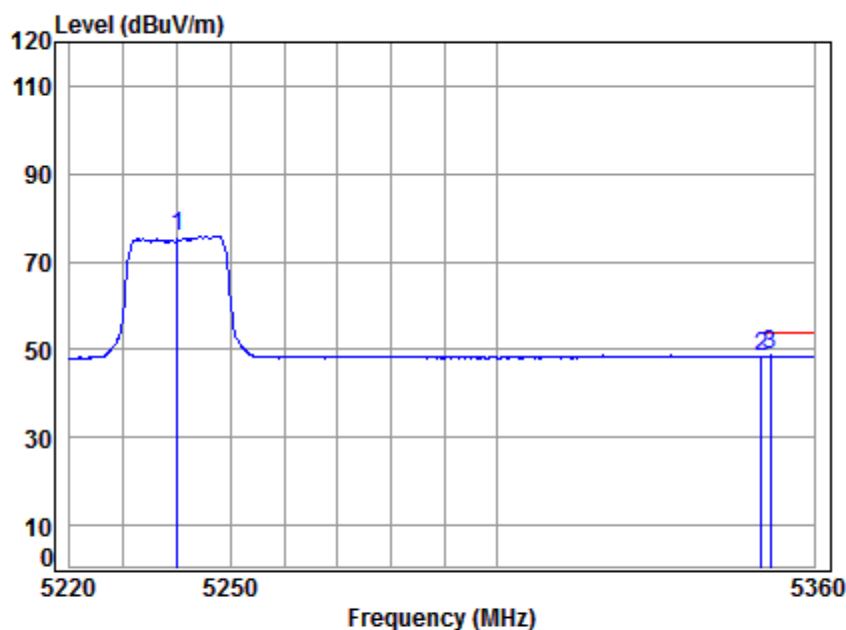
Mode:c; Polarization:Horizontal; Modulation:802.11n; bandwidth:20MHz; Channel:High



Site : chamber  
Condition: 3m HORIZONTAL  
Job No : 10092CR/10094CR  
Mode : 5240 Band edge  
NOTE : 5G WIFI 11N 20

		Cable	Ant	Preamp	Read		Limit	Over	
	Freq	Loss	Factor	Factor	Level	Level	Line	Limit	Remark
	MHz	dB	dB/m	dB	dBuV	dBuV/m	dBuV/m	dB	
1 *	5240.000	8.46	34.40	43.55	83.03	82.34	68.20	14.14	peak
2	5350.020	8.63	34.48	43.44	56.55	56.22	74.00	-17.78	peak
3	5358.156	8.64	34.49	43.43	58.81	58.51	74.00	-15.49	peak

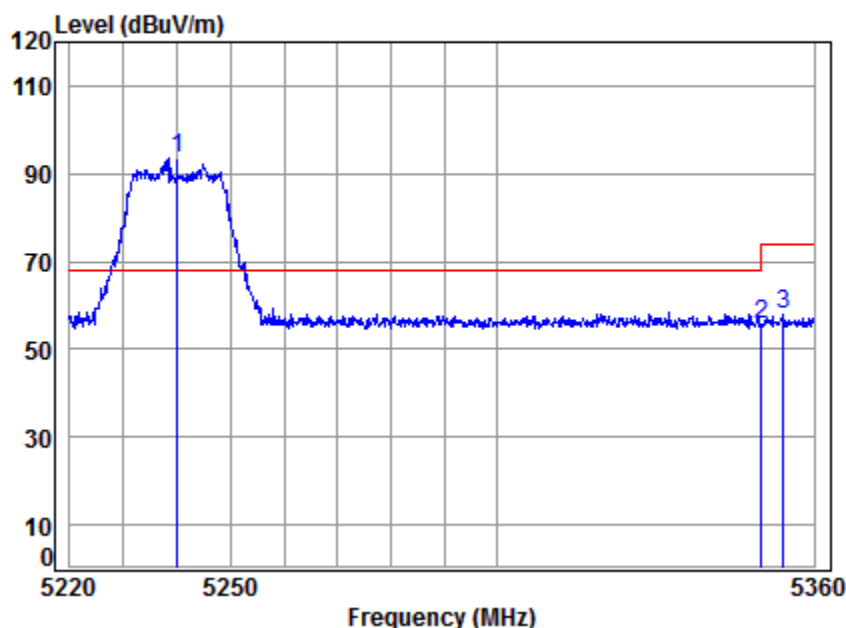
Mode:c; Polarization:Horizontal; Modulation:802.11n; bandwidth:20MHz; Channel:High



Site : chamber  
Condition: 3m HORIZONTAL  
Job No : 10092CR/10094CR  
Mode : 5240 Band edge  
NOTE : 5G WIFI 11N 20

		Cable	Ant	Preamp	Read		Limit	Over	
	Freq	Loss	Factor	Factor	Level	Level	Line	Limit	Remark
	MHz	dB	dB/m	dB	dBuV	dBuV/m	dBuV/m	dB	
1	5240.000	8.46	34.40	43.55	76.52	75.83	-----	-----	Average
2	5350.020	8.63	34.48	43.44	48.86	48.53	54.00	-5.47	Average
3	5351.637	8.63	34.49	43.44	48.92	48.60	54.00	-5.40	Average

Mode:c; Polarization:Vertical; Modulation:802.11n; bandwidth:20MHz; Channel:High

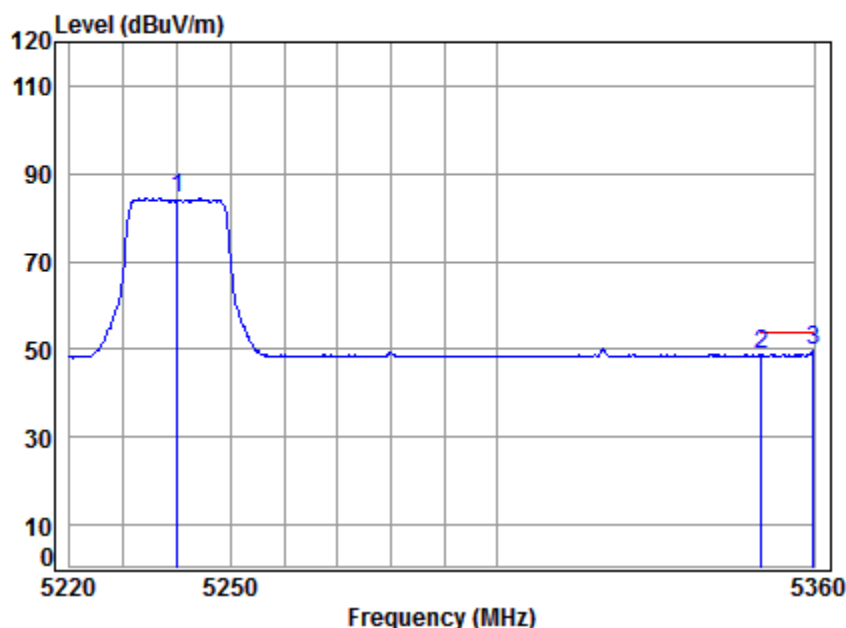


Site : chamber  
Condition: 3m VERTICAL  
Job No : 10092CR/10094CR  
Mode : 5240 Band edge  
NOTE : 5G WIFI 11N 20

		Cable	Ant	Preamp	Read		Limit	Over	
	Freq	Loss	Factor	Factor	Level	Level	Line	Limit	Remark
	MHz	dB	dB/m	dB	dBuV	dBuV/m	dBuV/m	dB	
1 *	5240.000	8.46	34.40	43.55	94.07	93.38	68.20	25.18	Peak
2	5350.020	8.63	34.48	43.44	56.18	55.85	74.00	-18.15	Peak
3	5354.187	8.64	34.49	43.44	58.43	58.12	74.00	-15.88	Peak



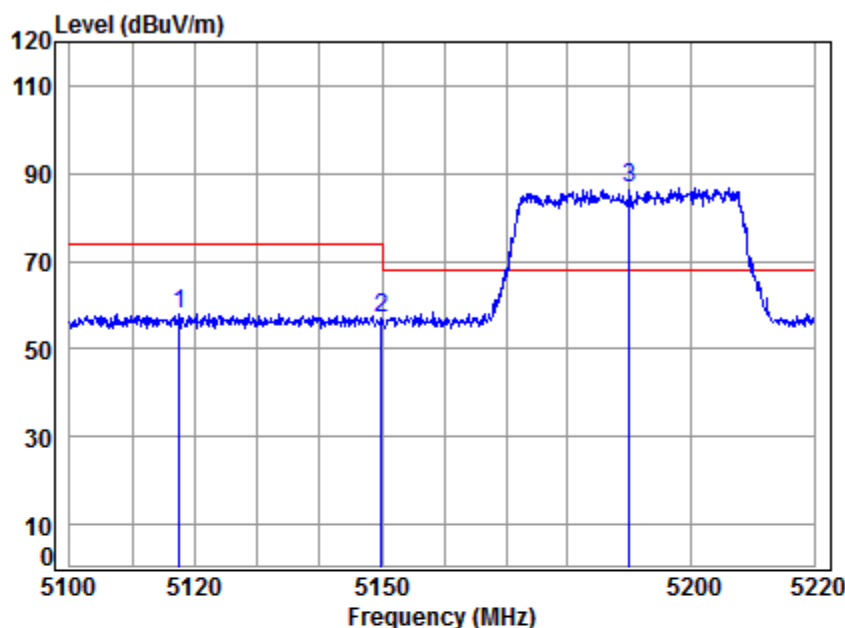
Mode:c; Polarization:Vertical; Modulation:802.11n; bandwidth:20MHz; Channel:High



Site : chamber  
Condition: 3m VERTICAL  
Job No : 10092CR/10094CR  
Mode : 5240 Band edge  
NOTE : 5G WIFI 11N 20

		Cable	Ant	Preamp	Read		Limit	Over	
	Freq	Loss	Factor	Factor	Level	Level	Line	Limit	Remark
	MHz	dB	dB/m	dB	dBuV	dBuV/m	dBuV/m	dB	
1	5240.000	8.46	34.40	43.55	85.05	84.36	-----	-----	Average
2	5350.020	8.63	34.48	43.44	48.98	48.65	54.00	-5.35	Average
3	5359.858	8.64	34.49	43.43	50.16	49.86	54.00	-4.14	Average

Mode:c; Polarization:Horizontal; Modulation:802.11n; bandwidth:40MHz; Channel:Low



Site : chamber  
Condition: 3m HORIZONTAL  
Job No : 10092CR/10094CR  
Mode : 5190 Band edge  
NOTE : 5G WIFI 11N 40

		Cable	Ant	Preamp	Read		Limit	Over	
	Freq	Loss	Factor	Factor	Level	Level	Line	Limit	Remark
	MHz	dB	dB/m	dB	dBuV	dBuV/m	dBuV/m	dB	
1	5117.465	8.28	34.30	43.68	59.24	58.14	74.00	-15.86	peak
2	5149.980	8.33	34.32	43.64	57.81	56.82	74.00	-17.18	peak
3 *	5190.000	8.39	34.36	43.60	87.68	86.83	68.20	18.63	peak

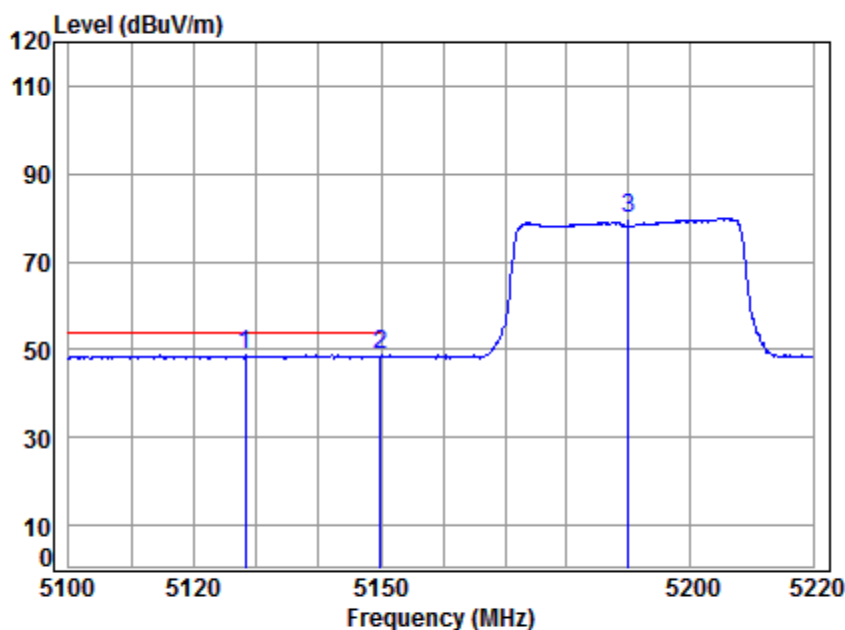


Unless otherwise agreed in writing, this document is issued by the Company subject to its General Conditions of Service printed overleaf, available on request or accessible at <http://www.sgs.com/en/Terms-and-Conditions.aspx> and, for electronic format documents, subject to Terms and Conditions for Electronic Documents at <http://www.sgs.com/en/Terms-and-Conditions/Terms-e-Documents.aspx>. Attention is drawn to the limitation of liability, indemnification and jurisdiction issues defined therein. Any holder of this document is advised that information contained hereon reflects the Company's findings at the time of its intervention only and within the limits of Client's instructions, if any. The Company's sole responsibility is to its Client and this document does not exonerate parties to a transaction from exercising all their rights and obligations under the transaction documents. This document cannot be reproduced except in full, without prior written approval of the Company. Any unauthorized alteration, forgery or falsification of the content or appearance of this document is unlawful and offenders may be prosecuted to the fullest extent of the law. Unless otherwise stated the results shown in this test report refer only to the sample(s) tested and such sample(s) are retained for 30 days only.  
Attention: To check the authenticity of testing / inspection report and certificate, please contact us at telephone: (86-755) 8307 1443, or email: [CN.Doccheck@sgs.com](mailto:CN.Doccheck@sgs.com)

SGS-CSTC Standards Technical Services Co., Ltd.  
Shenzhen Branch

No.1 Workshop, M-10, Middle Section, Science & Technology Park, Shenzhen, China 518057 t (86-755) 26012053 f (86-755) 26710594 www.sgs.com.cn  
中国·深圳·科技园中区M-10栋一号厂房 邮编: 518057 t (86-755) 26012053 f (86-755) 26710594 sgs.china@sgs.com

Mode:c; Polarization:Horizontal; Modulation:802.11n; bandwidth:40MHz; Channel:Low



