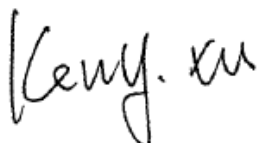


TEST REPORT

Application No.: SZEM2012012337CR
Applicant: LOUIS VUITTON MALLETIER
Address of Applicant: 2, rue du Pont Neuf 75001 PARIS France
Manufacturer: Louis Vuitton Malletier
Address of Manufacturer: 2, rue du Pont Neuf 75001 Paris, France
Equipment Under Test (EUT):
EUT Name: Louis Vuitton Horizon Speaker
Model No.: QAC
Trade Mark: Louis Vuitton
FCC ID: 2ALDGQAC
Standard(s) : 47 CFR Part 15, Subpart E 15.407
Date of Receipt: 2020-12-02
Date of Test: 2020-12-09 to 2021-01-27
Date of Issue: 2021-01-28

Test Result:	Pass*
---------------------	--------------

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



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

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		2021-02-02		Original

Authorized for issue by:				
				
		<hr/> Bill Chen/Project Engineer		
				
		<hr/> Eric Fu/Reviewer		

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

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
Duty Cycle	47 CFR Part 15, Subpart E 15.407	KDB 789033 II B 1	KDB 789033 D02 II B 1	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
Minimum 6 dB bandwidth (5.725-5.85 GHz band)	47 CFR Part 15, Subpart E 15.407	KDB 789033 D02 II C 2	47 CFR Part 15, Subpart C 15.407 (e)	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
Non-occupancy period	47 CFR Part 15, Subpart E 15.407	KDB 905462 D02 Section 7.8.3	KDB 905462 D02 Section 5.1	Pass
Channel Move Time	47 CFR Part 15, Subpart E 15.407	KDB 905462 D02 Section 7.8.3	KDB 905462 D02 Section 5.1	Pass
Channel Closing Transmission Time	47 CFR Part 15, Subpart E 15.407	KDB 905462 D02 Section 7.8.3	KDB 905462 D02 Section 5.1	Pass

3 Contents

	Page
1 COVER PAGE	1
2 TEST SUMMARY	3
3 CONTENTS	4
4 GENERAL INFORMATION	6
4.1 DETAILS OF E.U.T.	6
4.2 CABLE	7
4.3 DESCRIPTION OF SUPPORT UNITS	7
4.4 MEASUREMENT UNCERTAINTY	7
4.5 TEST LOCATION	8
4.6 TEST FACILITY	8
4.7 DEVIATION FROM STANDARDS	8
4.8 ABNORMALITIES FROM STANDARD CONDITIONS	8
5 EQUIPMENT LIST	9
6 RADIO SPECTRUM TECHNICAL REQUIREMENT	15
6.1 ANTENNA REQUIREMENT	15
6.1.1 Test Requirement:	15
6.1.2 Conclusion	15
6.2 TRANSMISSION IN THE ABSENCE OF DATA	16
6.2.1 Test Requirement:	16
6.2.1 Conclusion	16
7 RADIO SPECTRUM MATTER TEST RESULTS	17
7.1 CONDUCTED EMISSIONS AT AC POWER LINE (150kHz-30MHz)	17
7.1.1 E.U.T. Operation	17
7.1.2 Test Mode Description	17
7.1.3 Test Setup Diagram	18
7.1.4 Measurement Procedure and Data	18
7.2 DUTY CYCLE	21
7.2.1 E.U.T. Operation	21
7.2.2 Test Mode Description	21
7.2.3 Test Setup Diagram	22
7.2.4 Measurement Procedure and Data	22
7.3 99% BANDWIDTH	23
7.3.1 E.U.T. Operation	23
7.3.2 Test Mode Description	23
7.3.3 Test Setup Diagram	24
7.3.4 Measurement Procedure and Data	24
7.4 26dB EMISSION BANDWIDTH	25
7.4.1 E.U.T. Operation	25
7.4.2 Test Mode Description	25
7.4.3 Test Setup Diagram	26



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) 83071443, or email: CN.Doccheck@sgs.com

7.4.4	Measurement Procedure and Data.....	26
7.5	MINIMUM 6 dB BANDWIDTH (5.725-5.85 GHz BAND)	27
7.5.1	E.U.T. Operation.....	27
7.5.2	Test Mode Description	27
7.5.3	Test Setup Diagram	28
7.5.4	Measurement Procedure and Data.....	28
7.6	MAXIMUM CONDUCTED OUTPUT POWER.....	29
7.6.1	E.U.T. Operation.....	29
7.6.2	Test Mode Description	29
7.6.3	Test Setup Diagram	30
7.6.4	Measurement Procedure and Data.....	30
7.7	PEAK POWER SPECTRUM DENSITY	31
7.7.1	E.U.T. Operation.....	31
7.7.2	Test Mode Description	31
7.7.3	Test Setup Diagram	32
7.7.4	Measurement Procedure and Data.....	32
7.8	RADIATED EMISSIONS	33
7.8.1	E.U.T. Operation.....	33
7.8.2	Test Mode Description	33
7.8.3	Test Setup Diagram	34
7.8.4	Measurement Procedure and Data.....	35
7.9	RADIATED EMISSIONS WHICH FALL IN THE RESTRICTED BANDS.....	101
7.9.1	E.U.T. Operation.....	101
7.9.2	Test Mode Description	102
7.9.3	Test Setup Diagram	102
7.9.4	Measurement Procedure and Data.....	103
7.10	FREQUENCY STABILITY	162
7.10.1	E.U.T. Operation.....	162
7.10.2	Test Mode Description	162
7.10.3	Test Setup Diagram	163
7.10.4	Measurement Procedure and Data.....	163
7.11	NON-OCCUPANCY PERIOD	164
7.11.1	E.U.T. Operation.....	165
7.11.2	Test Mode Description	165
7.11.3	Test Setup Diagram	166
7.11.4	Measurement Procedure and Data.....	167
7.12	CHANNEL MOVE TIME	168
7.12.1	E.U.T. Operation.....	169
7.12.2	Test Mode Description	169
7.12.3	Test Setup Diagram	170
7.12.4	Measurement Procedure and Data.....	171
7.13	CHANNEL CLOSING TRANSMISSION TIME	172
7.13.1	E.U.T. Operation.....	173
7.13.2	Test Setup Diagram	174
7.13.3	Measurement Procedure and Data.....	175
8	TEST SETUP PHOTO.....	176
9	EUT CONSTRUCTIONAL DETAILS (EUT PHOTOS)	176
10	APPENDIX.....	177-277



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) 83071443, or email: 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

4 General Information

4.1 Details of E.U.T.

Power Supply:	Adapter: Model No.: LVMC0029 Input: AC 100-240V 50/60Hz 1.5A Max Output: USB 1: DC 5.0V/3A 15.0W,9.0V/3.0A 27.0W,12.0V/3.0A 36W,15.0V/3.0A 45.0W,20.0V/2.25A 45.0W USB 2: DC 5.0V/3A 15.0W,9.0V/2.0A 18.0W,12.0V/1.5A 18.0W USB 1+2:48W			
Antenna Gain:	Antenna 1(Black): Band 3:2.56dBi Band 4:2.72dBi Antenna 2(Gray): Band 3:3.53dBi Band 4:2.97dBi			
Antenna Type:	Integral Antenna			
TPC Function:	Without TPC function			
DFS Function:	Slave without Radar detection			
Channel Spacing:	802.11a/n(HT20)/ac(HT20): 20MHz; 802.11n(HT40)/ac(HT40): 40MHz; 802.11ac(HT80): 80MHz			
Moudulation Type:	802.11a: OFDM (64QAM, 16QAM, QPSK, BPSK); 802.11n: OFDM (BPSK, QPSK, 16QAM, 64QAM); 802.11ac: OFDM (BPSK, QPSK, 16QAM, 64QAM, 256QAM)			
Operation Frequency (80MHz):	U-NII-2C: 5530-5610MHz; U-NII-3: 5775MHz			
Operation Frequency (40MHz):	U-NII-2C: 5510-5670MHz; U-NII-3: 5755-5795MHz			
Operation Frequency (20MHz):	U-NII-2C: 5500-5700MHz; U-NII-3: 5745-5825MHz			
Operation Frequency:	Band	Mode	Frequency Range(MHz)	Number of channels
	UNII Band II-C	IEEE 802.11a	5500-5700	11
		IEEE 802.11n/ac 20MHz	5500-5700	11
		IEEE 802.11n/ac 40MHz	5510-5670	5
		IEEE 802.11ac 80MHz	5530-5610	2
	UNII Band III	IEEE 802.11a	5745-5825	5
		IEEE 802.11n/ac 20MHz	5745-5825	5
		IEEE 802.11n/ac 40MHz	5755-5795	2
		IEEE 802.11ac 80MHz	5775	1
Type of Modulation:	IEEE 802.11a: OFDM(BPSK/QPSK/16QAM/64QAM) IEEE 802.11n: OFDM(BPSK/QPSK/16QAM/64QAM) IEEE 802.11ac: OFDM (BPSK/QPSK/16QAM/64QAM/256QAM)			

4.2 Cable

Cable	Length	Shielding	Core
Type-C 1	300cm	Unshielded	Non-Core
Type-C 2	100cm	Unshielded	Non-Core

4.3 Description of Support Units

Description	Manufacturer	Model No.	Serial No.
--	--	--	--

The EUT has been tested as an independent unit.

4.4 Measurement Uncertainty

Test Item	Measurement Uncertainty
Conducted Emissions at AC Power Line (150kHz-30MHz)	$\pm 3.0\text{dB}$ (150kHz to 30MHz)
Duty Cycle	$\pm 0.37\%$
99% Bandwidth	$\pm 3\%$
26dB Emission bandwidth	$\pm 3\%$
Minimum 6 dB bandwidth (5.725-5.85 GHz band)	$\pm 3\%$
Maximum Conducted output power	$\pm 0.75\text{dB}$
Peak Power spectrum density	$\pm 2.84\text{dB}$
Radiated Emissions	$\pm 4.8\text{dB}$
Radiated Emissions which fall in the restricted bands	$\pm 4.5\text{dB}$ (below 1GHz); $\pm 4.8\text{dB}$ (above 1GHz);
Frequency Stability	$\pm 7.25 \times 10^{-8}$

Remark:

The U_{lab} (lab Uncertainty) is less than U_{CISPR} (CISPR Uncertainty), so the test results

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

4.5 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.

4.6 Test Facility

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

- **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.

4.7 Deviation from Standards

None

4.8 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

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	2019-06-13	2022-06-12
EMI Test Receiver	Rohde&Schwarz	ESCI	SEM004-02	2020-03-24	2021-03-23
Switch	WEINSCHEL ENGINEERING	1506A	SEN009-01	N/A	N/A
Matching Pad	anzac	PT-75	SEN009-02	N/A	N/A
Measurement Software	AUDIX	e3 V8.2014-6-27	N/A	N/A	N/A
Coaxial Cable	SGS	N/A	SEM024-01	2020-07-10	2021-07-09
LISN	Rohde&Schwarz	ENV216	SEM007-01	2020-09-23	2021-09-22
LISN	ETS-LINDGREN	3816/2	SEM007-02	2020-04-01	2021-03-31

Duty Cycle					
Equipment	Manufacturer	Model No	Inventory No	Cal Date	Cal Due Date
Shielding Room	SAEMC	MSR733	SEM001-09	2019-06-13	2022-06-12
DC Power Supply	Rohde & Schwarz	NGSM 32/10	SEM011-04	2020-03-24	2021-03-23
Spectrum Analyzer	Rohde & Schwarz	FSU43	SEM004-08	2020-04-01	2021-03-31
Signal Generator	KEYSIGHT	N5173B	SEM006-05	2020-09-23	2021-09-22
Measurement Software	TST	TST PASS V1.0.5	N/A	N/A	N/A
Coaxial Cable	SGS	N/A	SEM031-02	2020-07-10	2021-07-09
Attenuator	Huber+Suhner	6620_SMA-50-1	SEM021-09	2020-05-21	2021-05-20
Programmable Temperature & Humidity Chamber	Votsch Industrietechnik GmbH	VT 4002	SEM002-15	2020-03-25	2021-03-24

99% Bandwidth					
Equipment	Manufacturer	Model No	Inventory No	Cal Date	Cal Due Date
Shielding Room	SAEMC	MSR733	SEM001-09	2019-06-13	2022-06-12
DC Power Supply	Rohde & Schwarz	NGSM 32/10	SEM011-04	2020-03-24	2021-03-23
Spectrum Analyzer	Rohde & Schwarz	FSU43	SEM004-08	2020-04-01	2021-03-31
Signal Generator	KEYSIGHT	N5173B	SEM006-05	2020-09-23	2021-09-22
Measurement Software	TST	TST PASS V1.0.5	N/A	N/A	N/A
Coaxial Cable	SGS	N/A	SEM031-02	2020-07-10	2021-07-09
Attenuator	Huber+Suhner	6620_SMA-50-1	SEM021-09	2020-05-21	2021-05-20



Programmable Temperature & Humidity Chamber	Votsch Industrietechnik GmbH	VT 4002	SEM002-15	2020-03-25	2021-03-24
---	------------------------------	---------	-----------	------------	------------

26dB Emission bandwidth

Equipment	Manufacturer	Model No	Inventory No	Cal Date	Cal Due Date
Shielding Room	SAEMC	MSR733	SEM001-09	2019-06-13	2022-06-12
DC Power Supply	Rohde & Schwarz	NGSM 32/10	SEM011-04	2020-03-24	2021-03-23
Spectrum Analyzer	Rohde & Schwarz	FSU43	SEM004-08	2020-04-01	2021-03-31
Signal Generator	KEYSIGHT	N5173B	SEM006-05	2020-09-23	2021-09-22
Measurement Software	TST	TST PASS V1.0.5	N/A	N/A	N/A
Coaxial Cable	SGS	N/A	SEM031-02	2020-07-10	2021-07-09
Attenuator	Huber+Suhner	6620_SMA-50-1	SEM021-09	2020-05-21	2021-05-20
Programmable Temperature & Humidity Chamber	Votsch Industrietechnik GmbH	VT 4002	SEM002-15	2020-03-25	2021-03-24

Minimum 6 dB bandwidth (5.725-5.85 GHz band)

Equipment	Manufacturer	Model No	Inventory No	Cal Date	Cal Due Date
Shielding Room	SAEMC	MSR733	SEM001-09	2019-06-13	2022-06-12
DC Power Supply	Rohde & Schwarz	NGSM 32/10	SEM011-04	2020-03-24	2021-03-23
Spectrum Analyzer	Rohde & Schwarz	FSU43	SEM004-08	2020-04-01	2021-03-31
Signal Generator	KEYSIGHT	N5173B	SEM006-05	2020-09-23	2021-09-22
Measurement Software	TST	TST PASS V1.0.5	N/A	N/A	N/A
Coaxial Cable	SGS	N/A	SEM031-02	2020-07-10	2021-07-09
Attenuator	Huber+Suhner	6620_SMA-50-1	SEM021-09	2020-05-21	2021-05-20
Programmable Temperature & Humidity Chamber	Votsch Industrietechnik GmbH	VT 4002	SEM002-15	2020-03-25	2021-03-24

Maximum Conducted output power

Equipment	Manufacturer	Model No	Inventory No	Cal Date	Cal Due Date
Shielding Room	SAEMC	MSR733	SEM001-09	2019-06-13	2022-06-12
DC Power Supply	Rohde & Schwarz	NGSM 32/10	SEM011-04	2020-03-24	2021-03-23
Spectrum Analyzer	Rohde & Schwarz	FSU43	SEM004-08	2020-04-01	2021-03-31
Signal Generator	KEYSIGHT	N5173B	SEM006-05	2020-09-23	2021-09-22
Measurement Software	TST	TST PASS V1.0.5	N/A	N/A	N/A
Coaxial Cable	SGS	N/A	SEM031-02	2020-07-10	2021-07-09



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) 83071443, or email: 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