Site : chamber  
Condition: 3m HORIZONTAL  
Job No : 10092CR/10094CR  
Mode : 5190 Band edge  
NOTE : 5G WIFI 11N 40

		Cable	Ant	Preamp	Read		Limit	Over	
	Freq	Loss	Factor	Factor	Level	Level	Line	Limit	Remark
	MHz	dB	dB/m	dB	dBuV	dBuV/m	dBuV/m	dB	
1	5128.188	8.29	34.31	43.67	49.92	48.85	54.00	-5.15	Average
2	5149.980	8.33	34.32	43.64	49.74	48.75	54.00	-5.25	Average
3	5190.000	8.39	34.36	43.60	80.69	79.84	-----	-----	Average

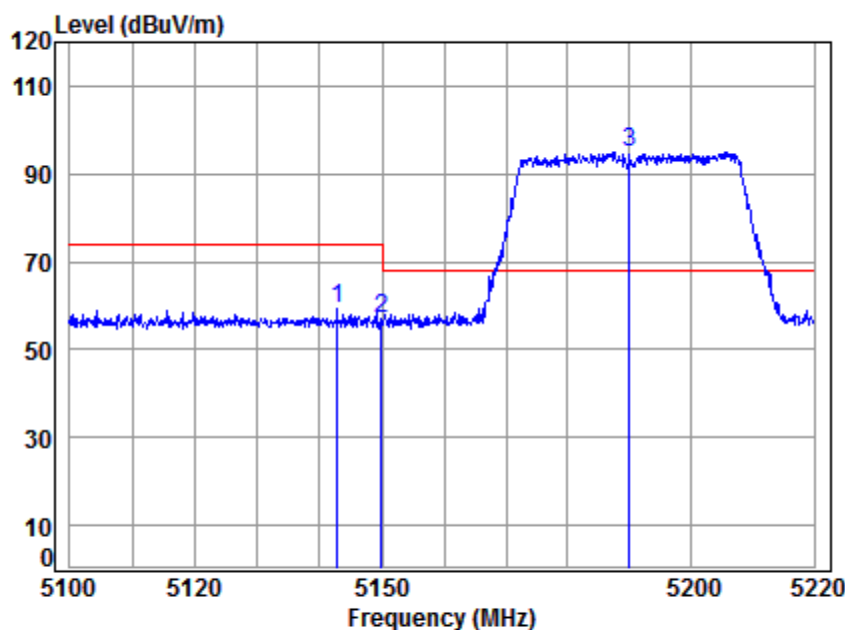


Unless otherwise agreed in writing, this document is issued by the Company subject to its General Conditions of Service printed overleaf, available on request or accessible at <http://www.sgs.com/en/Terms-and-Conditions.aspx> and, for electronic format documents, subject to Terms and Conditions for Electronic Documents at <http://www.sgs.com/en/Terms-and-Conditions/Terms-e-Documents.aspx>. Attention is drawn to the limitation of liability, indemnification and jurisdiction issues defined therein. Any holder of this document is advised that information contained hereon reflects the Company's findings at the time of its intervention only and within the limits of Client's instructions, if any. The Company's sole responsibility is to its Client and this document does not exonerate parties to a transaction from exercising all their rights and obligations under the transaction documents. This document cannot be reproduced except in full, without prior written approval of the Company. Any unauthorized alteration, forgery or falsification of the content or appearance of this document is unlawful and offenders may be prosecuted to the fullest extent of the law. Unless otherwise stated the results shown in this test report refer only to the sample(s) tested and such sample(s) are retained for 30 days only.  
Attention: To check the authenticity of testing / inspection report & certificate, please contact us at telephone: (86-755) 8307 1443, or email: [CN.Doccheck@sgs.com](mailto:CN.Doccheck@sgs.com)

SGS-CSTC Standards Technical Services Co., Ltd.  
Shenzhen Branch Laboratory

No.1 Workshop, M-10, Middle Section, Science & Technology Park, Shenzhen, China 518057 t (86-755) 26012053 f (86-755) 26710594 www.sgs.com.cn  
中国·深圳·科技园中区M-10栋一号厂房 邮编: 518057 t (86-755) 26012053 f (86-755) 26710594 sgs.china@sgs.com

Mode:c; Polarization:Vertical; Modulation:802.11n; bandwidth:40MHz; Channel:Low



Site : chamber  
Condition: 3m VERTICAL  
Job No : 10092CR/10094CR  
Mode : 5190 Band edge  
NOTE : 5G WIFI 11N 40

		Cable	Ant	Preamp	Read	Limit	Over	
Freq		Loss	Factor	Factor	Level	Line	Limit	Remark
MHz		dB	dB/m	dB	dBuV	dBuV/m	dBuV/m	dB
1	5142.759	8.31	34.32	43.65	60.15	59.13	74.00	-14.87 Peak
2	5149.980	8.33	34.32	43.64	58.20	57.21	74.00	-16.79 Peak
3 *	5190.000	8.39	34.36	43.60	95.94	95.09	68.20	26.89 Peak



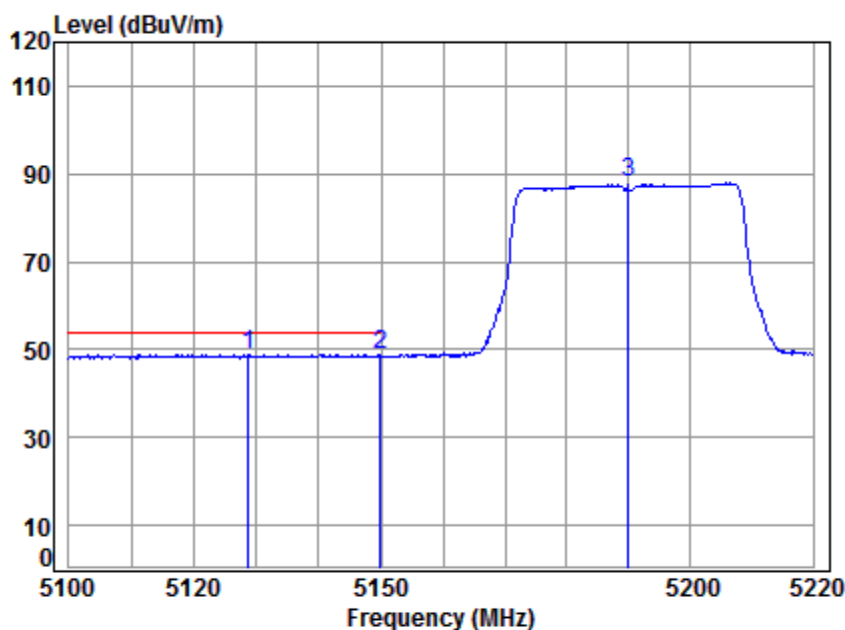
Unless otherwise agreed in writing, this document is issued by the Company subject to its General Conditions of Service printed overleaf, available on request or accessible at <http://www.sgs.com/en/Terms-and-Conditions.aspx> and, for electronic format documents, subject to Terms and Conditions for Electronic Documents at <http://www.sgs.com/en/Terms-and-Conditions/Terms-e-Documents.aspx>. Attention is drawn to the limitation of liability, indemnification and jurisdiction issues defined therein. Any holder of this document is advised that information contained hereon reflects the Company's findings at the time of its intervention only and within the limits of Client's instructions, if any. The Company's sole responsibility is to its Client and this document does not exonerate parties to a transaction from exercising all their rights and obligations under the transaction documents. This document cannot be reproduced except in full, without prior written approval of the Company. Any unauthorized alteration, forgery or falsification of the content or appearance of this document is unlawful and offenders may be prosecuted to the fullest extent of the law. Unless otherwise stated the results shown in this test report refer only to the sample(s) tested and such sample(s) are retained for 30 days only.  
Attention: To check the authenticity of testing / inspection report and certificate, please contact us at telephone: (86-755) 8307 1443, or email: [CN.Doccheck@sgs.com](mailto:CN.Doccheck@sgs.com)

SGS-CSTC Standards Technical Services Co., Ltd.  
Shenzhen Branch (China) SGS-CSTC Laboratory

No.1 Workshop, M-10, Middle Section, Science & Technology Park, Shenzhen, China 518057 t (86-755) 26012053 f (86-755) 26710594 www.sgsgroup.com.cn  
中国·深圳·科技园中区M-10栋一号厂房 邮编: 518057 t (86-755) 26012053 f (86-755) 26710594 sgs.china@sgs.com



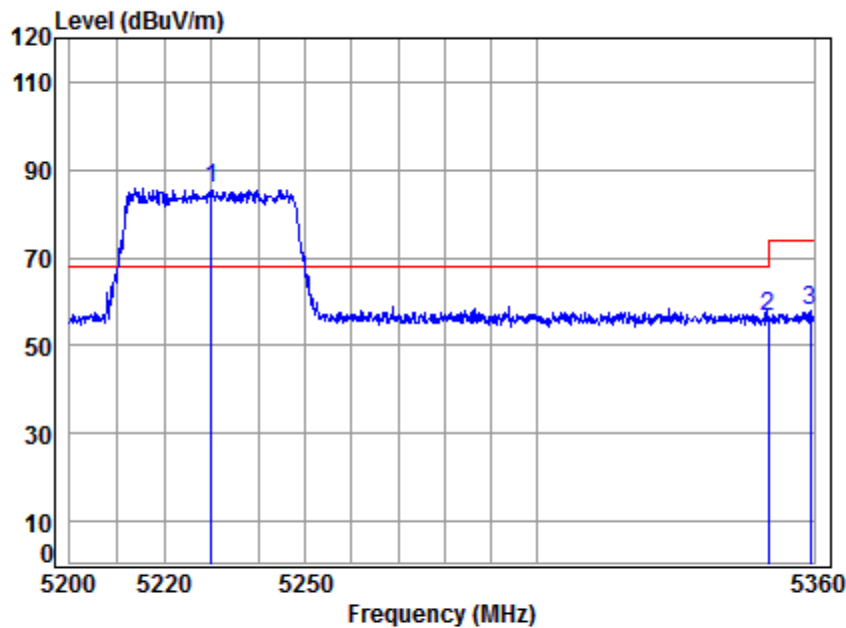
Mode:c; Polarization:Vertical; Modulation:802.11n; bandwidth:40MHz; Channel:Low



Site : chamber  
Condition: 3m VERTICAL  
Job No : 10092CR/10094CR  
Mode : 5190 Band edge  
NOTE : 5G WIFI 11N 40

		Cable	Ant	Preamp	Read		Limit	Over	
	Freq	Loss	Factor	Factor	Level	Level	Line	Limit	Remark
	MHz	dB	dB/m	dB	dBuV	dBuV/m	dBuV/m	dB	
1	5128.785	8.29	34.31	43.66	49.95	48.89	54.00	-5.11	Average
2	5149.980	8.33	34.32	43.64	49.75	48.76	54.00	-5.24	Average
3	5190.000	8.39	34.36	43.60	88.74	87.89	-----	-----	Average

Mode:c; Polarization:Horizontal; Modulation:802.11n; bandwidth:40MHz; Channel:High

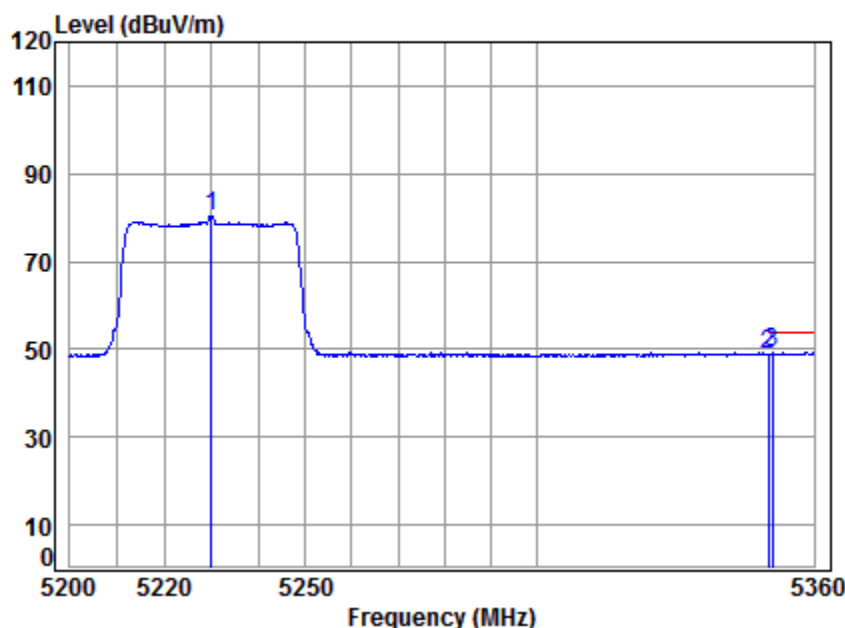


Site : chamber  
Condition: 3m HORIZONTAL  
Job No : 10092CR/10094CR  
Mode : 5230 Band edge  
NOTE : 5G WIFI 11N 40

		Cable	Ant	Preamp	Read		Limit	Over	
Freq		Loss	Factor	Factor	Level	Level	Line	Limit	Remark
MHz		dB	dB/m	dB	dBuV	dBuV/m	dBuV/m	dB	
1 *	5230.000	8.45	34.39	43.56	86.29	85.57	68.20	17.37	peak
2	5350.020	8.63	34.48	43.44	56.71	56.38	74.00	-17.62	peak
3	5359.188	8.64	34.49	43.43	58.38	58.08	74.00	-15.92	peak



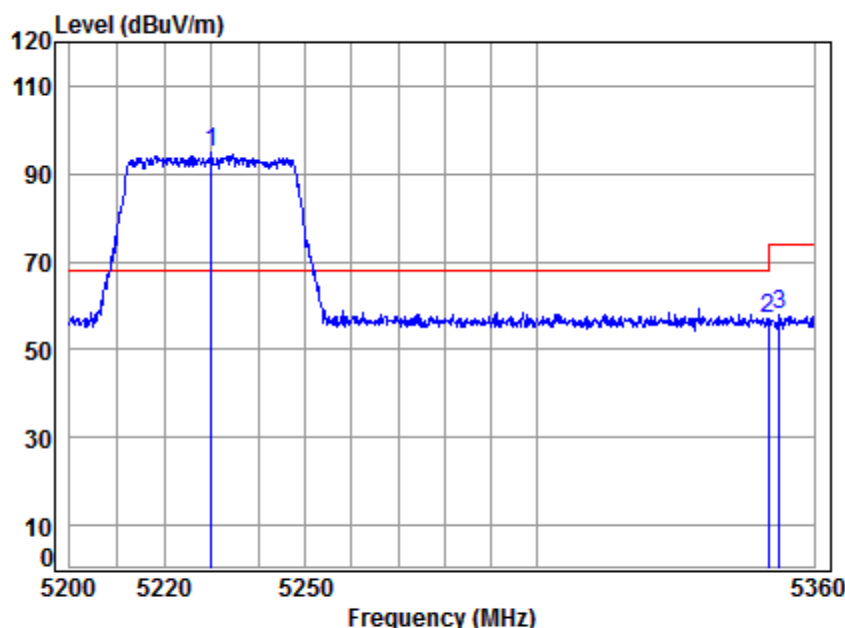
Mode:c; Polarization:Horizontal; Modulation:802.11n; bandwidth:40MHz; Channel:High



Site : chamber  
Condition: 3m HORIZONTAL  
Job No : 10092CR/10094CR  
Mode : 5230 Band edge  
NOTE : 5G WIFI 11N 40

		Cable	Ant	Preamp	Read		Limit	Over	
	Freq	Loss	Factor	Factor	Level	Level	Line	Limit	Remark
	MHz	dB	dB/m	dB	dBuV	dBuV/m	dBuV/m	dB	
1	5230.000	8.45	34.39	43.56	81.22	80.50	-----	-----	Average
2	5350.020	8.63	34.48	43.44	49.14	48.81	54.00	-5.19	Average
3	5350.911	8.63	34.48	43.44	49.51	49.18	54.00	-4.82	Average

Mode:c; Polarization:Vertical; Modulation:802.11n; bandwidth:40MHz; Channel:High

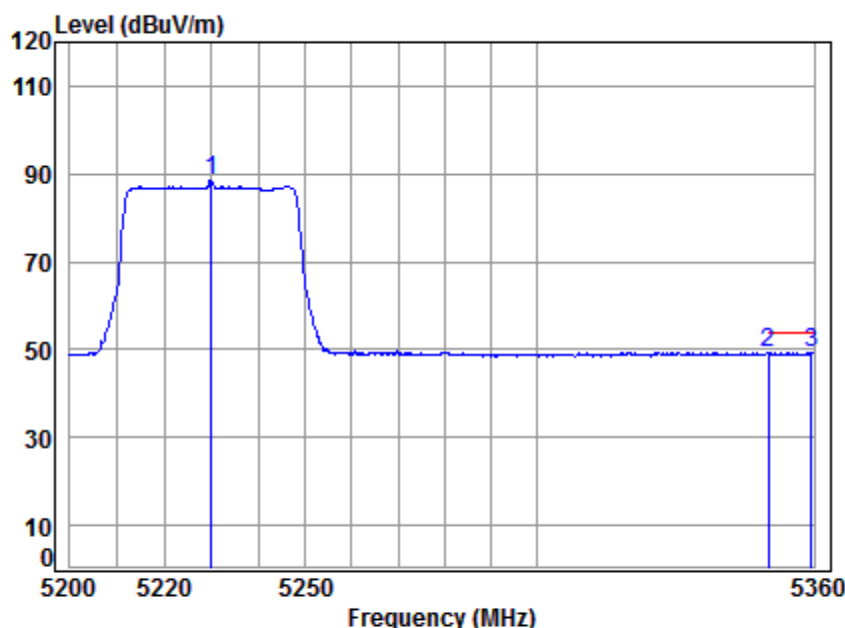


Site : chamber  
Condition: 3m VERTICAL  
Job No : 10092CR/10094CR  
Mode : 5230 Band edge  
NOTE : 5G WIFI 11N 40

		Cable	Ant	Preamp	Read	Limit	Over	
Freq		Loss	Factor	Factor	Level	Level	Line	Limit Remark
MHz		dB	dB/m	dB	dBuV	dBuV/m	dBuV/m	dB
1 *	5230.000	8.45	34.39	43.56	95.58	94.86	68.20	26.66 Peak
2	5350.020	8.63	34.48	43.44	57.52	57.19	74.00	-16.81 Peak
3	5352.533	8.63	34.49	43.44	58.17	57.85	74.00	-16.15 Peak



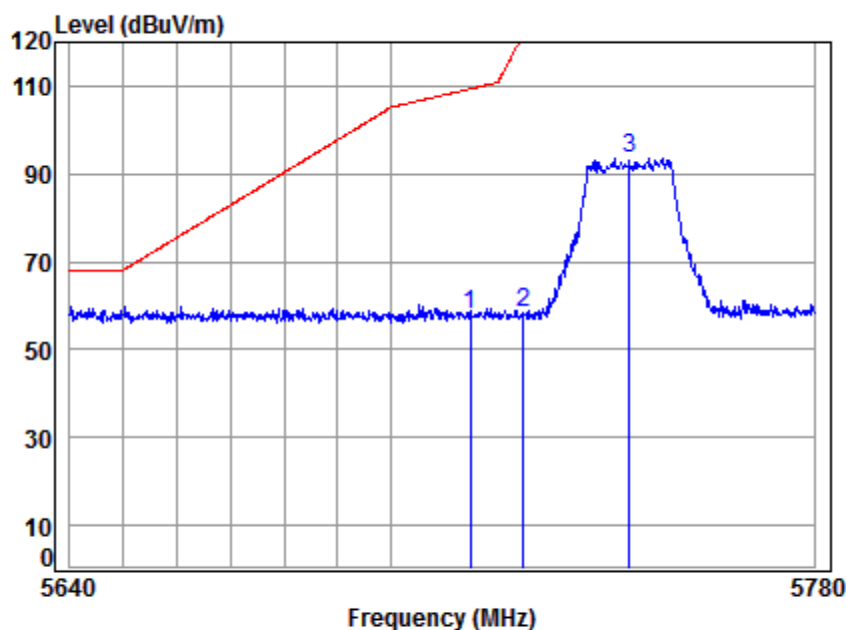
Mode:c; Polarization:Vertical; Modulation:802.11n; bandwidth:40MHz; Channel:High



Site : chamber  
Condition: 3m VERTICAL  
Job No : 10092CR/10094CR  
Mode : 5230 Band edge  
NOTE : 5G WIFI 11N 40

		Cable	Ant	Preamp	Read		Limit	Over	
	Freq	Loss	Factor	Factor	Level	Level	Line	Limit	Remark
	MHz	dB	dB/m	dB	dBuV	dBuV/m	dBuV/m	dB	
1	5230.000	8.45	34.39	43.56	89.15	88.43	-----	-----	Average
2	5350.020	8.63	34.48	43.44	49.42	49.09	54.00	-4.91	Average
3	5359.513	8.64	34.49	43.43	49.80	49.50	54.00	-4.50	Average

Mode:f; Polarization:Horizontal; Modulation:802.11a; bandwidth:20MHz; Channel:Low



Site : chamber  
Condition: 3m HORIZONTAL  
Job No : 10092CR/10094CR  
Mode : 5745 Band edge  
NOTE : 5G WIFI 11A

		Cable	Ant	Preamp	Read		Limit	Over	
	Freq	Loss	Factor	Factor	Level	Level	Line	Limit	Remark
	MHz	dB	dB/m	dB	dBuV	dBuV/m	dBuV/m	dB	
1	5715.000	9.61	34.82	43.09	56.63	57.97	109.40	-51.43	peak
2	5725.000	9.64	34.83	43.08	56.94	58.33	122.20	-63.87	peak
3	5745.000	9.71	34.85	43.06	92.26	93.76	125.20	-31.44	peak

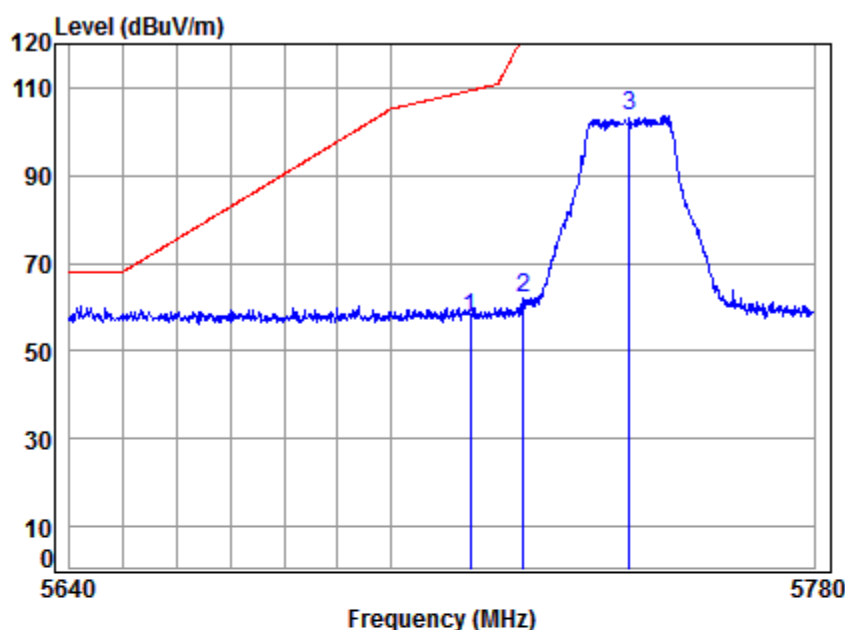


Unless otherwise agreed in writing, this document is issued by the Company subject to its General Conditions of Service printed overleaf, available on request or accessible at <http://www.sgs.com/en/Terms-and-Conditions.aspx> and, for electronic format documents, subject to Terms and Conditions for Electronic Documents at <http://www.sgs.com/en/Terms-and-Conditions/Terms-e-Documents.aspx>. Attention is drawn to the limitation of liability, indemnification and jurisdiction issues defined therein. Any holder of this document is advised that information contained hereon reflects the Company's findings at the time of its intervention only and within the limits of Client's instructions, if any. The Company's sole responsibility is to its Client and this document does not exonerate parties to a transaction from exercising all their rights and obligations under the transaction documents. This document cannot be reproduced except in full, without prior written approval of the Company. Any unauthorized alteration, forgery or falsification of the content or appearance of this document is unlawful and offenders may be prosecuted to the fullest extent of the law. Unless otherwise stated the results shown in this test report refer only to the sample(s) tested and such sample(s) are retained for 30 days only.  
Attention: To check the authenticity of testing / inspection report & certificate, please contact us at telephone: (86-755) 8307 1443, or email: [CN.Doccheck@sgs.com](mailto:CN.Doccheck@sgs.com)

SGS-CSTC Standards Technical Services Co., Ltd.  
Shenzhen Branch (China) SGS-CSTC Laboratory

No.1 Workshop, M-10, Middle Section, Science & Technology Park, Shenzhen, China 518057 t (86-755) 26012053 f (86-755) 26710594 www.sgs.com.cn  
中国·深圳·科技园中区M-10栋一号厂房 邮编: 518057 t (86-755) 26012053 f (86-755) 26710594 sgs.china@sgs.com

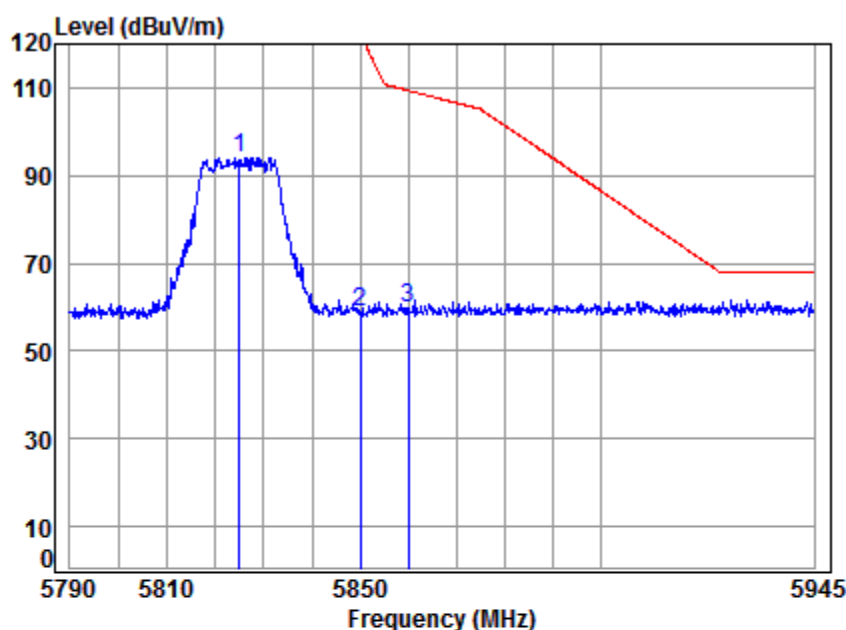
Mode:f; Polarization:Vertical; Modulation:802.11a; bandwidth:20MHz; Channel:Low



Site : chamber  
Condition: 3m VERTICAL  
Job No : 10092CR/10094CR  
Mode : 5745 Band edge  
NOTE : 5G WIFI 11A

		Cable	Ant	Preamp	Read		Limit	Over	
	Freq	Loss	Factor	Factor	Level	Level	Line	Limit	Remark
	MHz	dB	dB/m	dB	dBuV	dBuV/m	dBuV/m	dB	
1	5715.000	9.61	34.82	43.09	56.32	57.66	109.40	-51.74	peak
2	5725.000	9.64	34.83	43.08	60.62	62.01	122.20	-60.19	peak
3	5745.000	9.71	34.85	43.06	102.06	103.56	125.20	-21.64	peak

Mode:f; Polarization:Horizontal; Modulation:802.11a; bandwidth:20MHz; Channel:High



Site : chamber  
Condition: 3m HORIZONTAL  
Job No : 10092CR/10094CR  
Mode : 5825 Band edge  
NOTE : 5G WIFI 11A

	Freq	Cable Loss	Ant Factor	Preamp Factor	Read Level	Level	Limit Line	Over Limit	Remark
	MHz	dB	dB/m	dB	dBuV	dBuV/m	dBuV/m	dB	
1	5825.000	9.98	34.93	42.99	92.26	94.18	125.20	-31.02	peak
2	5850.000	10.07	34.95	42.96	57.03	59.09	122.20	-63.11	peak
3	5860.000	10.10	34.96	42.96	57.76	59.86	109.40	-49.54	peak