Attenuator	Huber+Suhner	6620_SMA-50-1	SEM021-09	2020-05-21	2021-05-20
Programmable Temperature & Humidity Chamber	Votsch Industrietechnik GmbH	VT 4002	SEM002-15	2020-03-25	2021-03-24

Peak Power spectrum density

Equipment	Manufacturer	Model No	Inventory No	Cal Date	Cal Due Date
Shielding Room	SAEMC	MSR733	SEM001-09	2019-06-13	2022-06-12
DC Power Supply	Rohde & Schwarz	NGSM 32/10	SEM011-04	2020-03-24	2021-03-23
Spectrum Analyzer	Rohde & Schwarz	FSU43	SEM004-08	2020-04-01	2021-03-31
Signal Generator	KEYSIGHT	N5173B	SEM006-05	2020-09-23	2021-09-22
Measurement Software	TST	TST PASS V1.0.5	N/A	N/A	N/A
Coaxial Cable	SGS	N/A	SEM031-02	2020-07-10	2021-07-09
Attenuator	Huber+Suhner	6620_SMA-50-1	SEM021-09	2020-05-21	2021-05-20
Programmable Temperature & Humidity Chamber	Votsch Industrietechnik GmbH	VT 4002	SEM002-15	2020-03-25	2021-03-24

Radiated 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
EXA Signal Analyzer	Agilent Technologies Inc	N9010A	SEM004-12	2020-04-09	2021-04-08
Horn Antenna	Rohde&Schwarz	HF907	SEM003-07	2018-04-13	2021-04-12
Pre-Amplifier	Compliance Directions Systems Inc.	PAP-0126	SEM004-11	2020-09-23	2021-09-22
Measurement Software	AUDIX	e3 V8.2014-6-27	N/A	N/A	N/A
Coaxial Cable	SGS	N/A	SEM026-01	2020-07-10	2021-07-09



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) 83071443, or email: 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

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
EXA Signal Analyzer	Agilent Technologies Inc	N9010A	SEM004-12	2020-04-09	2021-04-08
Horn Antenna	Rohde&Schwarz	HF907	SEM003-07	2018-04-13	2021-04-12
Pre-Amplifier	Compliance Directions Systems Inc.	PAP-0126	SEM004-11	2020-09-23	2021-09-22
Measurement Software	AUDIX	e3 V8.2014-6-27	N/A	N/A	N/A
Coaxial Cable	SGS	N/A	SEM026-01	2020-07-10	2021-07-09

Frequency Stability					
Equipment	Manufacturer	Model No	Inventory No	Cal Date	Cal Due Date
Shielding Room	SAEMC	MSR733	SEM001-09	2019-06-13	2022-06-12
DC Power Supply	Rohde & Schwarz	NGSM 32/10	SEM011-04	2020-03-24	2021-03-23
Spectrum Analyzer	Rohde & Schwarz	FSU43	SEM004-08	2020-04-01	2021-03-31
Signal Generator	KEYSIGHT	N5173B	SEM006-05	2020-09-23	2021-09-22
Measurement Software	TST	TST PASS V1.0.5	N/A	N/A	N/A
Coaxial Cable	SGS	N/A	SEM031-02	2020-07-10	2021-07-09
Attenuator	Huber+Suhner	6620_SMA-50-1	SEM021-09	2020-05-21	2021-05-20
Programmable Temperature & Humidity Chamber	Votsch Industrietechnik GmbH	VT 4002	SEM002-15	2020-03-25	2021-03-24

Non-occupancy period					
Equipment	Manufacturer	Model No	Inventory No	Cal Date	Cal Due Date
Shielding Room	SAEMC	MSR433	SEM001-11	2019-06-13	2022-06-12
EXA Signal Analyzer	KEYSIGHT	N9010A	SEM004-09	2020-04-09	2021-04-08
Signal Generator	KEYSIGHT	N5171B	SEM006-13	2020-03-23	2021-03-22
MXG Vector Signal Generator	KEYSIGHT	N5182A	SEM006-14	2020-03-23	2021-03-22
ESG Vector Signal Generator	KEYSIGHT	E4438C	SEM006-15	2020-09-23	2021-09-22
DC Power Supply	KEYSIGHT	E3642A	SEM011-07	2020-03-23	2021-03-22
Manual Step Attenuator	KEYSIGHT	8494B	SEM021-05	2020-04-09	2021-04-08
Manual Step Attenuator	KEYSIGHT	8496B	SEM021-06	2020-04-09	2021-04-08



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

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

Programmable Temperature&Humidity Chamber	Votsch Industrietechnik GmbH	VT 4002	SEM002-15	2020-03-25	2021-03-24
Universal Radio Communication Tester	Rohde&Schwarz	CMW500	SEM010-03	2020-04-01	2021-03-31
Measurement Software	JS Tonscend	JS1120-2 BT/WIFI V2.6	N/A	N/A	N/A
Coaxial Cable	SGS	N/A	SEM028-01	2020-07-10	2021-07-09

Channel Move Time					
Equipment	Manufacturer	Model No	Inventory No	Cal Date	Cal Due Date
Shielding Room	SAEMC	MSR433	SEM001-11	2019-06-13	2022-06-12
EXA Signal Analyzer	KEYSIGHT	N9010A	SEM004-09	2020-04-09	2021-04-08
Signal Generator	KEYSIGHT	N5171B	SEM006-13	2020-03-23	2021-03-22
MXG Vector Signal Generator	KEYSIGHT	N5182A	SEM006-14	2020-03-23	2021-03-22
ESG Vector Signal Generator	KEYSIGHT	E4438C	SEM006-15	2020-09-23	2021-09-22
DC Power Supply	KEYSIGHT	E3642A	SEM011-07	2020-03-23	2021-03-22
Manual Step Attenuator	KEYSIGHT	8494B	SEM021-05	2020-04-09	2021-04-08
Manual Step Attenuator	KEYSIGHT	8496B	SEM021-06	2020-04-09	2021-04-08
Programmable Temperature&Humidity Chamber	Votsch Industrietechnik GmbH	VT 4002	SEM002-15	2020-03-25	2021-03-24
Universal Radio Communication Tester	Rohde&Schwarz	CMW500	SEM010-03	2020-04-01	2021-03-31
Measurement Software	JS Tonscend	JS1120-2 BT/WIFI V2.6	N/A	N/A	N/A
Coaxial Cable	SGS	N/A	SEM028-01	2020-07-10	2021-07-09

Channel Closing Transmission Time					
Equipment	Manufacturer	Model No	Inventory No	Cal Date	Cal Due Date
Shielding Room	SAEMC	MSR433	SEM001-11	2019-06-13	2022-06-12
EXA Signal Analyzer	KEYSIGHT	N9010A	SEM004-09	2020-04-09	2021-04-08
Signal Generator	KEYSIGHT	N5171B	SEM006-13	2020-03-23	2021-03-22
MXG Vector Signal Generator	KEYSIGHT	N5182A	SEM006-14	2020-03-23	2021-03-22
ESG Vector Signal Generator	KEYSIGHT	E4438C	SEM006-15	2020-09-23	2021-09-22
DC Power Supply	KEYSIGHT	E3642A	SEM011-07	2020-03-23	2021-03-22
Manual Step Attenuator	KEYSIGHT	8494B	SEM021-05	2020-04-09	2021-04-08
Manual Step Attenuator	KEYSIGHT	8496B	SEM021-06	2020-04-09	2021-04-08



Unless otherwise agreed in writing, this document is issued by the Company subject to its General Conditions of Service printed overleaf, available on request or accessible at <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) 83071443, or email: CN.Doccheck@sgs.com

SGS-CSTC Standards Technical Services Co., Ltd.
Shenzhen Branch • 科技园中区M-10栋一号厂房
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

Programmable Temperature&Humidity Chamber	Votsch Industrietechnik GmbH	VT 4002	SEM002-15	2020-03-25	2021-03-24
Universal Radio Communication Tester	Rohde&Schwarz	CMW500	SEM010-03	2020-04-01	2021-03-31
Measurement Software	JS Tonscend	JS1120-2 BT/WIFI V2.6	N/A	N/A	N/A
Coaxial Cable	SGS	N/A	SEM028-01	2020-07-10	2021-07-09

General used equipment

Equipment	Manufacturer	Model No	Inventory No	Cal Date	Cal Due Date
Humidity/ Temperature Indicator	Shanghai Meteorological Industry Factory	ZJ1-2B	SEM002-04	2020-09-15	2021-09-14
Humidity/ Temperature Indicator	Mingle	N/A	SEM002-08	2020-09-15	2021-09-14
Barometer	Changchun Meteorological Industry Factory	DYM3	SEM002-01	2020-04-07	2021-04-06



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 a 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 Antenna: Antenna 1(Block):Band 3:2.56dBi Band 4:2.72dBi, Antenna 2(Gray):Band 3:3.53dBi Band 4:2.97dBi

Antenna location: Refer to Internal photos

6.2 Transmission in the Absence of Data

6.2.1 Test Requirement:

47 CFR Part 15, Subpart C 15.407 (c)

6.2.1 Conclusion

standard Requirement:

The device shall automatically discontinue transmission in cases of absence of information to transmit, or operational failure. A description on how this is done shall accompany the application for equipment certification. Note that this is not intended to prohibit transmission of control or signalling information or the use of repetitive codes where required by the technology.

EUT Details:

WIFI chip 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(dB μ V)	
	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

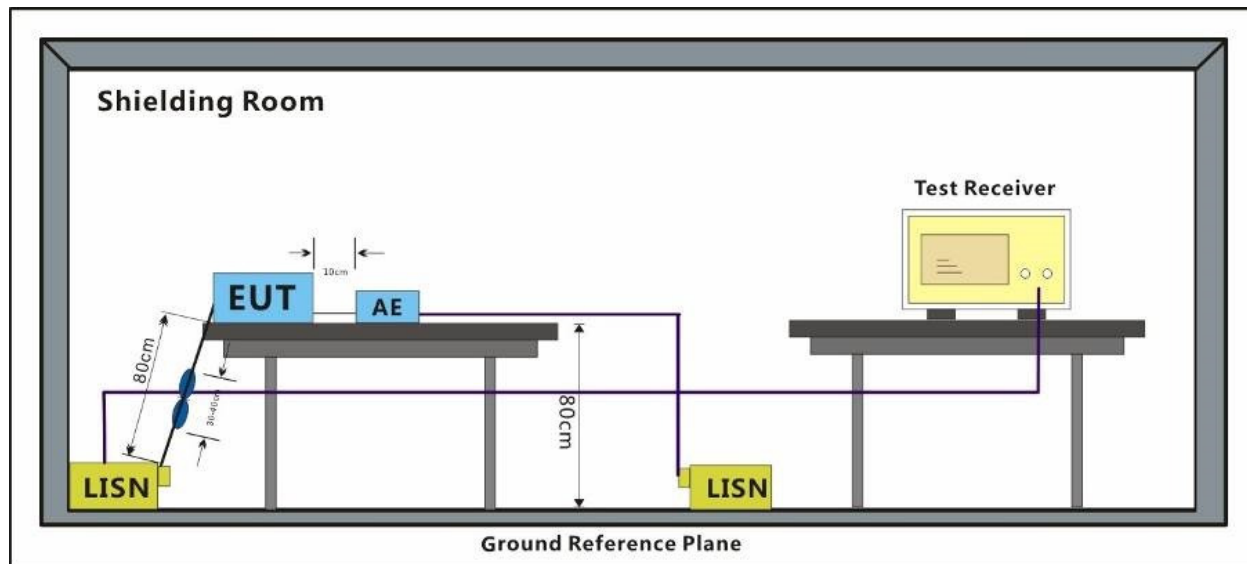
Operating Environment:

Temperature: 23.1 °C Humidity: 40.2 % RH Atmospheric Pressure: 1010 mbar

7.1.2 Test Mode Description

Pre-scan / Final test	Mode Code	Description
Final test	09	TX mode (U-NII-2C)_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.
Pre-scan	10	TX mode (U-NII-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.

7.1.3 Test Setup Diagram

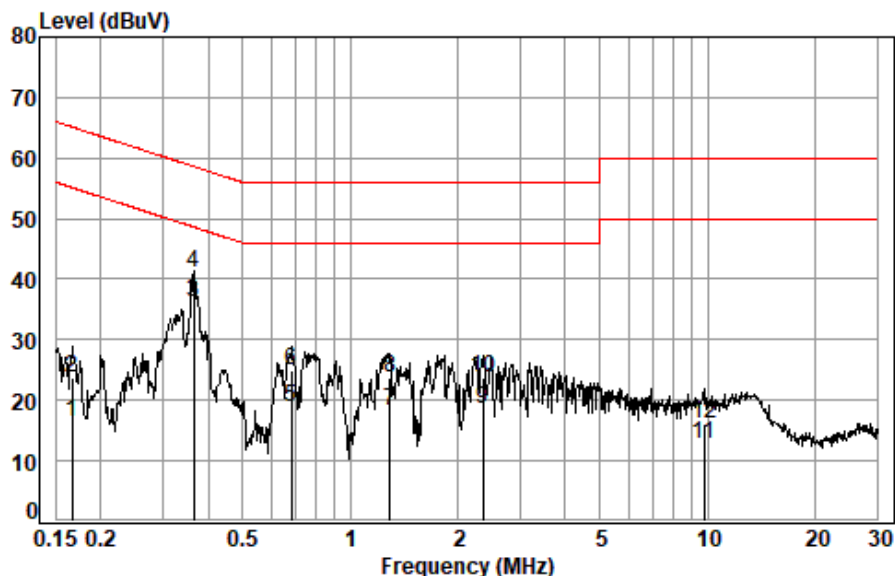


7.1.4 Measurement Procedure and Data

- 1) The mains terminal disturbance voltage test was conducted in a shielded room.
- 2) The EUT was connected to AC power source through a LISN 1 (Line Impedance Stabilization Network) which provides a 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

Test Mode: 09; Line: Live line

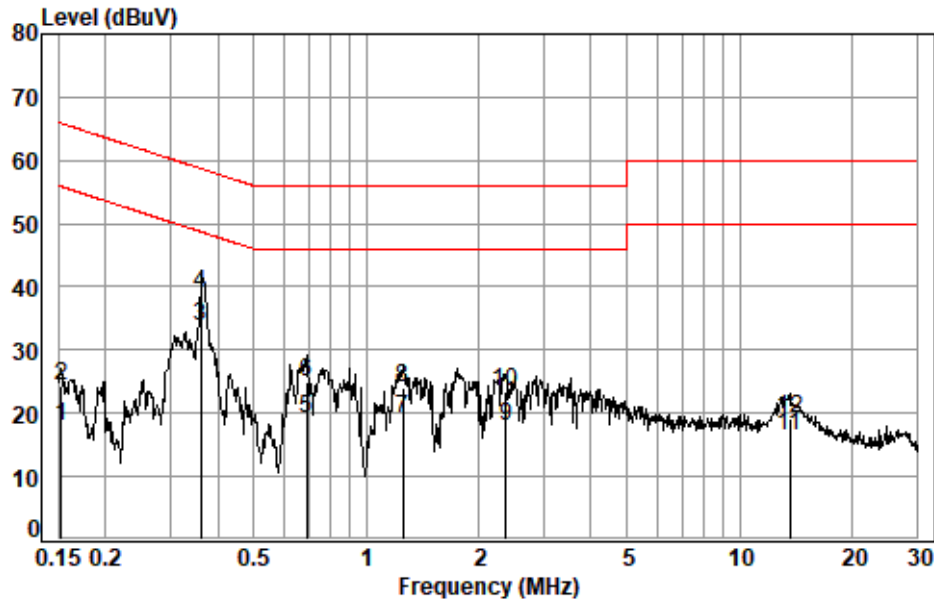


Site : Shielding Room
Condition: Line
Job No. : 12337CR
Test mode: 09

	Freq	Cable Loss	LISN Factor	Read Level	Level	Limit Line	Over Limit	Remark
	MHz	dB	dB	dBuV	dBuV	dBuV	dB	
1	0.1668	0.03	9.71	6.57	16.31	55.12	-38.81	Average
2	0.1668	0.03	9.71	14.08	23.82	65.12	-41.30	QP
3	0.3653	0.06	9.75	26.47	36.28	48.61	-12.33	Average
4	0.3653	0.06	9.75	31.31	41.12	58.61	-17.49	QP
5	0.6863	0.09	9.77	8.95	18.81	46.00	-27.19	Average
6	0.6863	0.09	9.77	15.09	24.95	56.00	-31.05	QP
7	1.2892	0.11	9.79	8.28	18.18	46.00	-27.82	Average
8	1.2892	0.11	9.79	13.92	23.82	56.00	-32.18	QP
9	2.3585	0.13	9.82	8.64	18.59	46.00	-27.41	Average
10	2.3585	0.13	9.82	13.71	23.66	56.00	-32.34	QP
11	9.8085	0.16	10.18	2.54	12.88	50.00	-37.12	Average
12	9.8085	0.16	10.18	5.78	16.12	60.00	-43.88	QP