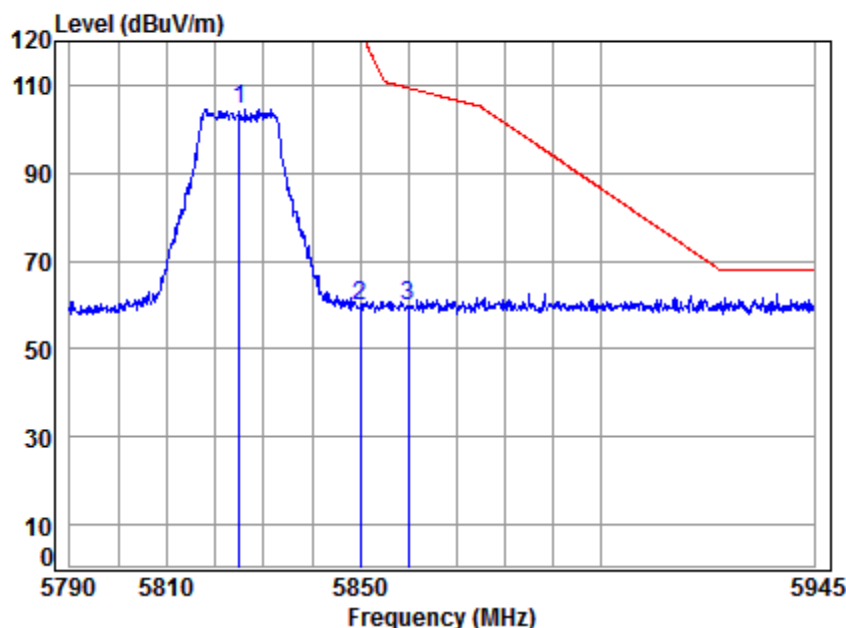
Unless otherwise agreed in writing, this document is issued by the Company subject to its General Conditions of Service printed overleaf, available on request or accessible at <http://www.sgs.com/en/Terms-and-Conditions.aspx> and, for electronic format documents, subject to Terms and Conditions for Electronic Documents at <http://www.sgs.com/en/Terms-and-Conditions/Terms-e-Documents.aspx>. Attention is drawn to the limitation of liability, indemnification and jurisdiction issues defined therein. Any holder of this document is advised that information contained hereon reflects the Company's findings at the time of its intervention only and within the limits of Client's instructions, if any. The Company's sole responsibility is to its Client and this document does not exonerate parties to a transaction from exercising all their rights and obligations under the transaction documents. This document cannot be reproduced except in full, without prior written approval of the Company. Any unauthorized alteration, forgery or falsification of the content or appearance of this document is unlawful and offenders may be prosecuted to the fullest extent of the law. Unless otherwise stated the results shown in this test report refer only to the sample(s) tested and such sample(s) are retained for 30 days only.  
Attention: To check the authenticity of testing / inspection report and certificate, please contact us at telephone: (86-755) 8307 1443, or email: [CN.Doccheck@sgs.com](mailto:CN.Doccheck@sgs.com)

SGS-CSTC Standards Technical Services Co., Ltd.  
Shenzhen Branch (China) EMC Laboratory

No.1 Workshop, M-10, Middle Section, Science & Technology Park, Shenzhen, China 518057 t (86-755) 26012053 f (86-755) 26710594 www.sgsgroup.com.cn  
中国·深圳·科技园中区M-10栋一号厂房 邮编: 518057 t (86-755) 26012053 f (86-755) 26710594 sgs.china@sgs.com



Mode:f; Polarization:Vertical; Modulation:802.11a; bandwidth:20MHz; Channel:High



Site : chamber  
Condition: 3m VERTICAL  
Job No : 10092CR/10094CR  
Mode : 5825 Band edge  
NOTE : 5G WIFI 11A

	Freq	Cable Loss	Ant Factor	Preamp Factor	Read Level	Level	Limit Line	Over Limit	Remark
	MHz	dB	dB/m	dB	dBuV	dBuV/m	dBuV/m	dB	
1	5825.000	9.98	34.93	42.99	102.59	104.51	125.20	-20.69	peak
2	5850.000	10.07	34.95	42.96	57.78	59.84	122.20	-62.36	peak
3	5860.000	10.10	34.96	42.96	57.62	59.72	109.40	-49.68	peak

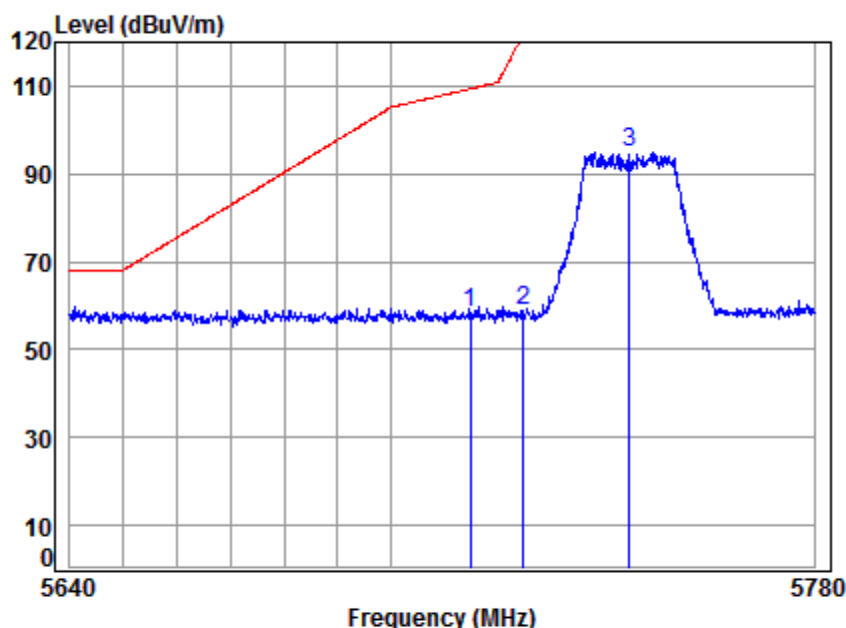


Unless otherwise agreed in writing, this document is issued by the Company subject to its General Conditions of Service printed overleaf, available on request or accessible at <http://www.sgs.com/en/Terms-and-Conditions.aspx> and, for electronic format documents, subject to Terms and Conditions for Electronic Documents at <http://www.sgs.com/en/Terms-and-Conditions/Terms-e-Documents.aspx>. Attention is drawn to the limitation of liability, indemnification and jurisdiction issues defined therein. Any holder of this document is advised that information contained hereon reflects the Company's findings at the time of its intervention only and within the limits of Client's instructions, if any. The Company's sole responsibility is to its Client and this document does not exonerate parties to a transaction from exercising all their rights and obligations under the transaction documents. This document cannot be reproduced except in full, without prior written approval of the Company. Any unauthorized alteration, forgery or falsification of the content or appearance of this document is unlawful and offenders may be prosecuted to the fullest extent of the law. Unless otherwise stated the results shown in this test report refer only to the sample(s) tested and such sample(s) are retained for 30 days only.  
Attention: To check the authenticity of testing / inspection report & certificate, please contact us at telephone: (86-755) 8307 1443, or email: [CN.Doccheck@sgs.com](mailto:CN.Doccheck@sgs.com)

SGS-CSTC Standards Technical Services Co., Ltd.  
Shenzhen Branch

No.1 Workshop, M-10, Middle Section, Science & Technology Park, Shenzhen, China 518057 t (86-755) 26012053 f (86-755) 26710594 www.sgs.com.cn  
中国·深圳·科技园中区M-10栋一号厂房 邮编: 518057 t (86-755) 26012053 f (86-755) 26710594 sgs.china@sgs.com

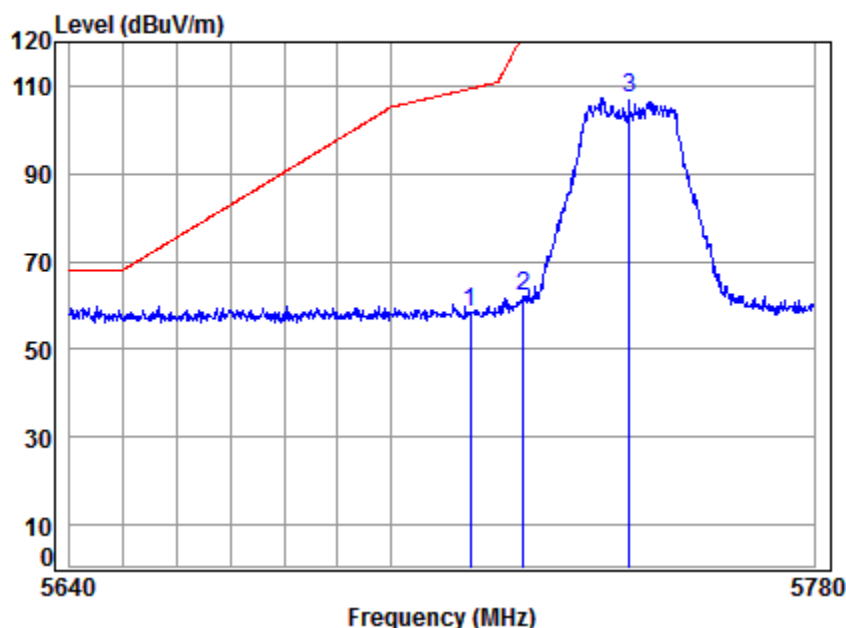
Mode:f; Polarization: Horizontal; Modulation:802.11ac; bandwidth:20MHz; Channel:Low



Site : chamber  
Condition: 3m HORIZONTAL  
Job No : 10092CR/10094CR  
Mode : 5745 Band edge  
NOTE : 5G WIFI 11AC 20

		Cable	Ant	Preamp	Read	Limit	Over	
	Freq	Loss	Factor	Factor	Level	Level	Line	Limit Remark
	MHz	dB	dB/m	dB	dBuV	dBuV/m	dBuV/m	dB
1	5715.000	9.61	34.82	43.09	57.26	58.60	109.40	-50.80 peak
2	5725.000	9.64	34.83	43.08	57.51	58.90	122.20	-63.30 peak
3	5745.000	9.71	34.85	43.06	93.61	95.11	125.20	-30.09 peak

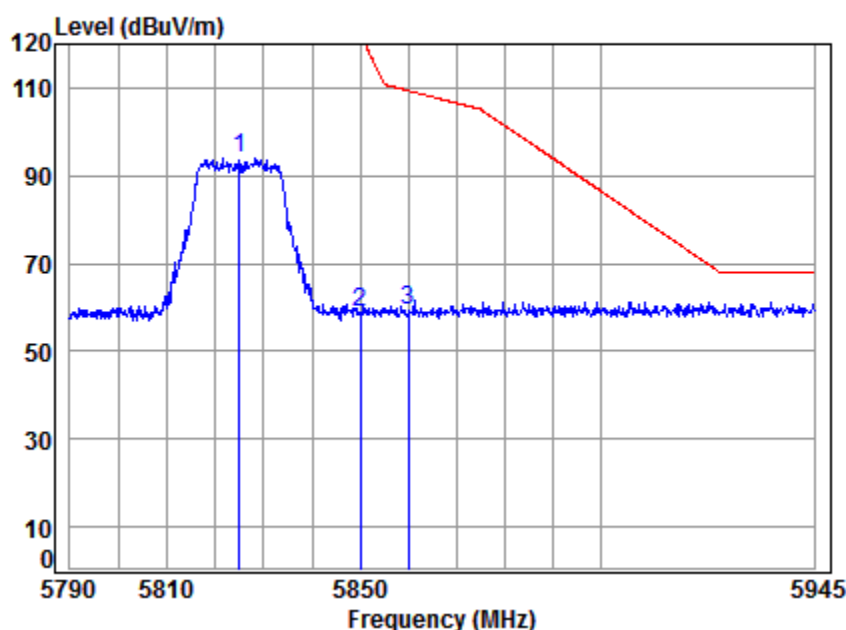
Mode:f; Polarization:Vertical; Modulation:802.11ac; bandwidth:20MHz; Channel:Low



Site : chamber  
Condition: 3m VERTICAL  
Job No : 10092CR/10094CR  
Mode : 5745 Band edge  
NOTE : 5G WIFI 11AC 20

		Cable	Ant	Preamp	Read		Limit	Over	
	Freq	Loss	Factor	Factor	Level	Level	Line	Limit	Remark
	MHz	dB	dB/m	dB	dBuV	dBuV/m	dBuV/m	dB	
1	5715.000	9.61	34.82	43.09	56.96	58.30	109.40	-51.10	peak
2	5725.000	9.64	34.83	43.08	60.72	62.11	122.20	-60.09	peak
3	5745.000	9.71	34.85	43.06	105.86	107.36	125.20	-17.84	peak

Mode:f; Polarization:Horizontal; Modulation:802.11ac; bandwidth:20MHz; Channel:High



Site : chamber  
Condition: 3m HORIZONTAL  
Job No : 10092CR/10094CR  
Mode : 5825 Band edge  
NOTE : 5G WIFI 11AC 20

	Freq	Cable Loss	Ant Factor	Preamp Factor	Read Level	Limit Level	Limit Line	Over Limit	Remark
	MHz	dB	dB/m	dB	dBuV	dBuV/m	dBuV/m	dB	
1	5825.000	9.98	34.93	42.99	92.18	94.10	125.20	-31.10	peak
2	5850.000	10.07	34.95	42.96	56.61	58.67	122.20	-63.53	peak
3	5860.000	10.10	34.96	42.96	57.24	59.34	109.40	-50.06	peak



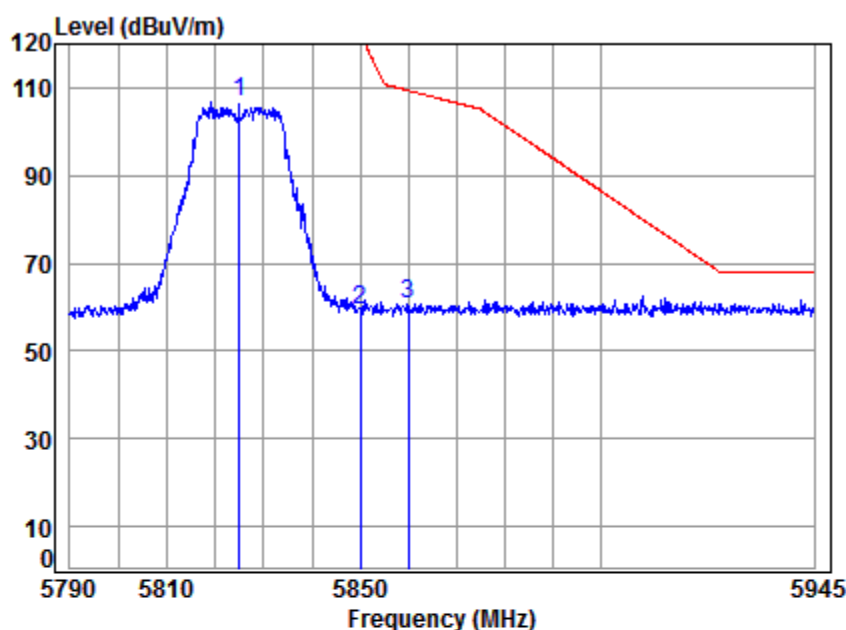
Unless otherwise agreed in writing, this document is issued by the Company subject to its General Conditions of Service printed overleaf, available on request or accessible at <http://www.sgs.com/en/Terms-and-Conditions.aspx> and, for electronic format documents, subject to Terms and Conditions for Electronic Documents at <http://www.sgs.com/en/Terms-and-Conditions/Terms-e-Documents.aspx>. Attention is drawn to the limitation of liability, indemnification and jurisdiction issues defined therein. Any holder of this document is advised that information contained hereon reflects the Company's findings at the time of its intervention only and within the limits of Client's instructions, if any. The Company's sole responsibility is to its Client and this document does not exonerate parties to a transaction from exercising all their rights and obligations under the transaction documents. This document cannot be reproduced except in full, without prior written approval of the Company. Any unauthorized alteration, forgery or falsification of the content or appearance of this document is unlawful and offenders may be prosecuted to the fullest extent of the law. Unless otherwise stated the results shown in this test report refer only to the sample(s) tested and such sample(s) are retained for 30 days only.  
Attention: To check the authenticity of testing / inspection report & certificate, please contact us at telephone: (86-755) 8307 1443, or email: [CN.Doccheck@sgs.com](mailto:CN.Doccheck@sgs.com)

SGS-CSTC Standards Technical Services Co., Ltd.  
Shenzhen Branch (China) - CSTC Laboratory

No.1 Workshop, M-10, Middle Section, Science & Technology Park, Shenzhen, China 518057 t (86-755) 26012053 f (86-755) 26710594 www.sgsgroup.com.cn  
中国·深圳·科技园中区M-10栋一号厂房 邮编: 518057 t (86-755) 26012053 f (86-755) 26710594 sgs.china@sgs.com



Mode:f; Polarization:Vertical; Modulation:802.11ac; bandwidth:20MHz; Channel:High



Site : chamber  
Condition: 3m VERTICAL  
Job No : 10092CR/10094CR  
Mode : 5825 Band edge  
NOTE : 5G WIFI 11AC 20

	Freq	Cable Loss	Ant Factor	Preamp Factor	Read Level	Level	Limit Line	Over Limit	Remark
	MHz	dB	dB/m	dB	dBuV	dBuV/m	dBuV/m	dB	
1	5825.000	9.98	34.93	42.99	104.97	106.89	125.20	-18.31	peak
2	5850.000	10.07	34.95	42.96	57.16	59.22	122.20	-62.98	peak
3	5860.000	10.10	34.96	42.96	58.51	60.61	109.40	-48.79	peak

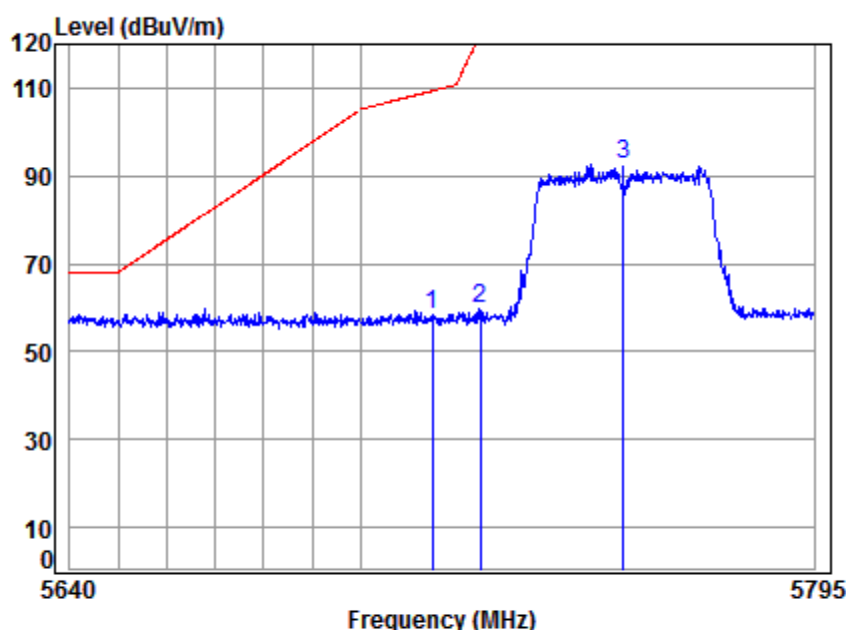


Unless otherwise agreed in writing, this document is issued by the Company subject to its General Conditions of Service printed overleaf, available on request or accessible at <http://www.sgs.com/en/Terms-and-Conditions.aspx> and, for electronic format documents, subject to Terms and Conditions for Electronic Documents at <http://www.sgs.com/en/Terms-and-Conditions/Terms-e-Documents.aspx>. Attention is drawn to the limitation of liability, indemnification and jurisdiction issues defined therein. Any holder of this document is advised that information contained hereon reflects the Company's findings at the time of its intervention only and within the limits of Client's instructions, if any. The Company's sole responsibility is to its Client and this document does not exonerate parties to a transaction from exercising all their rights and obligations under the transaction documents. This document cannot be reproduced except in full, without prior written approval of the Company. Any unauthorized alteration, forgery or falsification of the content or appearance of this document is unlawful and offenders may be prosecuted to the fullest extent of the law. Unless otherwise stated the results shown in this test report refer only to the sample(s) tested and such sample(s) are retained for 30 days only.  
Attention: To check the authenticity of testing / inspection report and certificate, please contact us at telephone: (86-755) 8307 1443, or email: [CN.Doccheck@sgs.com](mailto:CN.Doccheck@sgs.com)

SGS-CSTC Standards Technical Services Co., Ltd.  
Shenzhen Branch (China) EMC Laboratory

No.1 Workshop, M-10, Middle Section, Science & Technology Park, Shenzhen, China 518057 t (86-755) 26012053 f (86-755) 26710594 www.sgsgroup.com.cn  
中国·深圳·科技园中区M-10栋一号厂房 邮编: 518057 t (86-755) 26012053 f (86-755) 26710594 sgs.china@sgs.com

Mode:f; Polarization:Horizontal; Modulation:802.11ac; bandwidth:40MHz; Channel:Low



Site : chamber  
Condition: 3m HORIZONTAL  
Job No : 10092CR/10094CR  
Mode : 5755 Band edge  
NOTE : 5G WIFI 11AC 40

		Cable	Ant	Preamp	Read	Limit	Over	
Freq	Loss	Factor	Factor	Level	Level	Line	Limit	Remark
MHz	dB	dB/m	dB	dBuV	dBuV/m	dBuV/m	dB	
1	5715.000	9.61	34.82	43.09	57.02	58.36	109.40	-51.04 peak
2	5725.000	9.64	34.83	43.08	58.57	59.96	122.20	-62.24 peak
3	5755.000	9.75	34.86	43.05	91.29	92.85	125.20	-32.35 peak

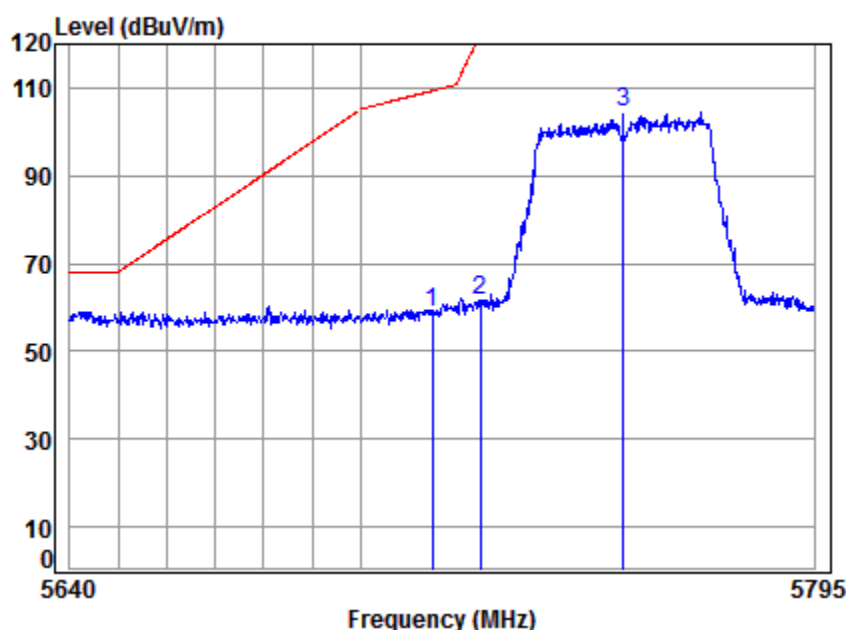


Unless otherwise agreed in writing, this document is issued by the Company subject to its General Conditions of Service printed overleaf, available on request or accessible at <http://www.sgs.com/en/Terms-and-Conditions.aspx> and, for electronic format documents, subject to Terms and Conditions for Electronic Documents at <http://www.sgs.com/en/Terms-and-Conditions/Terms-e-Documents.aspx>. Attention is drawn to the limitation of liability, indemnification and jurisdiction issues defined therein. Any holder of this document is advised that information contained hereon reflects the Company's findings at the time of its intervention only and within the limits of Client's instructions, if any. The Company's sole responsibility is to its Client and this document does not exonerate parties to a transaction from exercising all their rights and obligations under the transaction documents. This document cannot be reproduced except in full, without prior written approval of the Company. Any unauthorized alteration, forgery or falsification of the content or appearance of this document is unlawful and offenders may be prosecuted to the fullest extent of the law. Unless otherwise stated the results shown in this test report refer only to the sample(s) tested and such sample(s) are retained for 30 days only.  
Attention: To check the authenticity of testing / inspection report and certificate, please contact us at telephone: (86-755) 8307 1443, or email: [CN.Doccheck@sgs.com](mailto:CN.Doccheck@sgs.com)

SGS-CSTC Standards Technical Services Co., Ltd.  
Shenzhen Branch Laboratory

No.1 Workshop, M-10, Middle Section, Science & Technology Park, Shenzhen, China 518057 t (86-755) 26012053 f (86-755) 26710594 www.sgs.com.cn  
中国·深圳·科技园中区M-10栋一号厂房 邮编: 518057 t (86-755) 26012053 f (86-755) 26710594 sgs.china@sgs.com

Mode:f; Polarization:Vertical; Modulation:802.11ac; bandwidth:40MHz; Channel:Low



Site : chamber  
Condition: 3m VERTICAL  
Job No : 10092CR/10094CR  
Mode : 5755 Band edge  
NOTE : 5G WIFI 11AC 40

	Freq	Cable Loss	Ant Factor	Preamp Factor	Read Level	Level	Limit Line	Over Limit	Remark
	MHz	dB	dB/m	dB	dBuV	dBuV/m	dBuV/m	dB	
1	5715.000	9.61	34.82	43.09	57.74	59.08	109.40	-50.32	peak
2	5725.000	9.64	34.83	43.08	60.08	61.47	122.20	-60.73	peak
3	5755.000	9.75	34.86	43.05	102.79	104.35	125.20	-20.85	peak

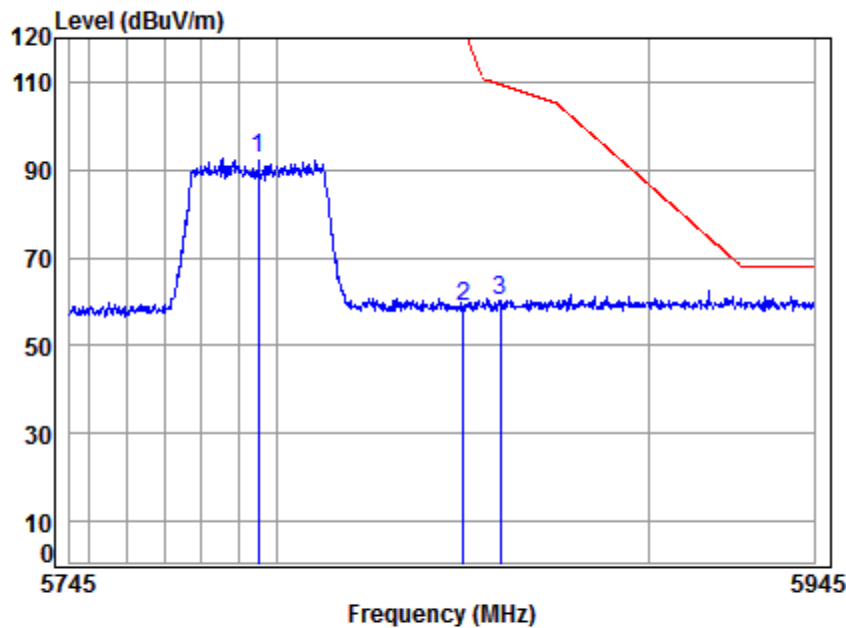


Unless otherwise agreed in writing, this document is issued by the Company subject to its General Conditions of Service printed overleaf, available on request or accessible at <http://www.sgs.com/en/Terms-and-Conditions.aspx> and, for electronic format documents, subject to Terms and Conditions for Electronic Documents at <http://www.sgs.com/en/Terms-and-Conditions/Terms-e-Documents.aspx>. Attention is drawn to the limitation of liability, indemnification and jurisdiction issues defined therein. Any holder of this document is advised that information contained hereon reflects the Company's findings at the time of its intervention only and within the limits of Client's instructions, if any. The Company's sole responsibility is to its Client and this document does not exonerate parties to a transaction from exercising all their rights and obligations under the transaction documents. This document cannot be reproduced except in full, without prior written approval of the Company. Any unauthorized alteration, forgery or falsification of the content or appearance of this document is unlawful and offenders may be prosecuted to the fullest extent of the law. Unless otherwise stated the results shown in this test report refer only to the sample(s) tested and such sample(s) are retained for 30 days only.  
Attention: To check the authenticity of testing / inspection report and certificate, please contact us at telephone: (86-755) 8307 1443, or email: [CN.Doccheck@sgs.com](mailto:CN.Doccheck@sgs.com)

SGS-CSTC Standards Technical Services Co., Ltd.  
Shenzhen Branch (China) Laboratory