Test Mode: 09; Line: Neutral Line



Site : Shielding Room
Condition: Neutral
Job No. : 12337CR
Test mode: 09

	Freq	Cable Loss	LISN Factor	Read Level	Level	Limit Line	Over Limit	Remark
	MHz	dB	dB	dBuV	dBuV	dBuV	dB	
1	0.1524	0.03	9.71	8.20	17.94	55.87	-37.93	Average
2	0.1524	0.03	9.71	14.55	24.29	65.87	-41.58	QP
3	0.3615	0.06	9.75	23.81	33.62	48.69	-15.07	Average
4	0.3615	0.06	9.75	29.15	38.96	58.69	-19.73	QP
5	0.6936	0.09	9.77	9.44	19.30	46.00	-26.70	Average
6	0.6936	0.09	9.77	15.04	24.90	56.00	-31.10	QP
7	1.2555	0.11	9.79	9.34	19.24	46.00	-26.76	Average
8	1.2555	0.11	9.79	14.17	24.07	56.00	-31.93	QP
9	2.3710	0.13	9.82	8.13	18.08	46.00	-27.92	Average
10	2.3710	0.13	9.82	13.44	23.39	56.00	-32.61	QP
11	13.6228	0.16	10.45	5.71	16.32	50.00	-33.68	Average
12	13.6228	0.16	10.45	8.54	19.15	60.00	-40.85	QP



Unless otherwise agreed in writing, this document is issued by the Company subject to its General Conditions of Service printed overleaf, available on request or accessible at <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.

7.2 Duty Cycle

Test Requirement KDB 789033 D02 II B 1
Test Method: KDB 789033 II B 1

7.2.1 E.U.T. Operation

Operating Environment:
Temperature: 26.8 °C Humidity: 37.1 % RH Atmospheric Pressure: 1010 mbar

7.2.2 Test Mode Description

Pre-scan / Final test	Mode Code	Description
Final test	09	TX mode (U-NII-2C)_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.
Final test	10	TX mode (U-NII-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.

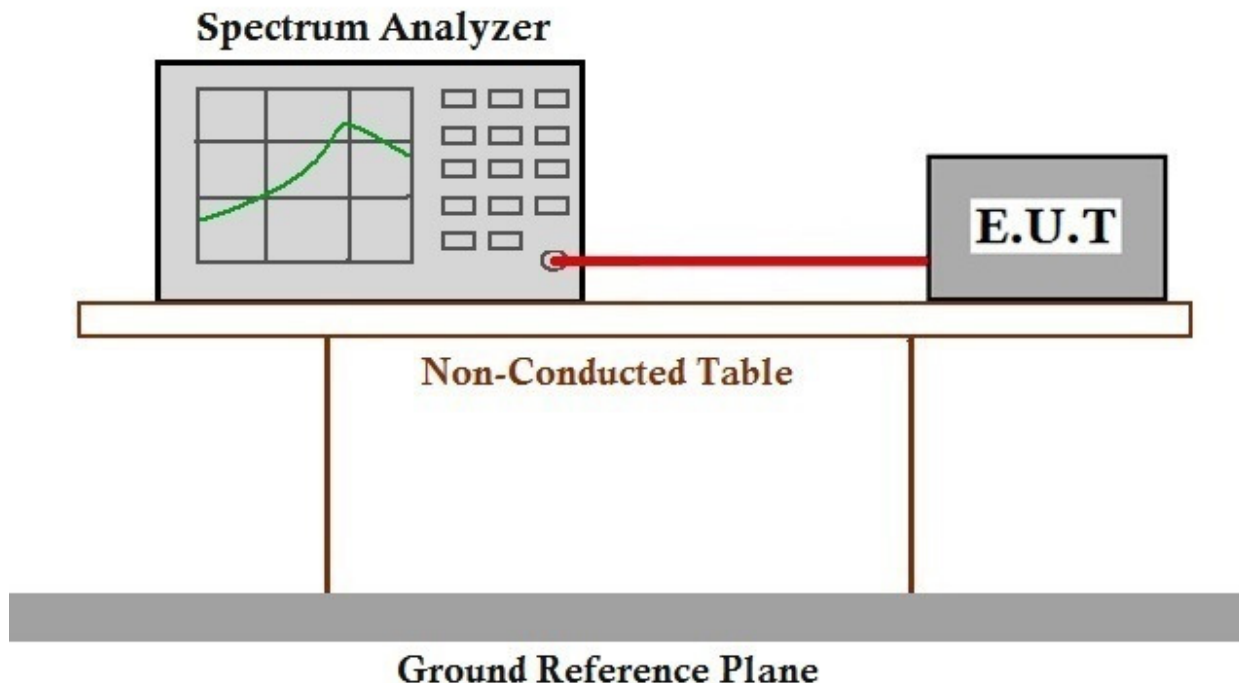


Unless otherwise agreed in writing, this document is issued by the Company subject to its General Conditions of Service printed overleaf, available on request or accessible at <http://www.sgs.com/en/Terms-and-Conditions.aspx> and, for electronic format documents, subject to Terms and Conditions for Electronic 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) 83071443, or email: 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

7.2.3 Test Setup Diagram



7.2.4 Measurement Procedure and Data

Please Refer To Appendix For Details



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

SGS-CSTC Standards Technical Services 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

7.3 99% Bandwidth

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

7.3.1 E.U.T. Operation

Operating Environment:
Temperature: 26.8 °C Humidity: 37.1 % RH Atmospheric Pressure: 1010 mbar

7.3.2 Test Mode Description

Pre-scan / Final test	Mode Code	Description
Final test	09	TX mode (U-NII-2C)_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.
Final test	10	TX mode (U-NII-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.

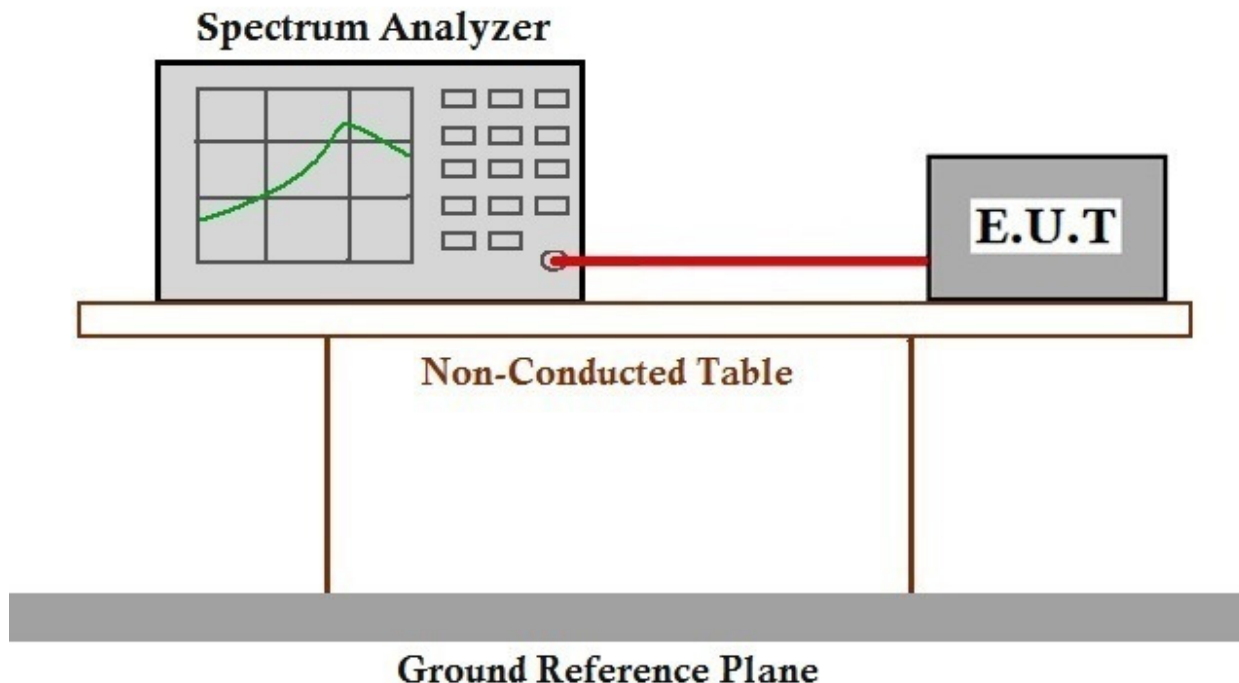


Unless otherwise agreed in writing, this document is issued by the Company subject to its General Conditions of Service printed overleaf, available on request or accessible at <http://www.sgs.com/en/Terms-and-Conditions.aspx> and, for electronic format documents, subject to Terms and Conditions for Electronic 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) 83071443, or email: 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

7.3.3 Test Setup Diagram



7.3.4 Measurement Procedure and Data

Please Refer To Appendix For Details



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

SGS-CSTC Standards Technical Services 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

7.4 26dB Emission bandwidth

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

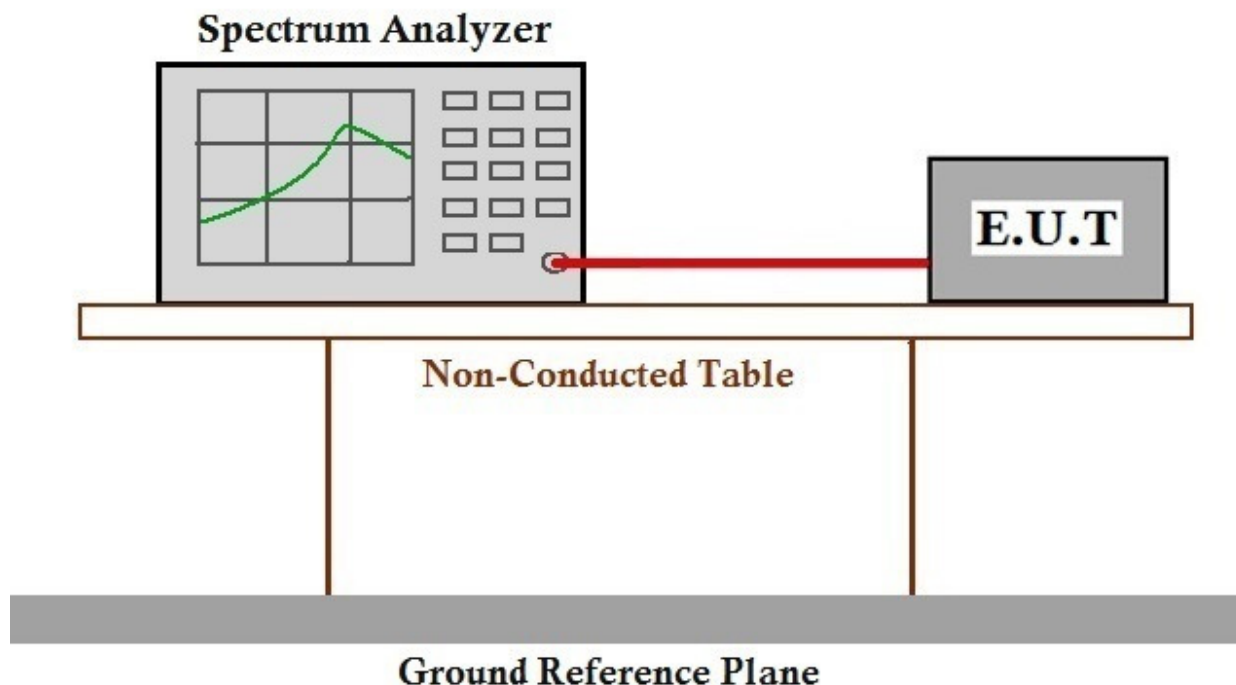
7.4.1 E.U.T. Operation

Operating Environment:
Temperature: 26.8 °C Humidity: 37.1 % RH Atmospheric Pressure: 1010 mbar

7.4.2 Test Mode Description

Pre-scan / Final test	Mode Code	Description
Final test	09	TX mode (U-NII-2C)_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.
Final test	10	TX mode (U-NII-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.

7.4.3 Test Setup Diagram



7.4.4 Measurement Procedure and Data

Please Refer To Appendix For Details

7.5 Minimum 6 dB bandwidth (5.725-5.85 GHz band)

Test Requirement 47 CFR Part 15, Subpart C 15.407 (e)
Test Method: KDB 789033 D02 II C 2

Limit:

Frequency band(MHz)	Limit
5725-5850	≥500 kHz

7.5.1 E.U.T. Operation

Operating Environment:

Temperature: 26.8 °C Humidity: 37.1 % RH Atmospheric Pressure: 1010 mbar

7.5.2 Test Mode Description

Pre-scan / Final test	Mode Code	Description
Final test	10	TX mode (U-NII-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.