No.1 Workshop, M-10, Middle Section, Science & Technology Park, Shenzhen, China 518057 t (86-755) 26012053 f (86-755) 26710594 www.sgs.com.cn  
中国·深圳·科技园中区M-10栋一号厂房 邮编: 518057 t (86-755) 26012053 f (86-755) 26710594 sgs.china@sgs.com

Mode:f; Polarization:Horizontal; Modulation:802.11ac; bandwidth:40MHz; Channel:High



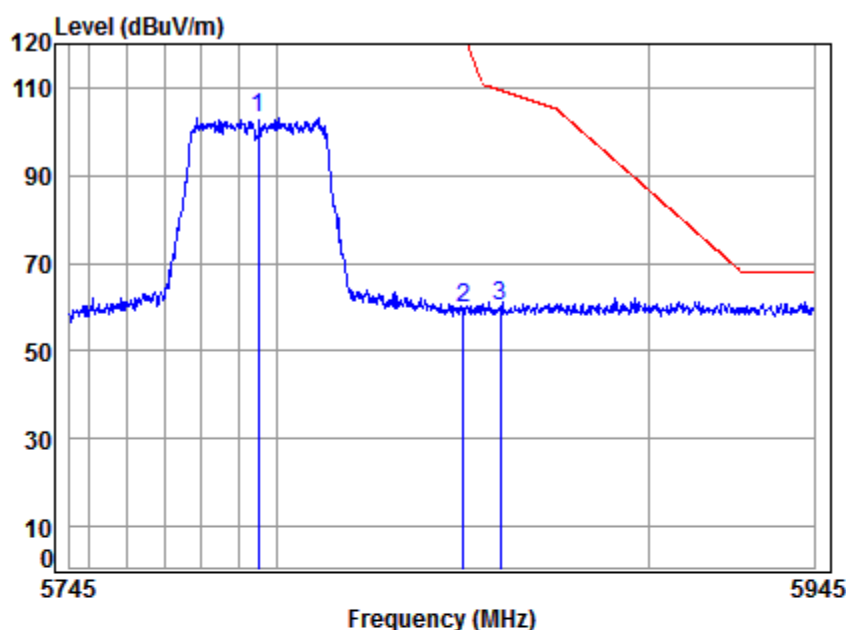
Site : chamber  
Condition: 3m HORIZONTAL  
Job No : 10092CR/10094CR  
Mode : 5795 Band edge  
NOTE : 5G WIFI 11AC 40

		Cable	Ant	Preamp	Read	Limit	Over	
Freq		Loss	Factor	Factor	Level	Level	Line	Limit Remark
MHz		dB	dB/m	dB	dBuV	dBuV/m	dBuV/m	dB
1	5795.000	9.88	34.90	43.02	90.84	92.60	125.20	-32.60 peak
2	5850.000	10.07	34.95	42.96	56.68	58.74	122.20	-63.46 peak
3	5860.000	10.10	34.96	42.96	57.95	60.05	109.40	-49.35 peak





Mode:f; Polarization:Vertical; Modulation:802.11ac; bandwidth:40MHz; Channel:High



Site : chamber  
Condition: 3m VERTICAL  
Job No : 10092CR/10094CR  
Mode : 5795 Band edge  
NOTE : 5G WIFI 11AC 40

		Cable	Ant	Preamp	Read		Limit	Over	
	Freq	Loss	Factor	Factor	Level	Level	Line	Limit	Remark
	MHz	dB	dB/m	dB	dBuV	dBuV/m	dBuV/m	dB	
1	5795.000	9.88	34.90	43.02	101.51	103.27	125.20	-21.93	peak
2	5850.000	10.07	34.95	42.96	57.58	59.64	122.20	-62.56	peak
3	5860.000	10.10	34.96	42.96	57.96	60.06	109.40	-49.34	peak

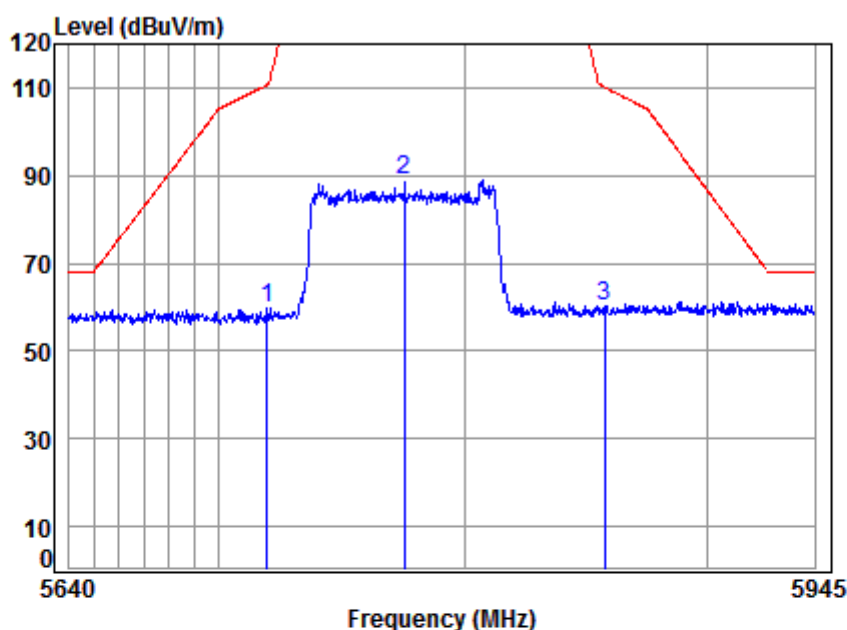


Unless otherwise agreed in writing, this document is issued by the Company subject to its General Conditions of Service printed overleaf, available on request or accessible at <http://www.sgs.com/en/Terms-and-Conditions.aspx> and, for electronic format documents, subject to Terms and Conditions for Electronic Documents at <http://www.sgs.com/en/Terms-and-Conditions/Terms-e-Documents.aspx>. Attention is drawn to the limitation of liability, indemnification and jurisdiction issues defined therein. Any holder of this document is advised that information contained hereon reflects the Company's findings at the time of its intervention only and within the limits of Client's instructions, if any. The Company's sole responsibility is to its Client and this document does not exonerate parties to a transaction from exercising all their rights and obligations under the transaction documents. This document cannot be reproduced except in full, without prior written approval of the Company. Any unauthorized alteration, forgery or falsification of the content or appearance of this document is unlawful and offenders may be prosecuted to the fullest extent of the law. Unless otherwise stated the results shown in this test report refer only to the sample(s) tested and such sample(s) are retained for 30 days only.  
Attention: To check the authenticity of testing / inspection report and certificate, please contact us at telephone: (86-755) 8307 1443, or email: [CN.Doccheck@sgs.com](mailto:CN.Doccheck@sgs.com)

SGS-CSTC Standards Technical Services Co., Ltd.  
Shenzhen Branch (China) EMC Laboratory

No.1 Workshop, M-10, Middle Section, Science & Technology Park, Shenzhen, China 518057 t (86-755) 26012053 f (86-755) 26710594 www.sgsgroup.com.cn  
中国·深圳·科技园中区M-10栋一号厂房 邮编: 518057 t (86-755) 26012053 f (86-755) 26710594 sgs.china@sgs.com

Mode:f; Polarization:Horizontal; Modulation:802.11ac; bandwidth:80MHz; Channel:middle



Site : chamber  
Condition: 3m HORIZONTAL  
Job No : 10092CR/10094CR  
Mode : 5775 Band edge  
NOTE : 5G WIFI 11AC 80

	Freq	Cable Loss	Ant Factor	Preamp Factor	Read Level	Level	Limit Line	Over Limit	Remark
	MHz	dB	dB/m	dB	dBuV	dBuV/m	dBuV/m	dB	
1	5719.568	9.62	34.82	43.08	58.46	59.82	110.68	-50.86	peak
2	5775.000	9.81	34.88	43.03	87.13	88.79	125.20	-36.41	peak
3	5857.357	10.09	34.96	42.96	58.14	60.23	110.14	-49.91	peak

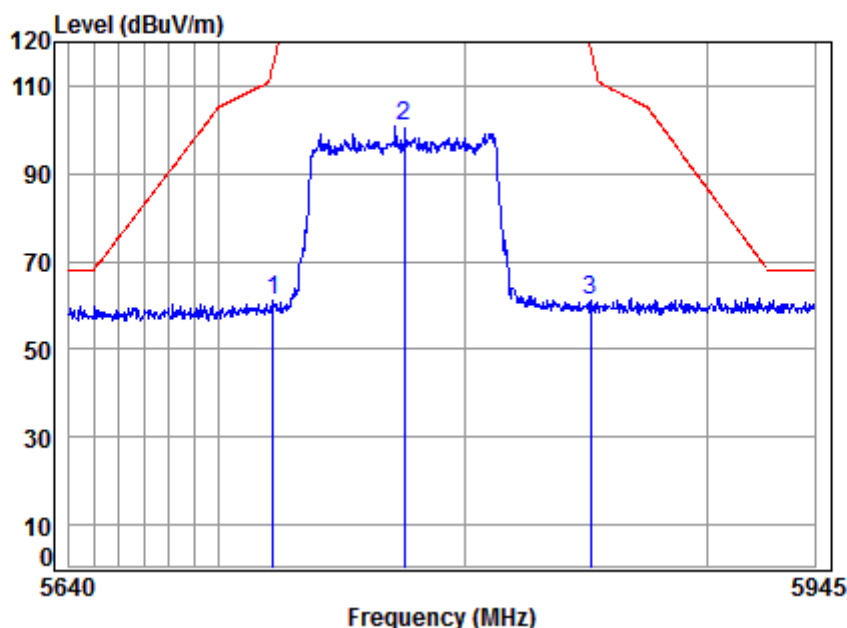


Unless otherwise agreed in writing, this document is issued by the Company subject to its General Conditions of Service printed overleaf, available on request or accessible at <http://www.sgs.com/en/Terms-and-Conditions.aspx> and, for electronic format documents, subject to Terms and Conditions for Electronic Documents at <http://www.sgs.com/en/Terms-and-Conditions/Terms-e-Documents.aspx>. Attention is drawn to the limitation of liability, indemnification and jurisdiction issues defined therein. Any holder of this document is advised that information contained hereon reflects the Company's findings at the time of its intervention only and within the limits of Client's instructions, if any. The Company's sole responsibility is to its Client and this document does not exonerate parties to a transaction from exercising all their rights and obligations under the transaction documents. This document cannot be reproduced except in full, without prior written approval of the Company. Any unauthorized alteration, forgery or falsification of the content or appearance of this document is unlawful and offenders may be prosecuted to the fullest extent of the law. Unless otherwise stated the results shown in this test report refer only to the sample(s) tested and such sample(s) are retained for 30 days only.  
Attention: To check the authenticity of testing / inspection report and certificate, please contact us at telephone: (86-755) 8307 1443, or email: [CN.Doccheck@sgs.com](mailto:CN.Doccheck@sgs.com)

SGS-CSTC Standards Technical Services Co., Ltd.  
Shenzhen Branch (China) Laboratory

No.1 Workshop, M-10, Middle Section, Science & Technology Park, Shenzhen, China 518057 t (86-755) 26012053 f (86-755) 26710594 www.sgs.com.cn  
中国·深圳·科技园中区M-10栋一号厂房 邮编: 518057 t (86-755) 26012053 f (86-755) 26710594 sgs.china@sgs.com

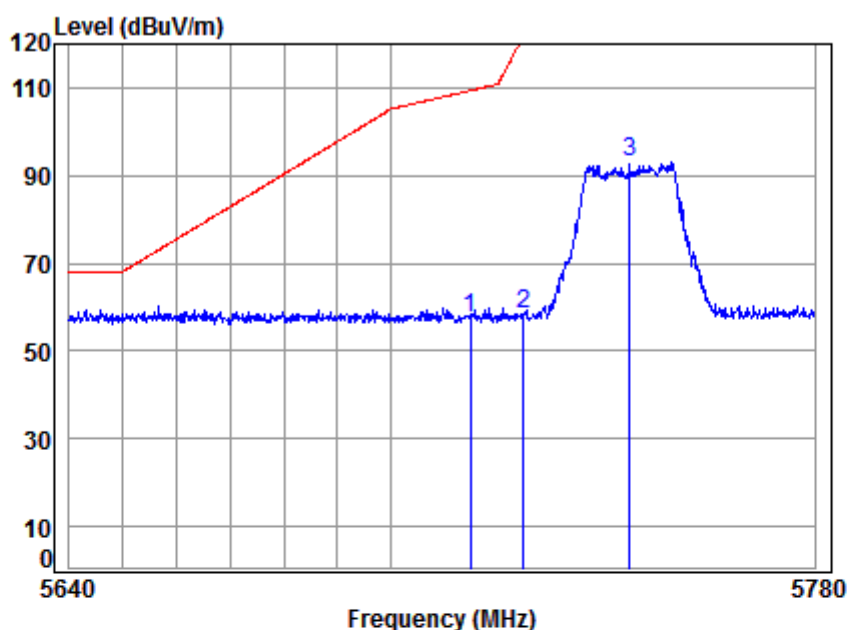
Mode:f; Polarization:Vertical; Modulation:802.11ac; bandwidth:80MHz; Channel:middle



Site : chamber  
Condition: 3m VERTICAL  
Job No : 10092CR/10094CR  
Mode : 5775 Band edge  
NOTE : 5G WIFI 11AC 80

		Cable	Ant	Preamp	Read	Limit	Over	
	Freq	Loss	Factor	Factor	Level	Level	Line	Limit Remark
	MHz	dB	dB/m	dB	dBuV	dBuV/m	dBuV/m	dB
1	5721.979	9.63	34.83	43.08	59.67	61.05	115.31	-54.26 peak
2	5775.000	9.81	34.88	43.03	99.00	100.66	125.20	-24.54 peak
3	5851.500	10.07	34.96	42.96	59.13	61.20	118.78	-57.58 peak

Mode:f; Polarization:Horizontal; Modulation:802.11n; bandwidth:40MHz; Channel:Low



Site : chamber  
Condition: 3m HORIZONTAL  
Job No : 10092CR/10094CR  
Mode : 5745 Band edge  
NOTE : 5G WIFI 11N 20

		Cable	Ant	Preamp	Read		Limit	Over	
	Freq	Loss	Factor	Factor	Level	Level	Line	Limit	Remark
	MHz	dB	dB/m	dB	dBuV	dBuV/m	dBuV/m	dB	
1	5715.000	9.61	34.82	43.09	55.99	57.33	109.40	-52.07	peak
2	5725.000	9.64	34.83	43.08	57.17	58.56	122.20	-63.64	peak
3	5745.000	9.71	34.85	43.06	91.50	93.00	125.20	-32.20	peak