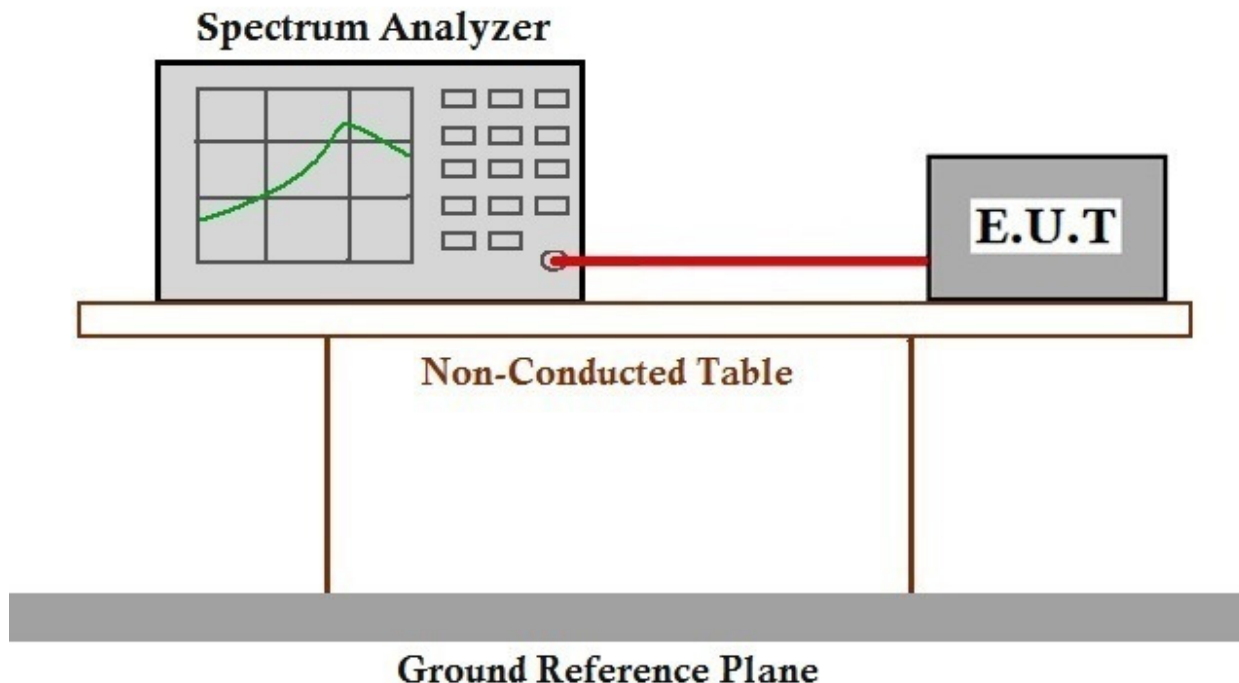


Unless otherwise agreed in writing, this document is issued by the Company subject to its General Conditions of Service printed overleaf, available on request or accessible at <http://www.sgs.com/en/Terms-and-Conditions.aspx> and, for electronic format documents, subject to Terms and Conditions for Electronic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

SGS-CSTC Standards Technical Services Co., Ltd.
Shenzhen Branch, China, 518057, EEC 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

7.5.3 Test Setup Diagram



7.5.4 Measurement Procedure and Data

Please Refer To Appendix For Details



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

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 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>

7.6.1 E.U.T. Operation

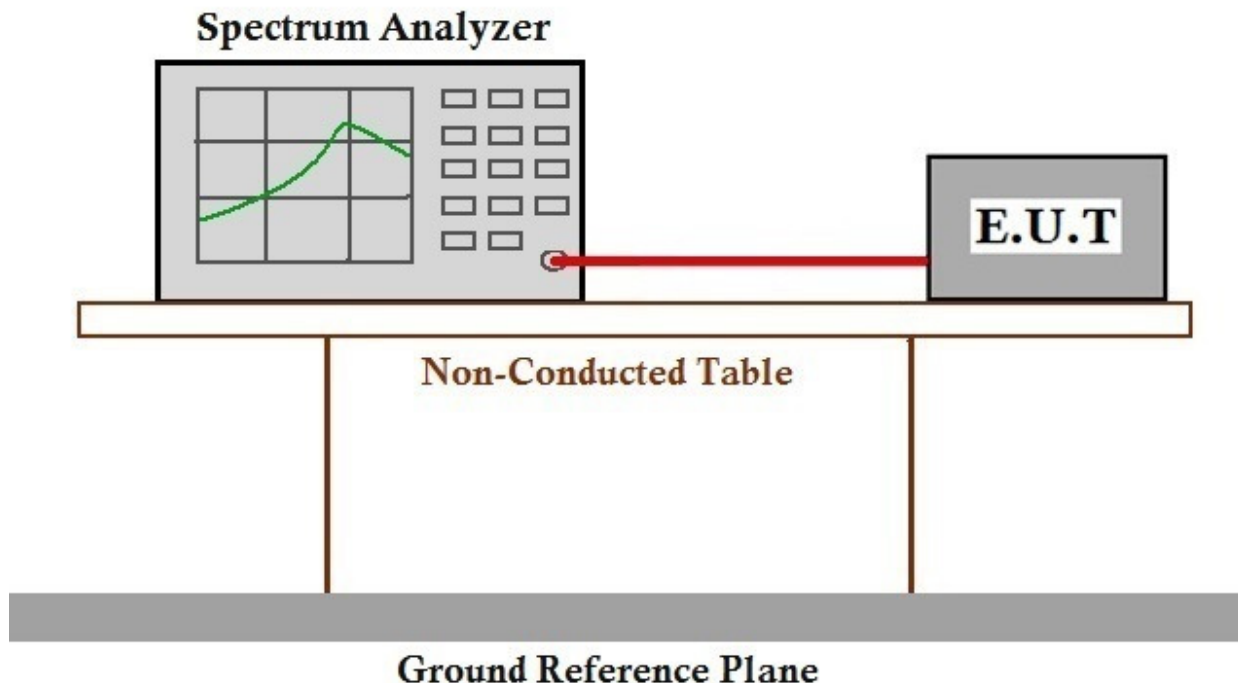
Operating Environment:

Temperature: 26.8 °C Humidity: 37.1 % RH Atmospheric Pressure: 1010 mbar

7.6.2 Test Mode Description

Pre-scan / Final test	Mode Code	Description
Final test	09	TX mode (U-NII-2C)_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.
Final test	10	TX mode (U-NII-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.

7.6.3 Test Setup Diagram



7.6.4 Measurement Procedure and Data

Please Refer To Appendix For Details



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

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

7.7 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.

7.7.1 E.U.T. Operation

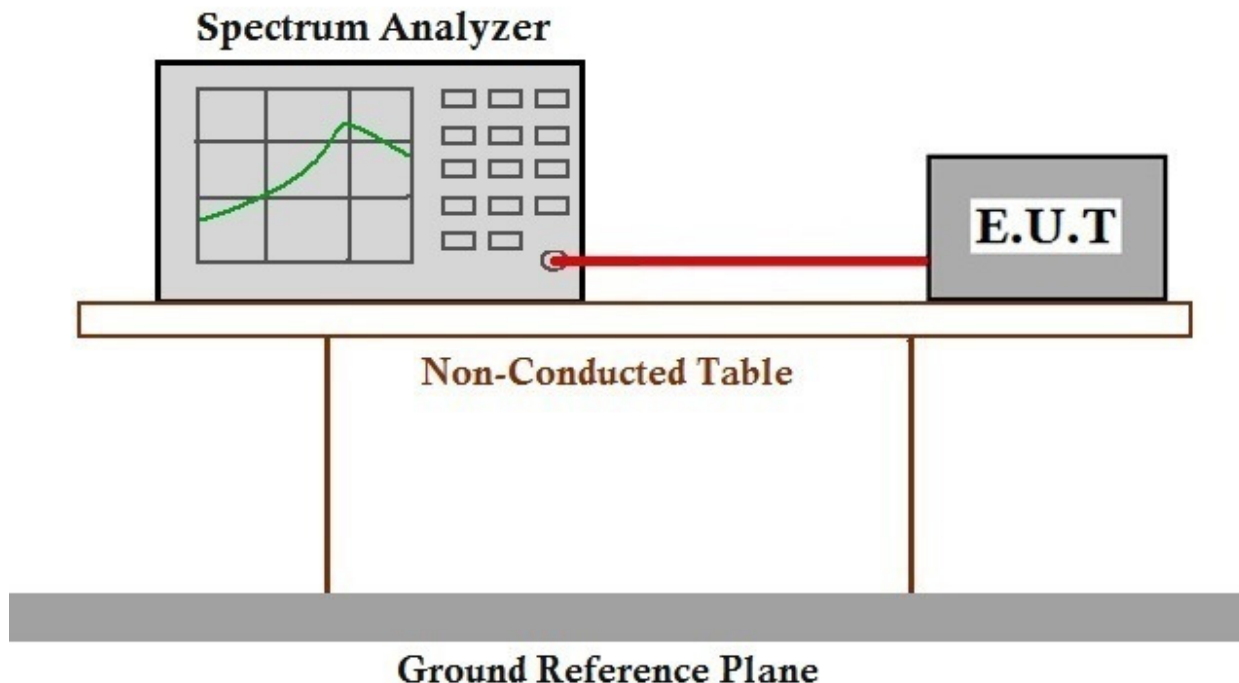
Operating Environment:

Temperature: 26.8 °C Humidity: 37.1 % RH Atmospheric Pressure: 1010 mbar

7.7.2 Test Mode Description

Pre-scan / Final test	Mode Code	Description
Final test	09	TX mode (U-NII-2C)_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.
Final test	10	TX mode (U-NII-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.

7.7.3 Test Setup Diagram



7.7.4 Measurement Procedure and Data

Please Refer To Appendix For Details



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

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 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

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

*(1) For transmitters operating in the 5.15-5.25 GHz band: All emissions outside of the 5.15-5.35 GHz band shall not exceed an e.i.r.p. of -27 dBm/MHz.

(2) For transmitters operating in the 5.25-5.35 GHz band: All emissions outside of the 5.15-5.35 GHz band shall not exceed an e.i.r.p. of -27 dBm/MHz.

(3) For transmitters operating in the 5.47-5.725 GHz band: All emissions outside of the 5.47-5.725 GHz band shall not exceed an e.i.r.p. of -27 dBm/MHz.

(4) For transmitters operating in the 5.725-5.85 GHz band:

(i) All emissions shall be limited to a level of -27 dBm/MHz at 75 MHz or more above or below the band edge increasing linearly to 10 dBm/MHz at 25 MHz above or below the band edge, and from 25 MHz above or below the band edge increasing linearly to a level of 15.6 dBm/MHz at 5 MHz above or below the band edge, and from 5 MHz above or below the band edge increasing linearly to a level of 27 dBm/MHz at the band edge.

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.

7.8.1 E.U.T. Operation

Operating Environment:
Temperature: 21.5 °C Humidity: 43.6 % RH Atmospheric Pressure: 1010 mbar

7.8.2 Test Mode Description

Pre-scan / Final test	Mode Code	Description
--------------------------	--------------	-------------

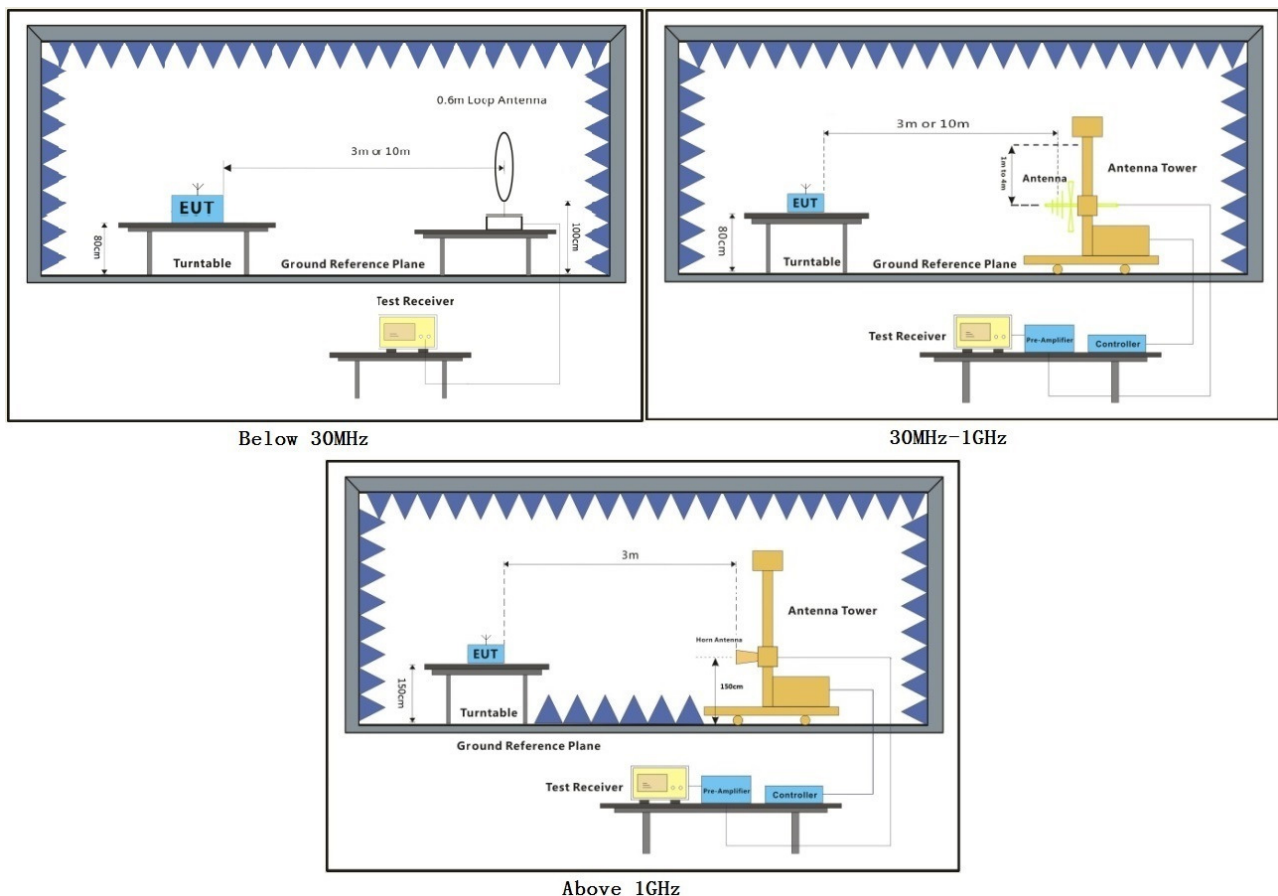


Unless otherwise agreed in writing, this document is issued by the Company subject to its General Conditions of Service printed overleaf, available on request or accessible at <http://www.sgs.com/en/Terms-and-Conditions.aspx> and, for electronic format documents, subject to Terms and Conditions for Electronic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

Final test	09	TX mode (U-NII-2C)_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.
Final test	10	TX mode (U-NII-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.

7.8.3 Test Setup Diagram



7.8.4 Measurement Procedure and Data

- a. For above 1GHz, the EUT was placed on the top of a rotating table 1.5 meters above the ground at a 3 meter fully-anechoic chamber. The table was rotated 360 degrees to determine the position of the highest radiation.
- b. The EUT was set 3 meters away from the interference-receiving antenna, which was mounted on the top of a variable-height antenna tower.
- c. The antenna height is varied from one meter to four meters above the ground to determine the maximum value of the field strength. Both horizontal and vertical polarizations of the antenna are set to make the measurement.
- d. For each suspected emission, the EUT was arranged to its worst case and then the antenna was tuned to heights from 1 meter to 4 meters (for the test frequency of below 30MHz, the antenna was tuned to heights 1 meter) and the rotatable table was turned from 0 degrees to 360 degrees to find the maximum reading.
- e. The test-receiver system was set to Peak Detect Function and Specified Bandwidth with Maximum Hold Mode.
- f. If the emission level of the EUT in peak mode was 10dB lower than the limit specified, then testing could be stopped and the peak values of the EUT would be reported. Otherwise the emissions that did not have 10dB margin would be re-tested one by one using peak or average method as specified and then reported in a data sheet.
- g. Test the EUT in the lowest channel, the middle channel, the Highest channel.
- h. The radiation measurements are performed in X, Y, Z axis positioning for Transmitting mode, and found the X axis positioning which it is the worst case.
- i. Repeat above procedures until all frequencies measured was complete.

Remark:

1. Level= Read Level+ Cable Loss+ Antenna Factor- Preamp Factor
2. Scan from 18GHz to 40GHz, the disturbance above 18GHz was very low. The points marked on above plots are the highest emissions could be found when testing, so only above points had been displayed. The amplitude of spurious emissions from the radiator which are attenuated more than 20dB below the limit need not be reported.
3. As shown in this section, for frequencies above 1GHz, the field strength limits are based on average limits. However, the peak field strength of any emission shall not exceed the maximum permitted average limits specified above by more than 20 dB under any condition of modulation. For the emissions whose peak level is lower than the average limit, only the peak measurement is shown in the report.



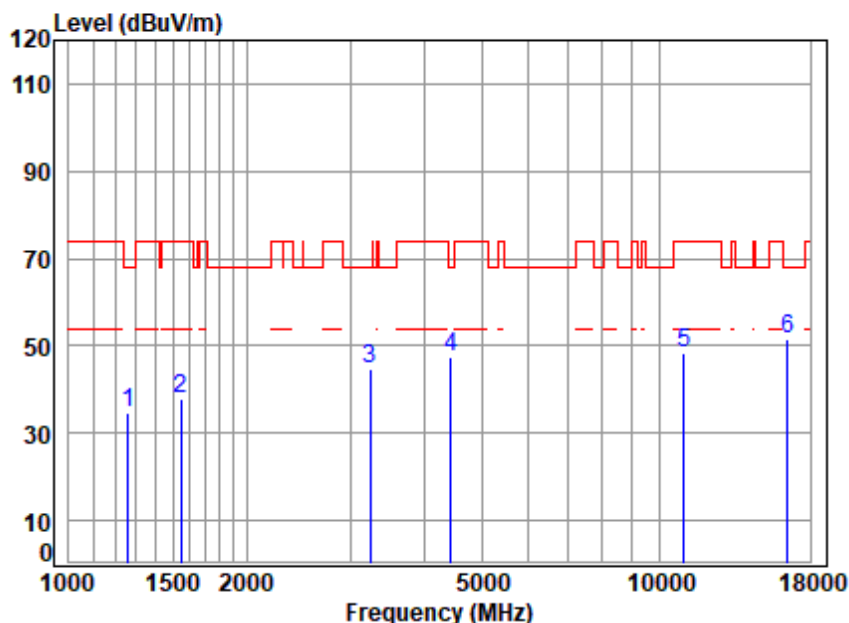
Unless otherwise agreed in writing, this document is issued by the Company subject to its General Conditions of Service printed overleaf, available on request or accessible at <http://www.sgs.com/en/Terms-and-Conditions.aspx> and, for electronic format documents, subject to Terms and Conditions for Electronic 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) 83071443, or email: 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.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

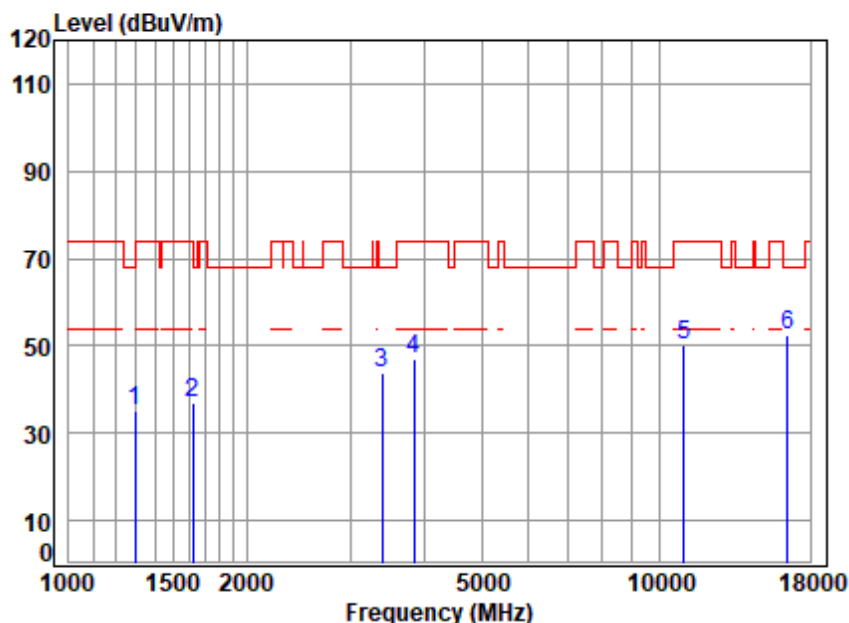
Test Mode: 09; Polarity: Horizontal; Modulation:802.11a; Bandwidth:20MHz; Channel:Low



Site : chamber
Condition: 3m HORIZONTAL
Job No : 12337CR\12340CR
Mode : 5500 TX RSE
Note : 5G WIFI 11A

	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	1260.149	2.87	24.85	39.80	46.70	34.62	68.20	-33.58	peak
2	1547.199	3.30	26.02	39.98	48.33	37.67	74.00	-36.33	peak
3	3233.260	5.18	31.29	40.88	49.24	44.83	68.20	-23.37	peak
4	4430.628	6.70	33.48	41.81	49.15	47.52	68.20	-20.68	peak
5	11000.000	10.97	37.80	37.62	37.34	48.49	74.00	-25.51	peak
6	16500.000	14.82	42.20	40.47	34.99	51.54	68.20	-16.66	peak

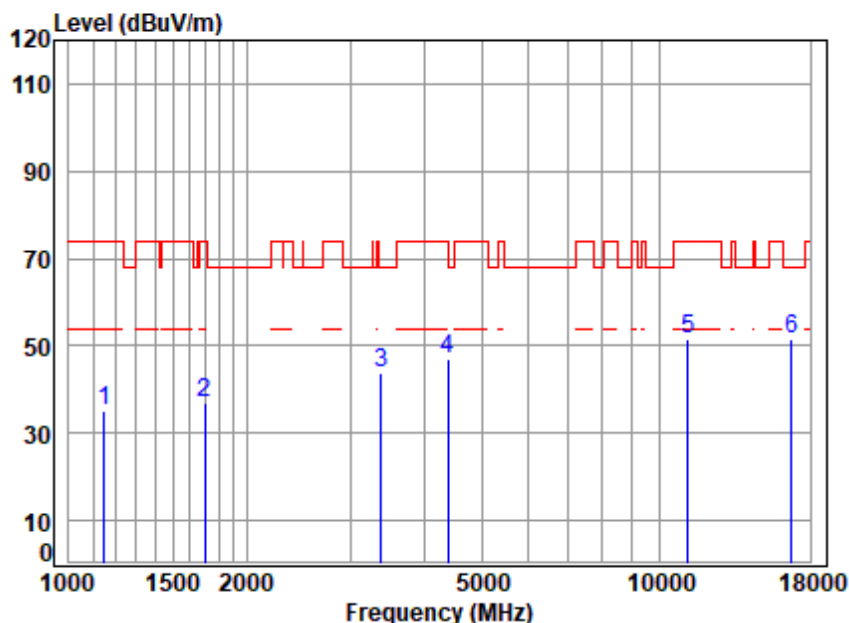
Test Mode: 09; Polarity: Vertical; Modulation:802.11a; Bandwidth:20MHz; Channel:Low



Site : chamber
Condition: 3m VERTICAL
Job No : 12337CR\12340CR
Mode : 5500 TX RSE
Note : 5G WIFI 11A

	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	1297.103	2.94	25.01	39.83	47.10	35.22	68.20	-32.98	peak
2	1625.121	3.37	26.36	40.02	47.28	36.99	74.00	-37.01	peak
3	3396.098	5.39	31.54	41.00	47.89	43.82	68.20	-24.38	peak
4	3845.537	6.06	32.41	41.30	49.67	46.84	74.00	-27.16	peak
5	11000.000	10.97	37.80	37.62	39.26	50.41	74.00	-23.59	peak
6	16500.000	14.82	42.20	40.47	35.78	52.33	68.20	-15.87	peak

Test Mode: 09; Polarity: Horizontal; Modulation:802.11a; Bandwidth:20MHz; Channel:middle

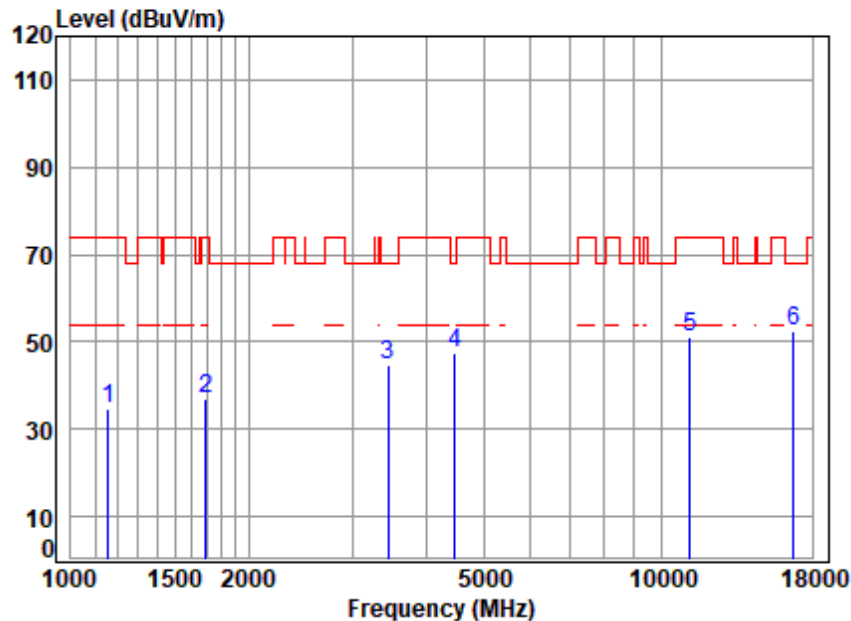


Site : chamber
Condition: 3m HORIZONTAL
Job No : 12337CR\12340CR
Mode : 5580 TX RSE
Note : 5G WIFI 11A

		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	1148.823	2.67	24.35	39.72	47.76	35.06	74.00	-38.94	peak
2	1697.129	3.43	26.66	40.06	47.06	37.09	74.00	-36.91	peak
3	3386.297	5.38	31.53	40.99	48.01	43.93	68.20	-24.27	peak
4	4379.699	6.65	33.39	41.77	48.60	46.87	74.00	-27.13	peak
5	11160.000	11.18	37.83	37.70	40.47	51.78	74.00	-22.22	peak
6	16740.000	14.51	42.39	40.41	34.92	51.41	68.20	-16.79	peak



Test Mode: 09; Polarity: Vertical; Modulation:802.11a; Bandwidth:20MHz; Channel:middle

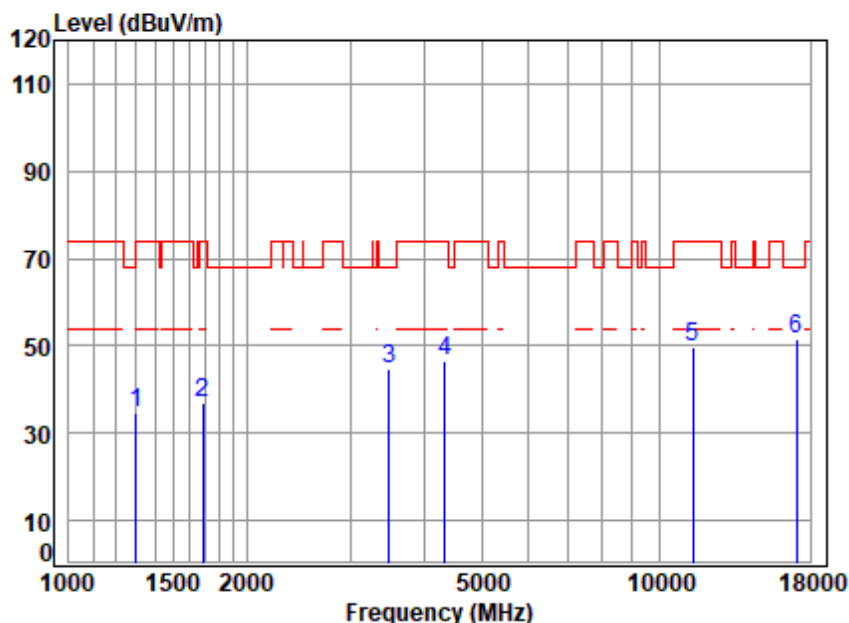


Site : chamber
Condition: 3m VERTICAL
Job No : 12337CR\12340CR
Mode : 5580 TX RSE
Note : 5G WIFI 11A

		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	1155.483	2.68	24.38	39.73	47.56	34.89	74.00	-39.11	peak
2	1692.231	3.42	26.64	40.06	47.11	37.11	74.00	-36.89	peak
3	3445.535	5.45	31.62	41.04	48.78	44.81	68.20	-23.39	peak
4	4469.214	6.73	33.55	41.85	48.84	47.27	68.20	-20.93	peak
5	11160.000	11.18	37.83	37.70	39.74	51.05	74.00	-22.95	peak
6	16740.000	14.51	42.39	40.41	36.06	52.55	68.20	-15.65	peak



Test Mode: 09; Polarity: Horizontal; Modulation:802.11a; Bandwidth:20MHz; Channel:High

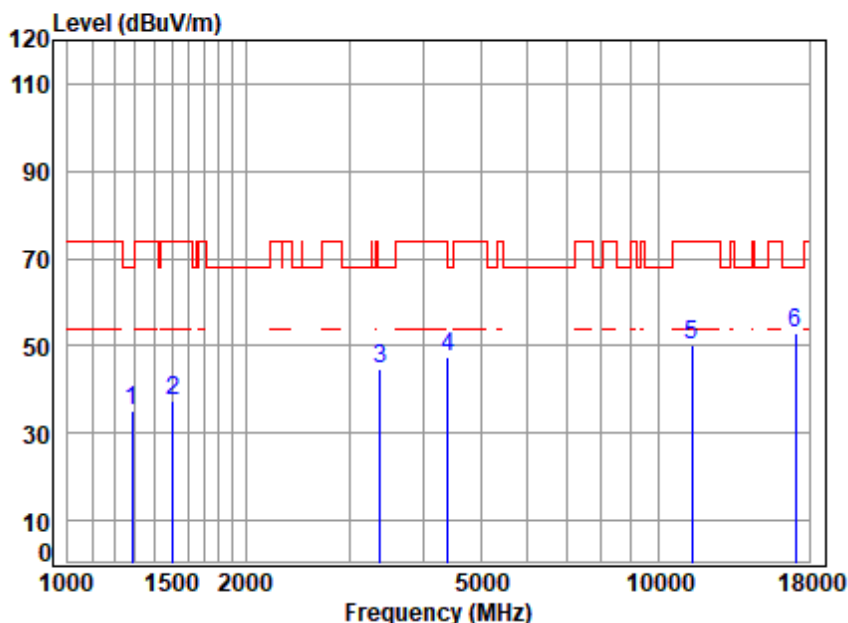


Site : chamber
Condition: 3m HORIZONTAL
Job No : 12337CR\12340CR
Mode : 5700 TX RSE
Note : 5G WIFI 11A

	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	1300.858	2.94	25.03	39.83	46.49	34.63	74.00	-39.37	peak
2	1687.347	3.42	26.62	40.05	46.88	36.87	74.00	-37.13	peak
3	3485.601	5.50	31.68	41.07	48.57	44.68	68.20	-23.52	peak
4	4329.354	6.60	33.30	41.72	48.57	46.75	74.00	-27.25	peak
5	11400.000	11.50	37.88	37.82	38.24	49.80	74.00	-24.20	peak
6	17100.000	14.14	42.66	40.32	35.27	51.75	68.20	-16.45	peak



Test Mode: 09; Polarity: Vertical; Modulation:802.11a; Bandwidth:20MHz; Channel:High

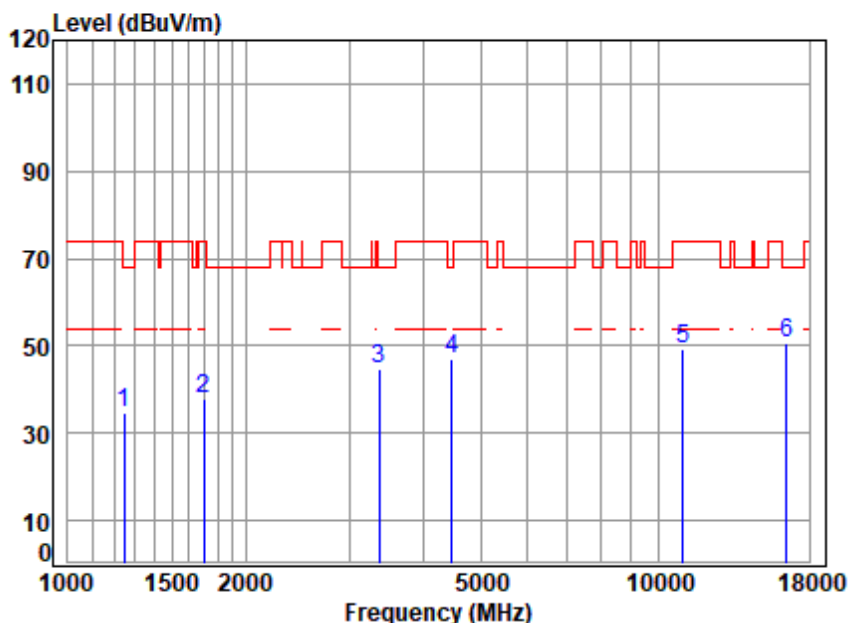


Site : chamber
Condition: 3m VERTICAL
Job No : 12337CR\12340CR
Mode : 5700 TX RSE
Note : 5G WIFI 11A