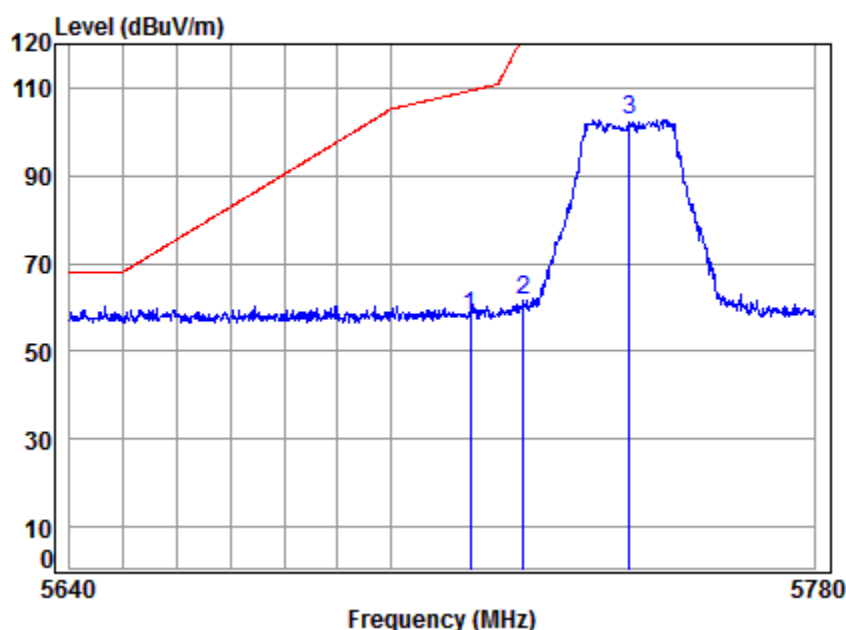
Unless otherwise agreed in writing, this document is issued by the Company subject to its General Conditions of Service printed overleaf, available on request or accessible at <http://www.sgs.com/en/Terms-and-Conditions.aspx> and, for electronic format documents, subject to Terms and Conditions for Electronic Documents at <http://www.sgs.com/en/Terms-and-Conditions/Terms-e-Documents.aspx>. Attention is drawn to the limitation of liability, indemnification and jurisdiction issues defined therein. Any holder of this document is advised that information contained hereon reflects the Company's findings at the time of its intervention only and within the limits of Client's instructions, if any. The Company's sole responsibility is to its Client and this document does not exonerate parties to a transaction from exercising all their rights and obligations under the transaction documents. This document cannot be reproduced except in full, without prior written approval of the Company. Any unauthorized alteration, forgery or falsification of the content or appearance of this document is unlawful and offenders may be prosecuted to the fullest extent of the law. Unless otherwise stated the results shown in this test report refer only to the sample(s) tested and such sample(s) are retained for 30 days only.  
Attention: To check the authenticity of testing / inspection report and certificate, please contact us at telephone: (86-755) 8307 1443, or email: [CN.Doccheck@sgs.com](mailto:CN.Doccheck@sgs.com)

SGS-CSTC Standards Technical Services Co., Ltd.  
Shenzhen Branch

No.1 Workshop, M-10, Middle Section, Science & Technology Park, Shenzhen, China 518057 t (86-755) 26012053 f (86-755) 26710594 www.sgs.com.cn  
中国·深圳·科技园中区M-10栋一号厂房 邮编: 518057 t (86-755) 26012053 f (86-755) 26710594 sgs.china@sgs.com



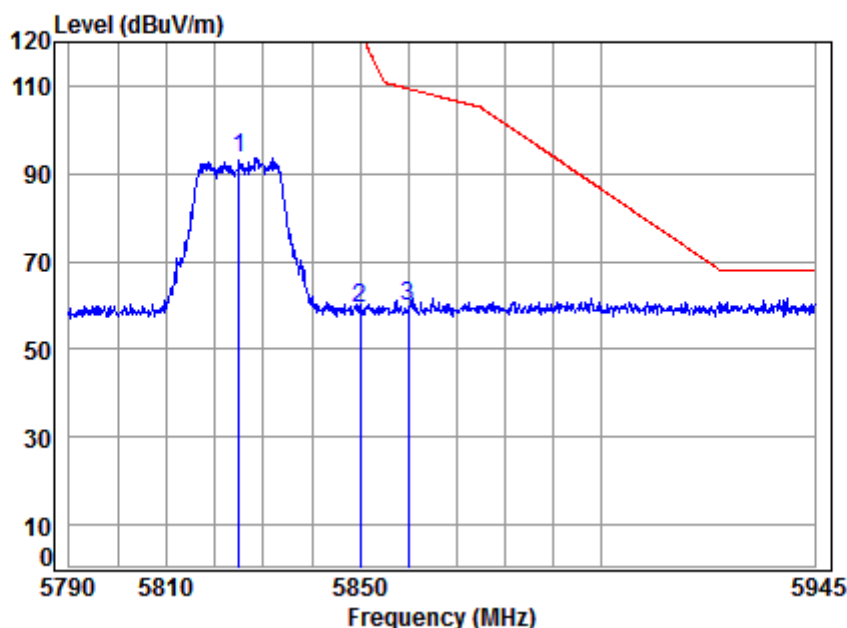
Mode:f; Polarization:Vertical; Modulation:802.11n; bandwidth:40MHz; Channel:Low



Site : chamber  
Condition: 3m VERTICAL  
Job No : 10092CR/10094CR  
Mode : 5745 Band edge  
NOTE : 5G WIFI 11N 20

		Cable	Ant	Preamp	Read		Limit	Over	
	Freq	Loss	Factor	Factor	Level	Level	Line	Limit	Remark
	MHz	dB	dB/m	dB	dBuV	dBuV/m	dBuV/m	dB	
1	5715.000	9.61	34.82	43.09	56.55	57.89	109.40	-51.51	peak
2	5725.000	9.64	34.83	43.08	60.25	61.64	122.20	-60.56	peak
3	5745.000	9.71	34.85	43.06	101.34	102.84	125.20	-22.36	peak

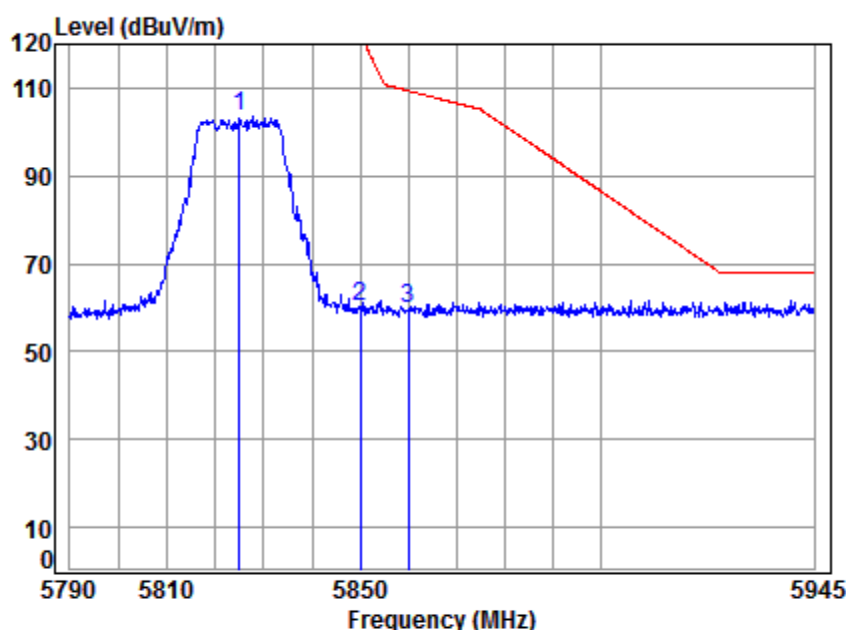
Mode:f; Polarization:Horizontal; Modulation:802.11n; bandwidth:20MHz; Channel:High



Site : chamber  
Condition: 3m HORIZONTAL  
Job No : 10092CR/10094CR  
Mode : 5825 Band edge  
NOTE : 5G WIFI 11N 20

		Cable	Ant	Preamp	Read	Limit	Over	
	Freq	Loss	Factor	Factor	Level	Level	Line	Limit Remark
	MHz	dB	dB/m	dB	dBuV	dBuV/m	dBuV/m	dB
1	5825.000	9.98	34.93	42.99	91.73	93.65	125.20	-31.55 peak
2	5850.000	10.07	34.95	42.96	57.37	59.43	122.20	-62.77 peak
3	5860.000	10.10	34.96	42.96	57.75	59.85	109.40	-49.55 peak

Mode:f; Polarization:Vertical; Modulation:802.11n; bandwidth:20MHz; Channel:High



Site : chamber  
Condition: 3m VERTICAL  
Job No : 10092CR/10094CR  
Mode : 5825 Band edge  
NOTE : 5G WIFI 11N 20

		Cable	Ant	Preamp	Read		Limit	Over	
	Freq	Loss	Factor	Factor	Level	Level	Line	Limit	Remark
	MHz	dB	dB/m	dB	dBuV	dBuV/m	dBuV/m	dB	
1	5825.000	9.98	34.93	42.99	101.53	103.45	125.20	-21.75	peak
2	5850.000	10.07	34.95	42.96	58.23	60.29	122.20	-61.91	peak
3	5860.000	10.10	34.96	42.96	57.53	59.63	109.40	-49.77	peak

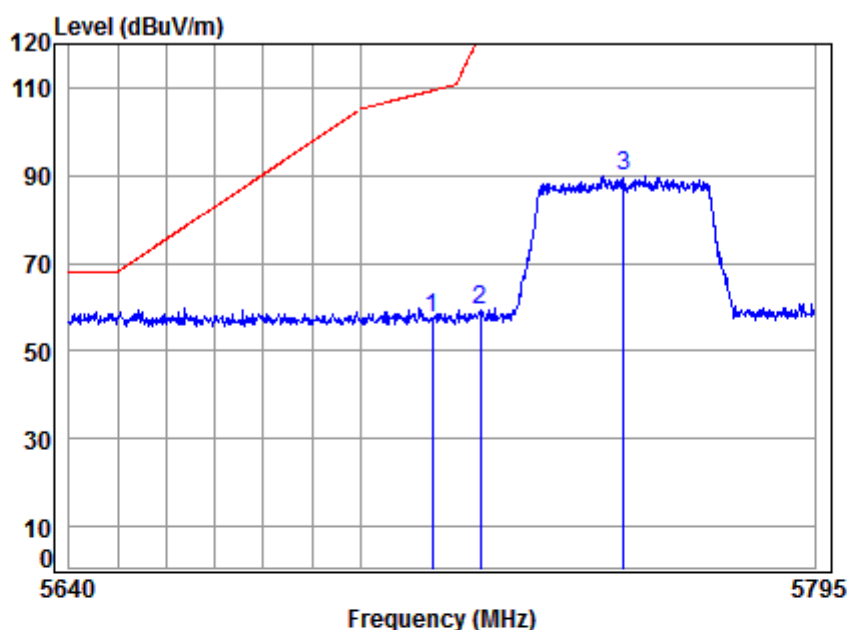


Unless otherwise agreed in writing, this document is issued by the Company subject to its General Conditions of Service printed overleaf, available on request or accessible at <http://www.sgs.com/en/Terms-and-Conditions.aspx> and, for electronic format documents, subject to Terms and Conditions for Electronic Documents at <http://www.sgs.com/en/Terms-and-Conditions/Terms-e-Documents.aspx>. Attention is drawn to the limitation of liability, indemnification and jurisdiction issues defined therein. Any holder of this document is advised that information contained hereon reflects the Company's findings at the time of its intervention only and within the limits of Client's instructions, if any. The Company's sole responsibility is to its Client and this document does not exonerate parties to a transaction from exercising all their rights and obligations under the transaction documents. This document cannot be reproduced except in full, without prior written approval of the Company. Any unauthorized alteration, forgery or falsification of the content or appearance of this document is unlawful and offenders may be prosecuted to the fullest extent of the law. Unless otherwise stated the results shown in this test report refer only to the sample(s) tested and such sample(s) are retained for 30 days only.  
Attention: To check the authenticity of testing / inspection report and certificate, please contact us at telephone: (86-755) 8307 1443, or email: [CN.Doccheck@sgs.com](mailto:CN.Doccheck@sgs.com)

SGS-CSTC Standards Technical Services Co., Ltd.  
Shenzhen Branch (China) CSTC Laboratory

No.1 Workshop, M-10, Middle Section, Science & Technology Park, Shenzhen, China 518057 t (86-755) 26012053 f (86-755) 26710594 www.sgsgroup.com.cn  
中国·深圳·科技园中区M-10栋一号厂房 邮编: 518057 t (86-755) 26012053 f (86-755) 26710594 sgs.china@sgs.com

Mode:f; Polarization:Horizontal; Modulation:802.11n; bandwidth:40MHz; Channel:Low

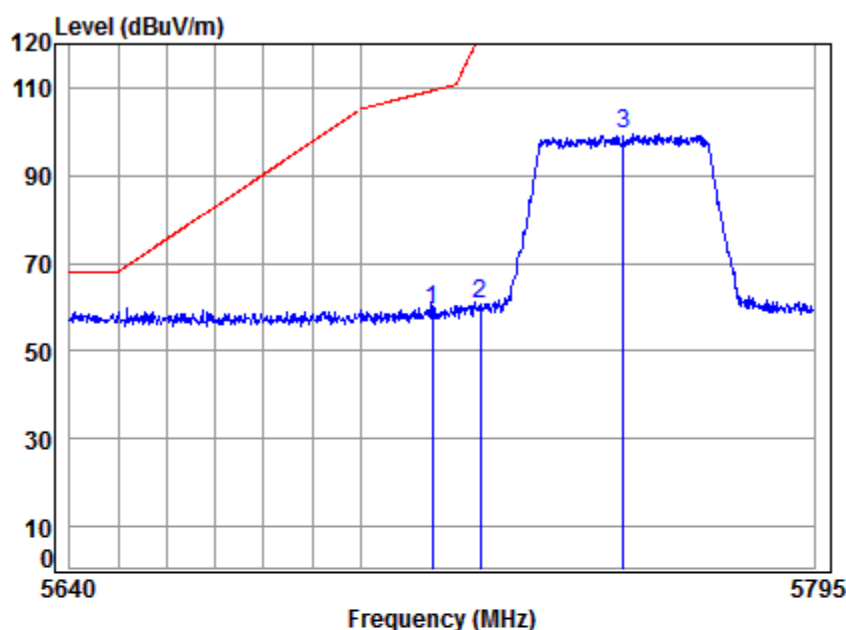


Site : chamber  
Condition: 3m HORIZONTAL  
Job No : 10092CR/10094CR  
Mode : 5755 Band edge  
NOTE : 5G WIFI 11N 40