	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	1285.904	2.92	24.96	39.82	46.85	34.91	68.20	-33.29	peak
2	1507.470	3.27	25.83	39.96	48.07	37.21	74.00	-36.79	peak
3	3376.523	5.37	31.51	40.99	48.67	44.56	68.20	-23.64	peak
4	4405.090	6.67	33.44	41.79	49.26	47.58	68.20	-20.62	peak
5	11400.000	11.50	37.88	37.82	38.68	50.24	74.00	-23.76	peak
6	17100.000	14.14	42.66	40.32	36.34	52.82	68.20	-15.38	peak



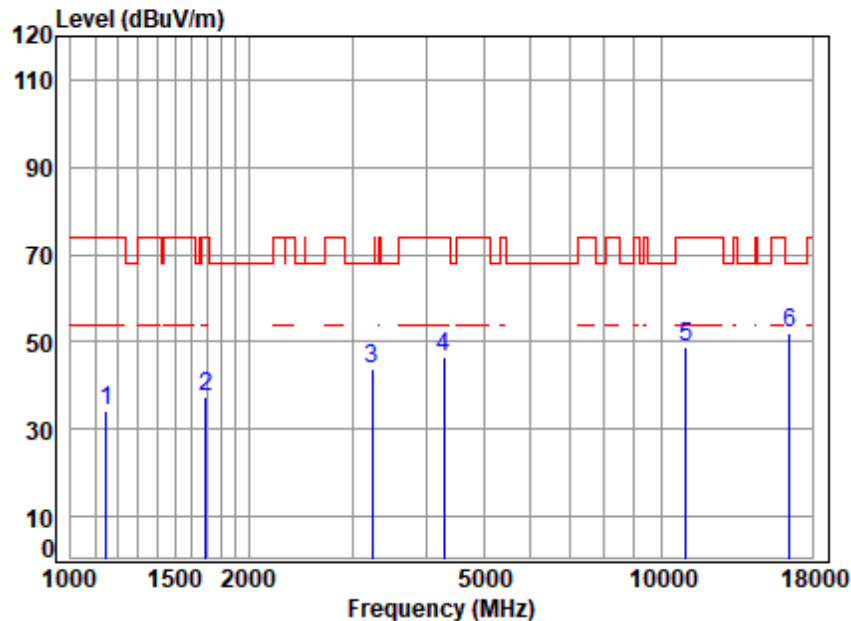
Test Mode: 09; Polarity: Horizontal; Modulation:802.11n; Bandwidth:20MHz; Channel:Low



Site : chamber
Condition: 3m HORIZONTAL
Job No : 12337CR\12340CR
Mode : 5500 TX RSE
Note : 5G WIFI 11N20

	Freq	Cable Loss	Ant Factor	Preamp Factor	Read Level	Level	Limit	Over	Remark
	MHz	dB	dB/m	dB	dBuV	dBuV/m	dBuV/m	dB	
1	1245.663	2.85	24.79	39.79	46.72	34.57	68.20	-33.63	peak
2	1697.129	3.43	26.66	40.06	47.71	37.74	74.00	-36.26	peak
3	3366.778	5.35	31.50	40.98	48.91	44.78	68.20	-23.42	peak
4	4469.214	6.73	33.55	41.85	48.61	47.04	68.20	-21.16	peak
5	11000.000	10.97	37.80	37.62	38.03	49.18	74.00	-24.82	peak
6	16500.000	14.82	42.20	40.47	34.23	50.78	68.20	-17.42	peak

Test Mode: 09; Polarity: Vertical; Modulation: 802.11n; Bandwidth: 20MHz; Channel: Low

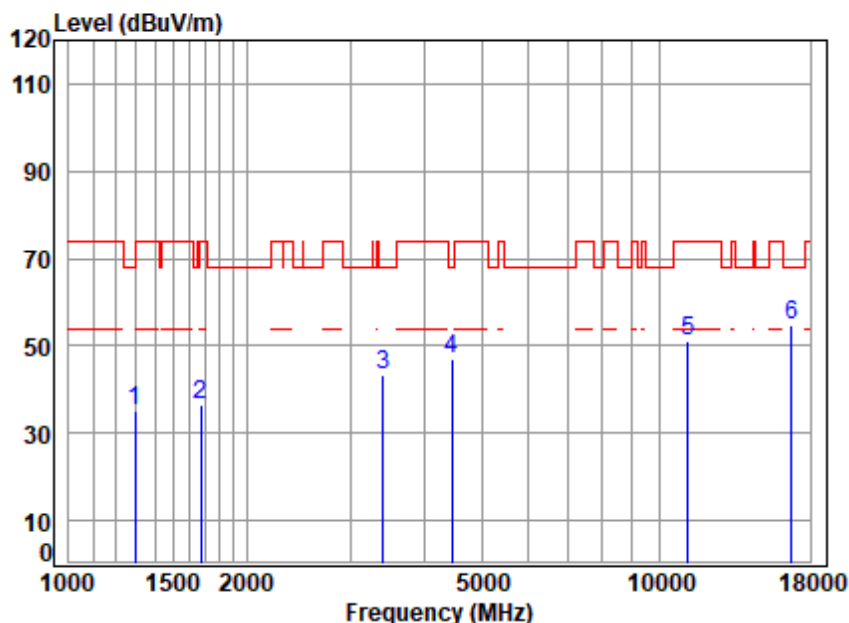


Site : chamber
Condition: 3m VERTICAL
Job No : 12337CR\12340CR
Mode : 5500 TX RSE
Note : 5G WIFI 11N20

	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	1148.823	2.67	24.35	39.72	47.13	34.43	74.00	-39.57	peak
2	1692.231	3.42	26.64	40.06	47.30	37.30	74.00	-36.70	peak
3	3233.260	5.18	31.29	40.88	48.34	43.93	68.20	-24.27	peak
4	4279.589	6.56	33.22	41.67	48.42	46.53	74.00	-27.47	peak
5	11000.000	10.97	37.80	37.62	37.58	48.73	74.00	-25.27	peak
6	16500.000	14.82	42.20	40.47	35.26	51.81	68.20	-16.39	peak



Test Mode: 09; Polarity: Horizontal; Modulation:802.11n; Bandwidth:20MHz; Channel:middle

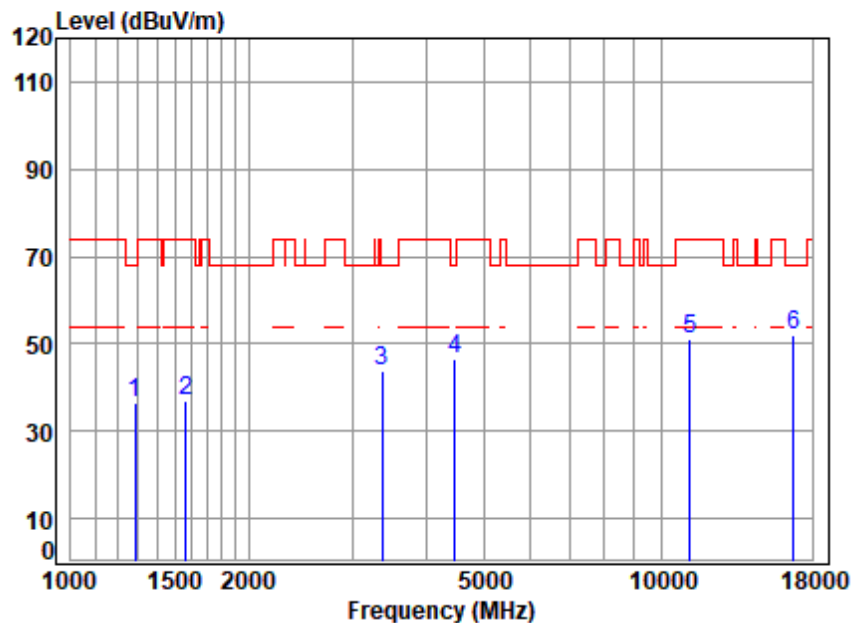


Site : chamber
Condition: 3m HORIZONTAL
Job No : 12337CR\12340CR
Mode : 5580 TX RSE
Note : 5G WIFI 11N20

	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	1297.103	2.94	25.01	39.83	47.00	35.12	68.20	-33.08	peak
2	1672.779	3.41	26.56	40.05	46.56	36.48	74.00	-37.52	peak
3	3405.929	5.40	31.56	41.01	47.51	43.46	68.20	-24.74	peak
4	4456.315	6.72	33.53	41.84	48.49	46.90	68.20	-21.30	peak
5	11160.000	11.18	37.83	37.70	39.60	50.91	74.00	-23.09	peak
6	16740.000	14.51	42.39	40.41	38.32	54.81	68.20	-13.39	peak



Test Mode: 09; Polarity: Vertical; Modulation:802.11n; Bandwidth:20MHz; Channel:middle

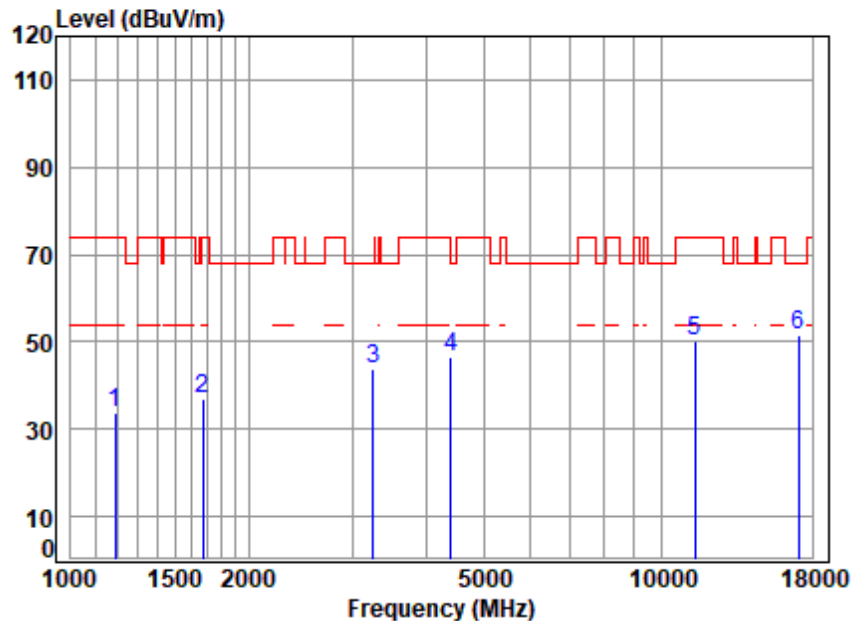


Site : chamber
Condition: 3m VERTICAL
Job No : 12337CR\12340CR
Mode : 5580 TX RSE
Note : 5G WIFI 11N20

	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	1285.904	2.92	24.96	39.82	48.35	36.41	68.20	-31.79	peak
2	1565.191	3.32	26.10	39.99	47.68	37.11	74.00	-36.89	peak
3	3366.778	5.35	31.50	40.98	47.81	43.68	68.20	-24.52	peak
4	4469.214	6.73	33.55	41.85	48.14	46.57	68.20	-21.63	peak
5	11160.000	11.18	37.83	37.70	39.77	51.08	74.00	-22.92	peak
6	16740.000	14.51	42.39	40.41	35.74	52.23	68.20	-15.97	peak



Test Mode: 09; Polarity: Horizontal; Modulation:802.11n; Bandwidth:20MHz; Channel:High

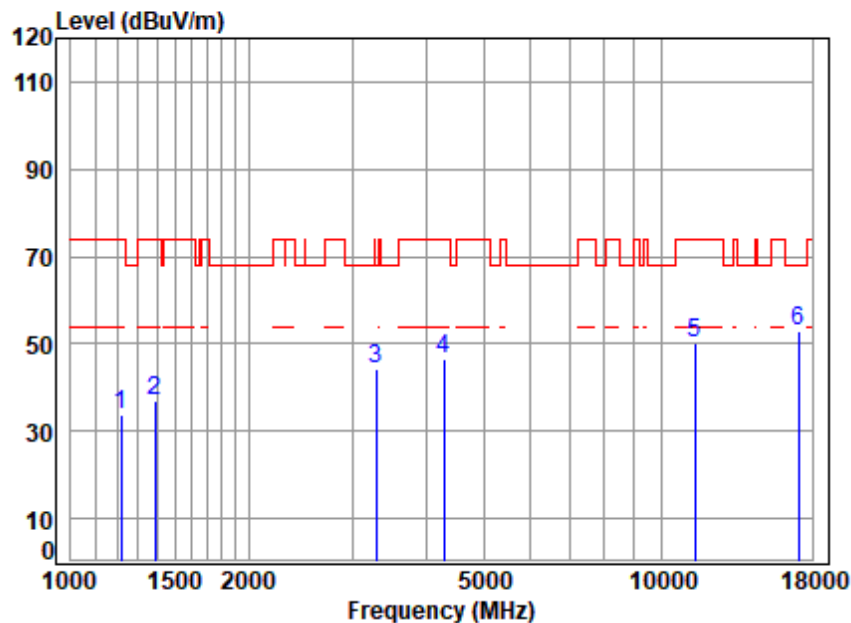


Site : chamber
Condition: 3m HORIZONTAL
Job No : 12337CR\12340CR
Mode : 5700 TX RSE
Note : 5G WIFI 11N20

	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	1189.368	2.74	24.54	39.75	46.37	33.90	74.00	-40.10	peak
2	1672.779	3.41	26.56	40.05	47.16	37.08	74.00	-36.92	peak
3	3252.005	5.21	31.32	40.90	48.30	43.93	68.20	-24.27	peak
4	4405.090	6.67	33.44	41.79	48.21	46.53	68.20	-21.67	peak
5	11400.000	11.50	37.88	37.82	38.75	50.31	74.00	-23.69	peak
6	17100.000	14.14	42.66	40.32	35.28	51.76	68.20	-16.44	peak



Test Mode: 09; Polarity: Vertical; Modulation:802.11n; Bandwidth:20MHz; Channel:High

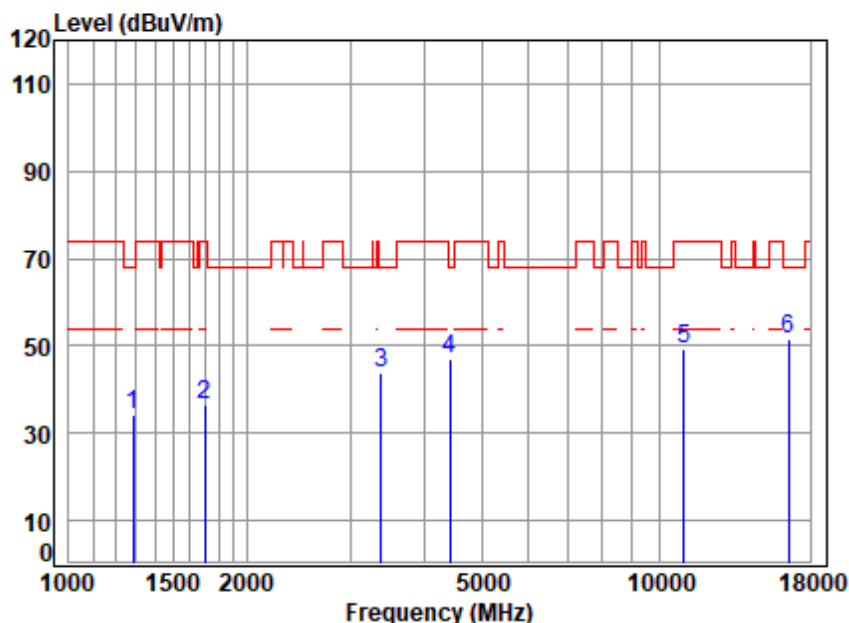


Site : chamber
Condition: 3m VERTICAL
Job No : 12337CR\12340CR
Mode : 5700 TX RSE
Note : 5G WIFI 11N20

	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	1217.190	2.80	24.67	39.77	46.01	33.71	74.00	-40.29	peak
2	1390.276	3.09	25.39	39.89	48.24	36.83	74.00	-37.17	peak
3	3289.821	5.25	31.38	40.92	48.40	44.11	68.20	-24.09	peak
4	4279.589	6.56	33.22	41.67	48.51	46.62	74.00	-27.38	peak
5	11400.000	11.50	37.88	37.82	38.49	50.05	74.00	-23.95	peak
6	17100.000	14.14	42.66	40.32	36.56	53.04	68.20	-15.16	peak



Test Mode: 09; Polarity: Horizontal; Modulation:802.11n; Bandwidth:40MHz; Channel:Low

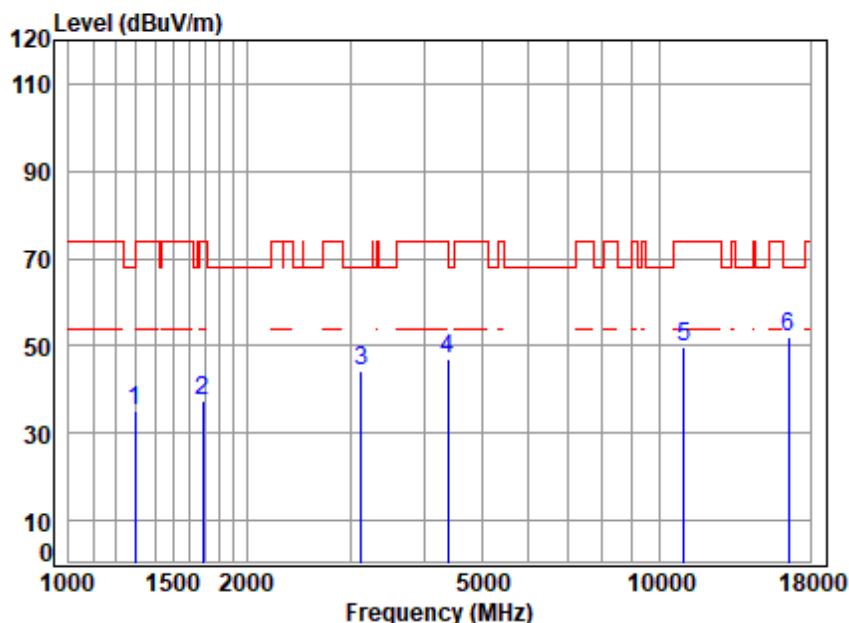


Site : chamber
Condition: 3m HORIZONTAL
Job No : 12337CR\12340CR
Mode : 5510 TX RSE
Note : 5G WIFI 11N40

	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	1285.904	2.92	24.96	39.82	46.28	34.34	68.20	-33.86	peak
2	1697.129	3.43	26.66	40.06	46.26	36.29	74.00	-37.71	peak
3	3376.523	5.37	31.51	40.99	47.88	43.77	68.20	-24.43	peak
4	4417.841	6.68	33.46	41.80	48.59	46.93	68.20	-21.27	peak
5	11020.000	11.00	37.80	37.63	38.28	49.45	74.00	-24.55	peak
6	16530.000	14.78	42.22	40.46	34.96	51.50	68.20	-16.70	peak



Test Mode: 09; Polarity: Vertical; Modulation: 802.11n; Bandwidth: 40MHz; Channel: Low

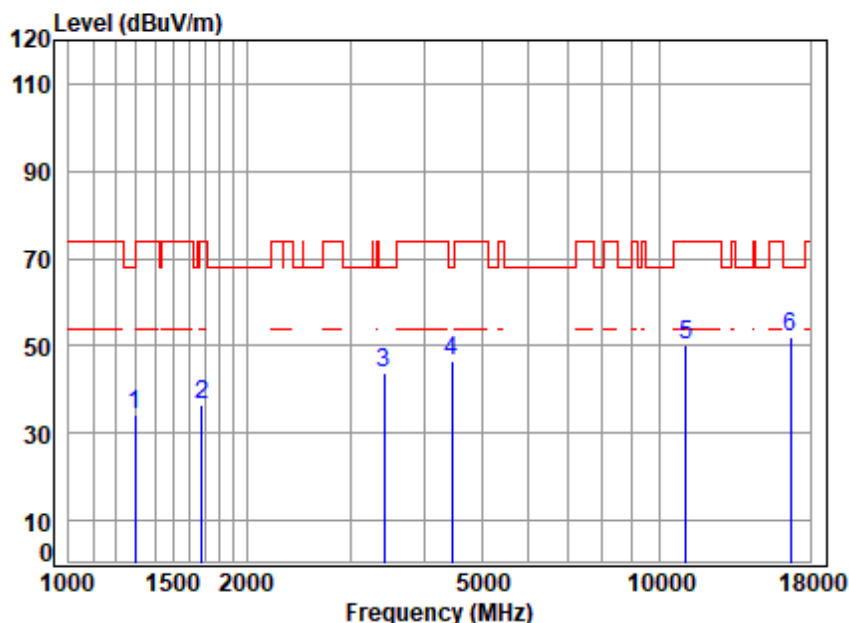


Site : chamber
Condition: 3m VERTICAL
Job No : 12337CR\12340CR
Mode : 5510 TX RSE
Note : 5G WIFI 11N40

	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	1293.359	2.93	25.00	39.82	46.81	34.92	68.20	-33.28	peak
2	1687.347	3.42	26.62	40.05	47.33	37.32	74.00	-36.68	peak
3	3132.079	5.04	31.12	40.80	49.04	44.40	68.20	-23.80	peak
4	4392.376	6.66	33.42	41.78	48.59	46.89	74.00	-27.11	peak
5	11020.000	11.00	37.80	37.63	38.59	49.76	74.00	-24.24	peak
6	16530.000	14.78	42.22	40.46	35.53	52.07	68.20	-16.13	peak



Test Mode: 09; Polarity: Horizontal; Modulation:802.11n; Bandwidth:40MHz; Channel:middle

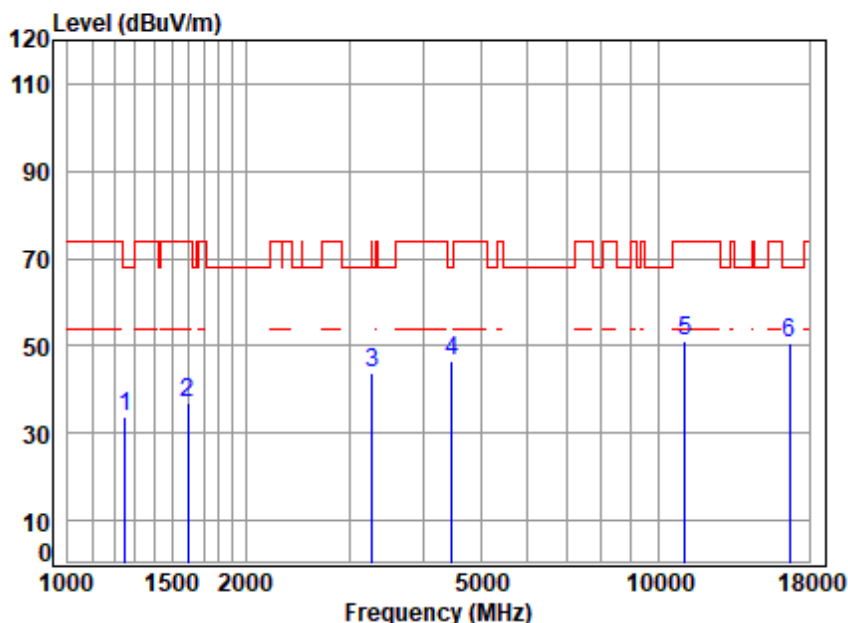


Site : chamber
Condition: 3m HORIZONTAL
Job No : 12337CR\12340CR
Mode : 5550 TX RSE
Note : 5G WIFI 11N40

	Freq	Cable Loss	Ant Factor	Preamp Factor	Read Level	Level	Limit	Over	Remark
	MHz	dB	dB/m	dB	dBuV	dBuV/m	dBuV/m	dB	
1	1297.103	2.94	25.01	39.83	46.18	34.30	68.20	-33.90	peak
2	1677.621	3.41	26.58	40.05	46.74	36.68	74.00	-37.32	peak
3	3425.675	5.43	31.59	41.02	47.65	43.65	68.20	-24.55	peak
4	4456.315	6.72	33.53	41.84	48.15	46.56	68.20	-21.64	peak
5	11100.000	11.10	37.82	37.67	38.78	50.03	74.00	-23.97	peak
6	16650.000	14.62	42.32	40.43	35.67	52.18	68.20	-16.02	peak



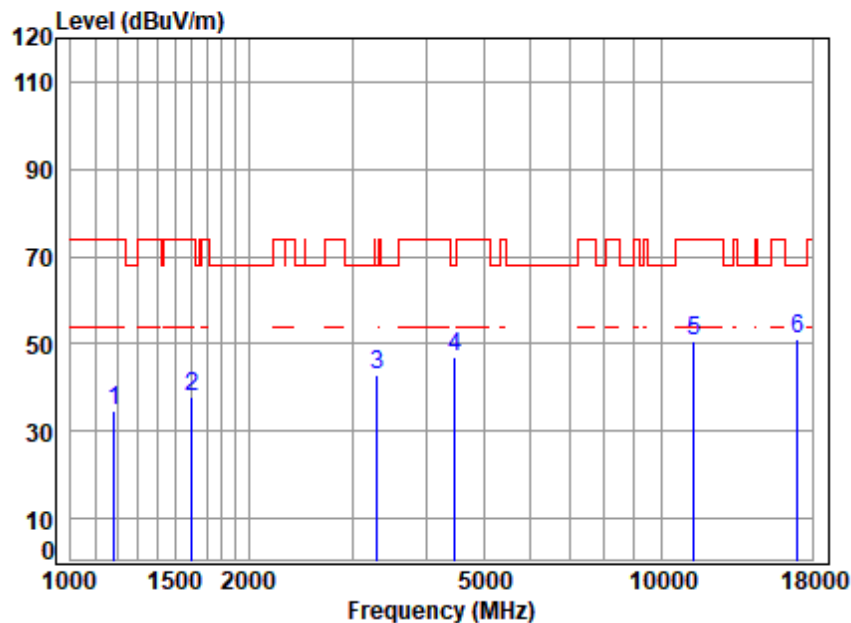
Test Mode: 09; Polarity: Vertical; Modulation:802.11n; Bandwidth:40MHz; Channel:middle



Site : chamber
Condition: 3m VERTICAL
Job No : 12337CR\12340CR
Mode : 5550 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	1249.269	2.85	24.81	39.79	45.70	33.57	68.20	-34.63	peak
2	1597.181	3.35	26.24	40.01	47.58	37.16	74.00	-36.84	peak
3	3280.326	5.24	31.36	40.92	48.01	43.69	68.20	-24.51	peak
4	4469.214	6.73	33.55	41.85	48.04	46.47	68.20	-21.73	peak
5	11100.000	11.10	37.82	37.67	40.06	51.31	74.00	-22.69	peak
6	16650.000	14.62	42.32	40.43	34.36	50.87	68.20	-17.33	peak

Test Mode: 09; Polarity: Horizontal; Modulation:802.11n; Bandwidth:40MHz; Channel:High

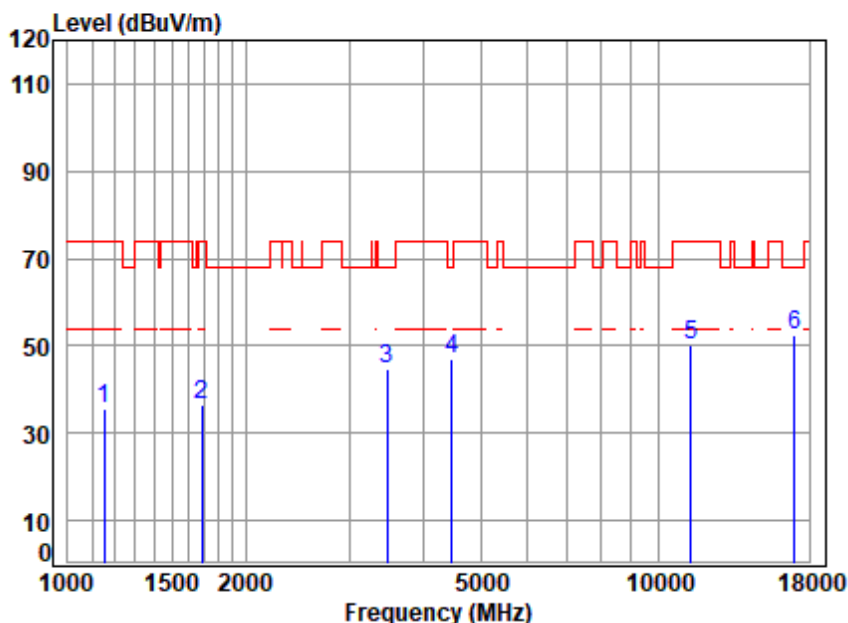


Site : chamber
Condition: 3m HORIZONTAL
Job No : 12337CR\12340CR
Mode : 5670 TX RSE
Note : 5G WIFI 11N40

	Freq	Cable Loss	Ant Factor	Preamp Factor	Read Level	Level	Limit	Over	Remark
	MHz	dB	dB/m	dB	dBuV	dBuV/m	dBuV/m	dB	
1	1182.513	2.73	24.51	39.75	47.05	34.54	74.00	-39.46	peak
2	1606.441	3.35	26.28	40.01	48.26	37.88	74.00	-36.12	peak
3	3308.894	5.28	31.41	40.94	47.36	43.11	68.20	-25.09	peak
4	4469.214	6.73	33.55	41.85	48.77	47.20	68.20	-21.00	peak
5	11340.000	11.42	37.87	37.79	39.13	50.63	74.00	-23.37	peak
6	17010.000	14.17	42.61	40.34	34.71	51.15	68.20	-17.05	peak



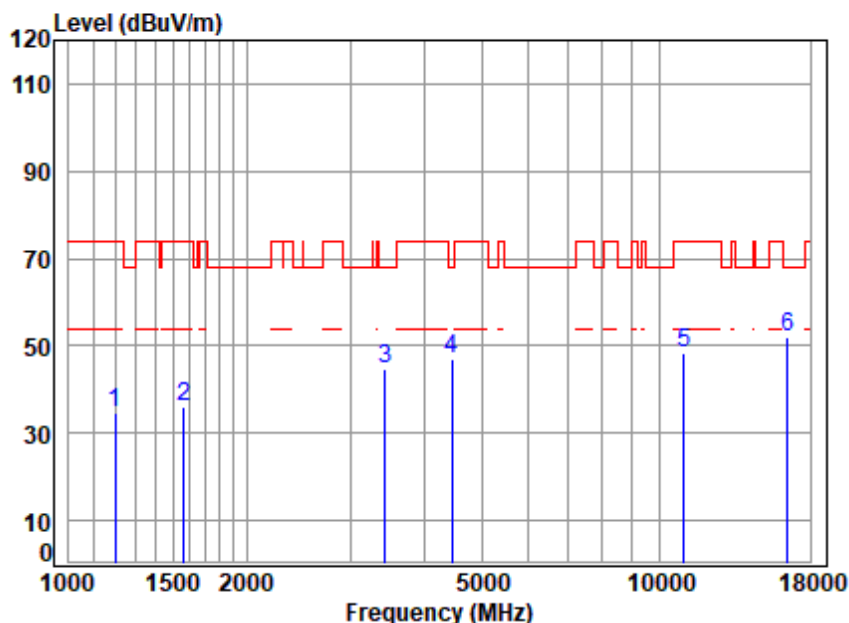
Test Mode: 09; Polarity: Vertical; Modulation:802.11n; Bandwidth:40MHz; Channel:High



Site : chamber
Condition: 3m VERTICAL
Job No : 12337CR\12340CR
Mode : 5670 TX RSE
Note : 5G WIFI 11N40