	Freq	Cable Loss	Ant Factor	Preamp Factor	Read Level	Limit Level	Limit Line	Over Limit	Remark
	MHz	dB	dB/m	dB	dBuV	dBuV/m	dBuV/m	dB	
1	5715.000	9.61	34.82	43.09	56.17	57.51	109.40	-51.89	peak
2	5725.000	9.64	34.83	43.08	57.83	59.22	122.20	-62.98	peak
3	5755.000	9.75	34.86	43.05	88.22	89.78	125.20	-35.42	peak



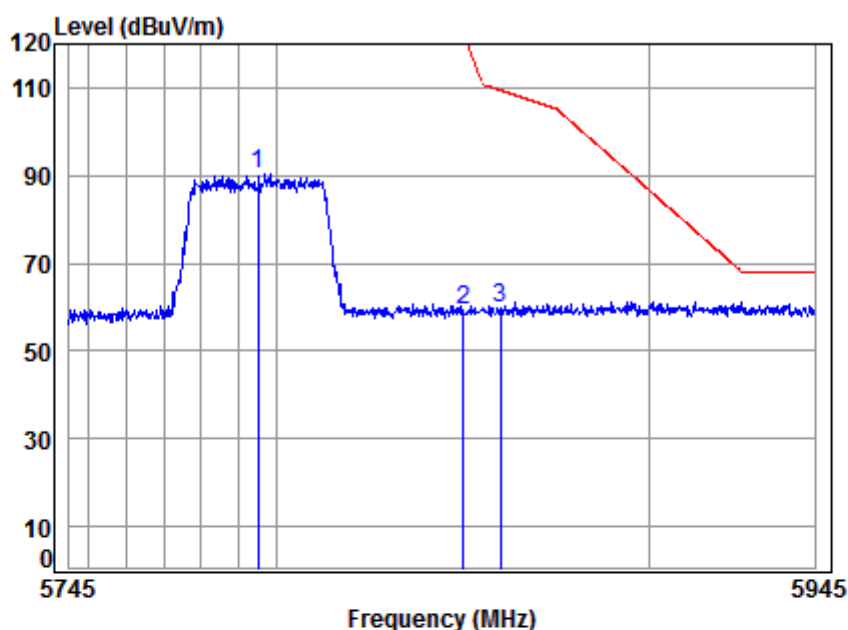
Mode:f; Polarization:Vertical; Modulation:802.11n; bandwidth:40MHz; Channel:Low



Site : chamber  
Condition: 3m VERTICAL  
Job No : 10092CR/10094CR  
Mode : 5755 Band edge  
NOTE : 5G WIFI 11N 40

	Freq	Cable Loss	Ant Factor	Preamp Factor	Read Level	Level	Limit Line	Over Limit	Remark
	MHz	dB	dB/m	dB	dBuV	dBuV/m	dBuV/m	dB	
1	5715.000	9.61	34.82	43.09	57.79	59.13	109.40	-50.27	peak
2	5725.000	9.64	34.83	43.08	59.31	60.70	122.20	-61.50	peak
3	5755.000	9.75	34.86	43.05	97.97	99.53	125.20	-25.67	peak

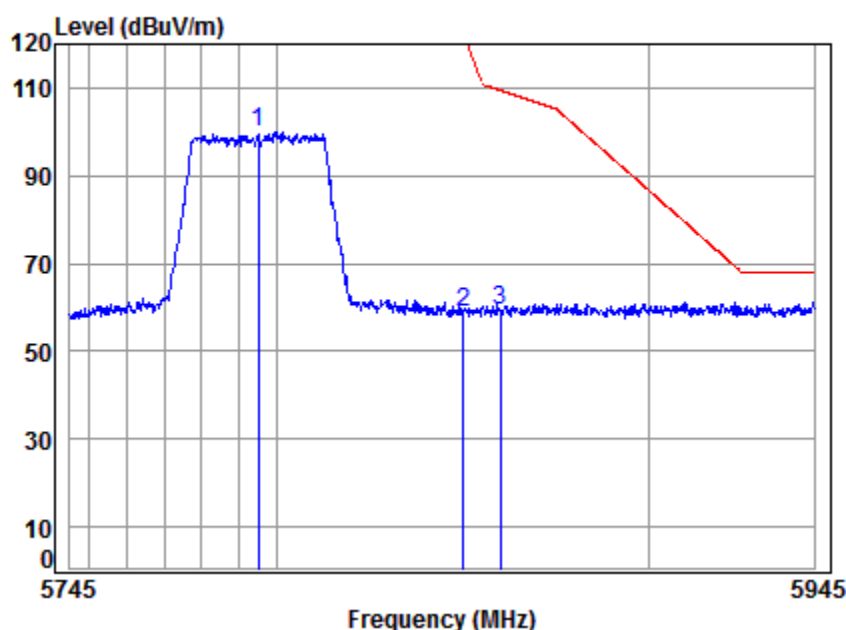
Mode:f; Polarization:Horizontal; Modulation:802.11n; bandwidth:40MHz; Channel:High



Site : chamber  
Condition: 3m HORIZONTAL  
Job No : 10092CR/10094CR  
Mode : 5795 Band edge  
NOTE : 5G WIFI 11N 40

	Freq	Cable Loss	Ant Factor	Preamp Factor	Read Level	Level	Limit Line	Over Limit	Remark
	MHz	dB	dB/m	dB	dBuV	dBuV/m	dBuV/m	dB	
1	5795.000	9.88	34.90	43.02	88.55	90.31	125.20	-34.89	peak
2	5850.000	10.07	34.95	42.96	57.30	59.36	122.20	-62.84	peak
3	5860.000	10.10	34.96	42.96	57.87	59.97	109.40	-49.43	peak

Mode:f; Polarization:Vertical; Modulation:802.11n; bandwidth:40MHz; Channel:High



Site : chamber  
Condition: 3m VERTICAL  
Job No : 10092CR/10094CR  
Mode : 5795 Band edge  
NOTE : 5G WIFI 11N 40

	Freq	Cable Loss	Ant Factor	Preamp Factor	Read Level	Level	Limit Line	Over Limit	Remark
	MHz	dB	dB/m	dB	dBuV	dBuV/m	dBuV/m	dB	
1	5795.000	9.88	34.90	43.02	97.97	99.73	125.20	-25.47	peak
2	5850.000	10.07	34.95	42.96	56.59	58.65	122.20	-63.55	peak
3	5860.000	10.10	34.96	42.96	57.08	59.18	109.40	-50.22	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 <http://www.sgs.com/en/Terms-and-Conditions.aspx> and, for electronic format documents, subject to Terms and Conditions for Electronic Documents at <http://www.sgs.com/en/Terms-and-Conditions/Terms-e-Documents.aspx>. Attention is drawn to the limitation of liability, indemnification and jurisdiction issues defined therein. Any holder of this document is advised that information contained hereon reflects the Company's findings at the time of its intervention only and within the limits of Client's instructions, if any. The Company's sole responsibility is to its Client and this document does not exonerate parties to a transaction from exercising all their rights and obligations under the transaction documents. This document cannot be reproduced except in full, without prior written approval of the Company. Any unauthorized alteration, forgery or falsification of the content or appearance of this document is unlawful and offenders may be prosecuted to the fullest extent of the law. Unless otherwise stated the results shown in this test report refer only to the sample(s) tested and such sample(s) are retained for 30 days only.  
Attention: To check the authenticity of testing / inspection report & certificate, please contact us at telephone: (86-755) 8307 1443, or email: [CN.Doccheck@sgs.com](mailto:CN.Doccheck@sgs.com)

SGS-CSTC Standards Technical Services Co., Ltd.  
Shenzhen Branch (China) - CSTC Laboratory

No.1 Workshop, M-10, Middle Section, Science & Technology Park, Shenzhen, China 518057 t (86-755) 26012053 f (86-755) 26710594 www.sgsgroup.com.cn  
中国·深圳·科技园中区M-10栋一号厂房 邮编: 518057 t (86-755) 26012053 f (86-755) 26710594 sgs.china@sgs.com

## 7.8 Frequency Stability

Test Requirement	47 CFR Part 15, Subpart C 15.407 (g)
Test Method:	ANSI C63.10 (2013) Section 6.8
Limit:	The frequency tolerance shall be maintained within the band of operation frequency over a temperature variation of 0 degrees to 35 degrees C at normal supply voltage, and for a variation in the primary supply voltage from 85% to 115% of the rated supply voltage at a temperature of 20 degrees C.

### 7.8.1 E.U.T. Operation

Operating Environment:

Temperature: 24.3 °C Humidity: 48.3 % RH Atmospheric Pressure: 1020 mbar

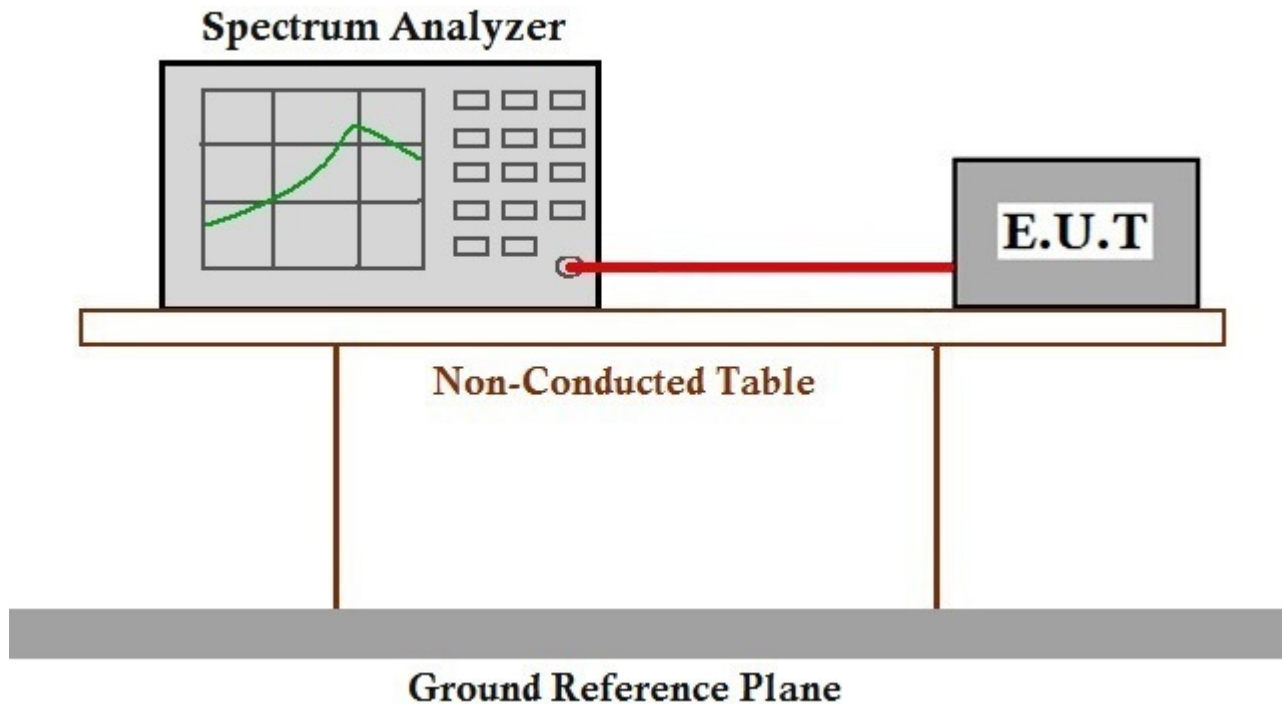
Test mode: c:TX mode (Band 1)\_Keep the EUT in continuously transmitting mode with all modulation types. All data rates for each modulation type have been tested and found the data rate @ 6Mbps is the worst case of IEEE 802.11a; data rate @ MCS0 is the worst case of IEEE 802.11n(HT20); data rate @ MCS0 is the worst case of IEEE 802.11n(HT40); data rate @ MCS0 is the worst case of IEEE 802.11ac(VHT20); data rate @ MCS0 is the worst case of IEEE 802.11ac(VHT40); data rate @ MCS0 is the worst case of IEEE 802.11ac(VHT80). Only the data of worst case is recorded in the report.

f:TX mode (Band 3)\_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 @ 6Mbps is the worst case of IEEE 802.11a; data rate @ MCS0 is the worst case of IEEE 802.11n(HT20); data rate @ MCS0 is the worst case of IEEE 802.11n(HT40); data rate @ MCS0 is the worst case of IEEE 802.11ac(VHT20); data rate @ MCS0 is the worst case of IEEE 802.11ac(VHT40); data rate @ MCS0 is the worst case of IEEE 802.11ac(VHT80). Only the data of worst case is recorded in the report.





### 7.8.2 Test Setup Diagram



### 7.8.3 Measurement Procedure and Data

The applicant declares that the emissions are maintained within the band of operation under all conditions of normal operation as specified in the user's manual and meets Section 15.407(g) requirements.





## 8 Photographs

### 8.1 Test Setup

Please refer to setup photos.

### 8.2 EUT Constructional Details (EUT Photos)

Please Refer to external and internal photos 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 <http://www.sgs.com/en/Terms-and-Conditions.aspx> and, for electronic format documents, subject to Terms and Conditions for Electronic Documents at <http://www.sgs.com/en/Terms-and-Conditions/Terms-e-Documents.aspx>. Attention is drawn to the limitation of liability, indemnification and jurisdiction issues defined therein. Any holder of this document is advised that information contained hereon reflects the Company's findings at the time of its intervention only and within the limits of Client's instructions, if any. The Company's sole responsibility is to its Client and this document does not exonerate parties to a transaction from exercising all their rights and obligations under the transaction documents. This document cannot be reproduced except in full, without prior written approval of the Company. Any unauthorized alteration, forgery or falsification of the content or appearance of this document is unlawful and offenders may be prosecuted to the fullest extent of the law. Unless otherwise stated the results shown in this test report refer only to the sample(s) tested and such sample(s) are retained for 30 days only.  
Attention: To check the authenticity of testing / inspection report & certificate, please contact us at telephone: (86-755) 8307 1443, or email: [CN.Doccheck@sgs.com](mailto:CN.Doccheck@sgs.com)