	Freq	Cable Loss	Ant Factor	Preamp Factor	Read Level	Level	Limit	Over	Remark
	MHz	dB	dB/m	dB	dBuV	dBuV/m	dBuV/m	dB	
1	1152.148	2.67	24.37	39.72	48.13	35.45	74.00	-38.55	peak
2	1687.347	3.42	26.62	40.05	46.50	36.49	74.00	-37.51	peak
3	3475.541	5.49	31.66	41.06	48.65	44.74	68.20	-23.46	peak
4	4469.214	6.73	33.55	41.85	48.73	47.16	68.20	-21.04	peak
5	11340.000	11.42	37.87	37.79	38.73	50.23	74.00	-23.77	peak
6	17010.000	14.17	42.61	40.34	36.12	52.56	68.20	-15.64	peak

Test Mode: 09; Polarity: Horizontal; Modulation:802.11ac; Bandwidth:20MHz; Channel:Low

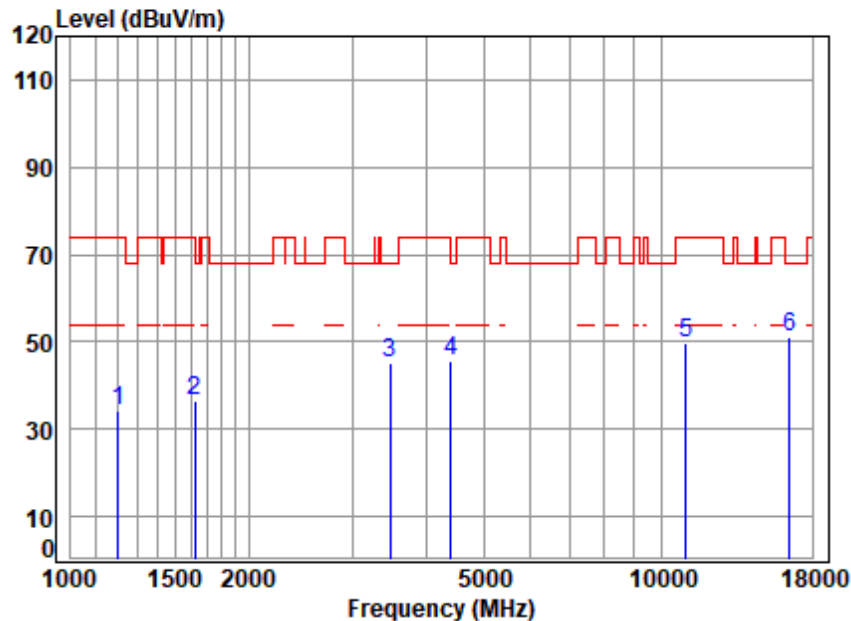


Site : chamber
Condition: 3m HORIZONTAL
Job No : 12337CR\12340CR
Mode : 5500 TX RSE
Note : 5G WIFI 11AC20

		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	1196.264	2.76	24.57	39.76	47.27	34.84	74.00	-39.16	peak
2	1565.191	3.32	26.10	39.99	46.74	36.17	74.00	-37.83	peak
3	3435.590	5.44	31.60	41.03	48.74	44.75	68.20	-23.45	peak
4	4456.315	6.72	33.53	41.84	48.80	47.21	68.20	-20.99	peak
5	11000.000	10.97	37.80	37.62	37.11	48.26	74.00	-25.74	peak
6	16500.000	14.82	42.20	40.47	35.50	52.05	68.20	-16.15	peak



Test Mode: 09; Polarity: Vertical; Modulation:802.11ac; Bandwidth:20MHz; Channel:Low

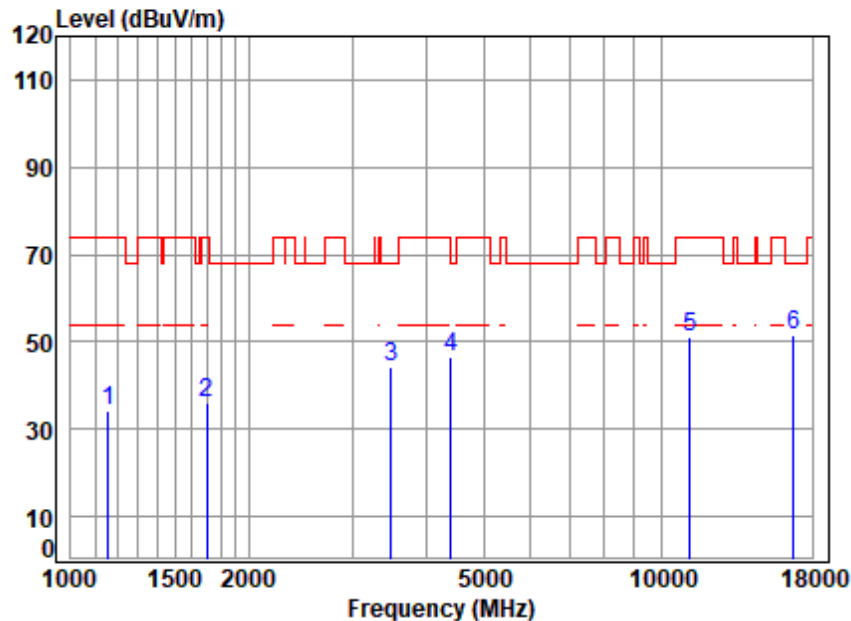


Site : chamber
Condition: 3m VERTICAL
Job No : 12337CR\12340CR
Mode : 5500 TX RSE
Note : 5G WIFI 11AC20

		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	1203.199	2.77	24.60	39.76	46.43	34.04	74.00	-39.96	peak
2	1625.121	3.37	26.36	40.02	46.78	36.49	74.00	-37.51	peak
3	3475.541	5.49	31.66	41.06	49.01	45.10	68.20	-23.10	peak
4	4405.090	6.67	33.44	41.79	47.49	45.81	68.20	-22.39	peak
5	11000.000	10.97	37.80	37.62	38.70	49.85	74.00	-24.15	peak
6	16500.000	14.82	42.20	40.47	34.44	50.99	68.20	-17.21	peak



Test Mode: 09; Polarity: Horizontal; Modulation:802.11ac; Bandwidth:20MHz; Channel:middle

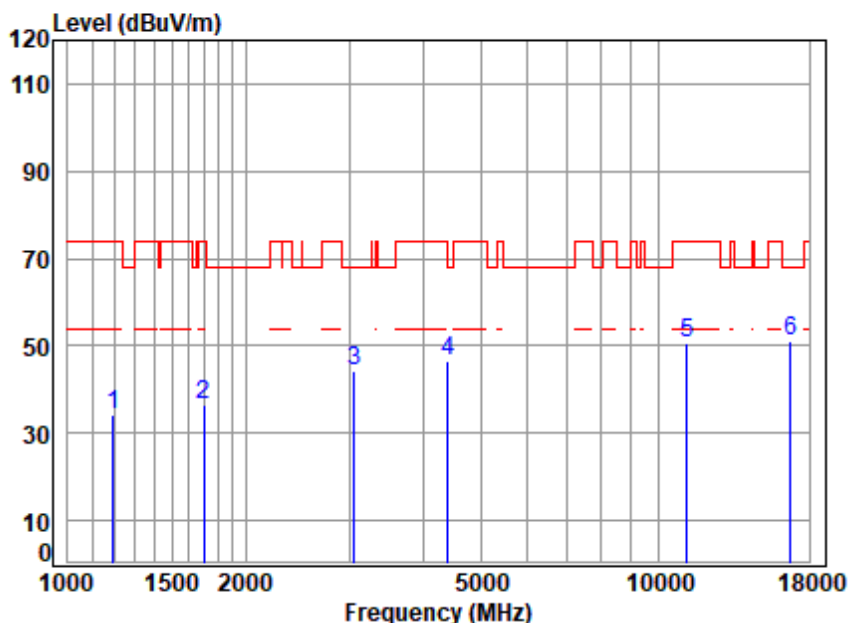


Site : chamber
Condition: 3m HORIZONTAL
Job No : 12337CR\12340CR
Mode : 5580 TX RSE
Note : 5G WIFI 11AC20

		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	1158.828	2.69	24.40	39.73	46.84	34.20	74.00	-39.80	peak
2	1702.042	3.43	26.68	40.06	46.19	36.24	74.00	-37.76	peak
3	3485.601	5.50	31.68	41.07	47.93	44.04	68.20	-24.16	peak
4	4405.090	6.67	33.44	41.79	48.08	46.40	68.20	-21.80	peak
5	11160.000	11.18	37.83	37.70	39.99	51.30	74.00	-22.70	peak
6	16740.000	14.51	42.39	40.41	35.21	51.70	68.20	-16.50	peak



Test Mode: 09; Polarity: Vertical; Modulation: 802.11ac; Bandwidth: 20MHz; Channel: middle

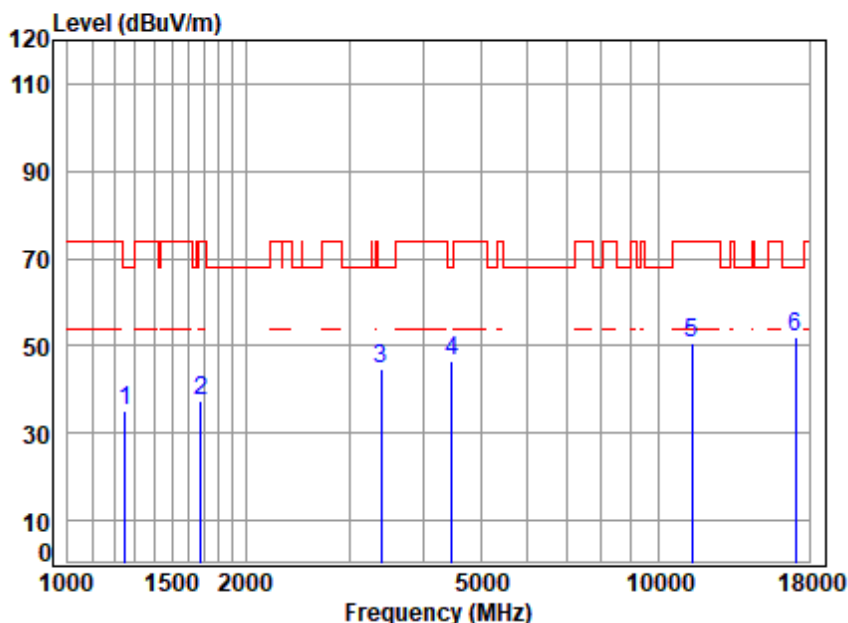


Site : chamber
Condition: 3m VERTICAL
Job No : 12337CR\12340CR
Mode : 5580 TX RSE
Note : 5G WIFI 11AC20

	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	2.75	24.56	39.75	46.47	34.03	74.00	-39.97	peak
2	1702.042	3.43	26.68	40.06	46.27	36.32	74.00	-37.68	peak
3	3060.486	4.95	31.00	40.75	49.10	44.30	68.20	-23.90	peak
4	4405.090	6.67	33.44	41.79	48.27	46.59	68.20	-21.61	peak
5	11160.000	11.18	37.83	37.70	39.49	50.80	74.00	-23.20	peak
6	16740.000	14.51	42.39	40.41	34.39	50.88	68.20	-17.32	peak



Test Mode: 09; Polarity: Horizontal; Modulation:802.11ac; Bandwidth:20MHz; Channel:High

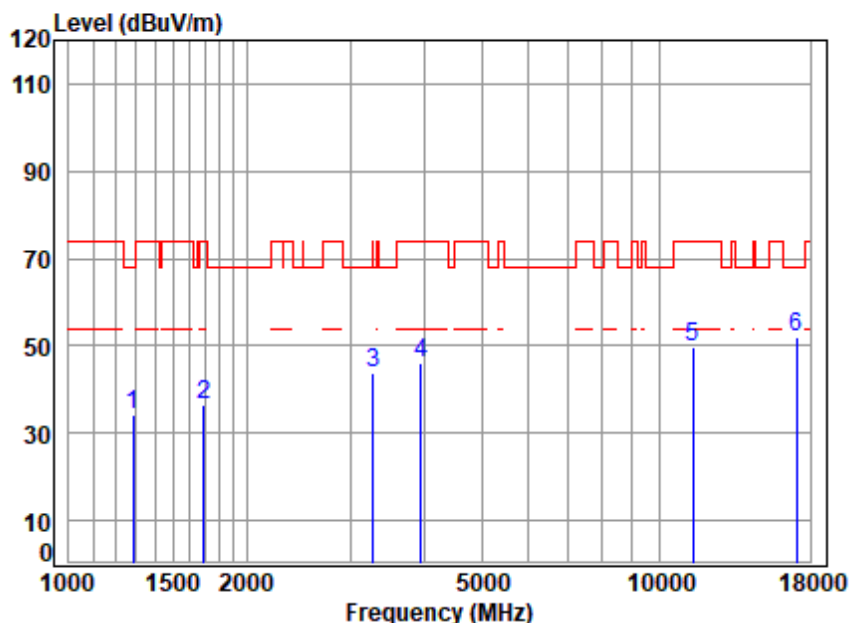


Site : chamber
Condition: 3m HORIZONTAL
Job No : 12337CR\12340CR
Mode : 5700 TX RSE
Note : 5G WIFI 11AC20

	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	1249.269	2.85	24.81	39.79	47.35	35.22	68.20	-32.98	peak
2	1682.477	3.42	26.60	40.05	47.54	37.51	74.00	-36.49	peak
3	3396.098	5.39	31.54	41.00	48.89	44.82	68.20	-23.38	peak
4	4469.214	6.73	33.55	41.85	48.03	46.46	68.20	-21.74	peak
5	11400.000	11.50	37.88	37.82	39.21	50.77	74.00	-23.23	peak
6	17100.000	14.14	42.66	40.32	35.75	52.23	68.20	-15.97	peak



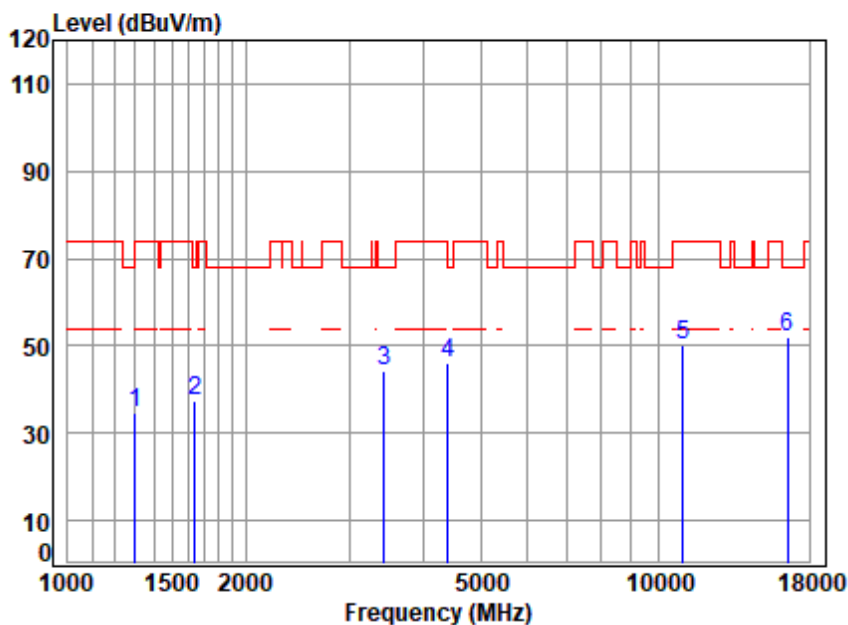
Test Mode: 09; Polarity: Vertical; Modulation:802.11ac; Bandwidth:20MHz; Channel:High



Site : chamber
Condition: 3m VERTICAL
Job No : 12337CR\12340CR
Mode : 5700 TX RSE
Note : 5G WIFI 11AC20

	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	1285.904	2.92	24.96	39.82	46.15	34.21	68.20	-33.99	peak
2	1692.231	3.42	26.64	40.06	46.64	36.64	74.00	-37.36	peak
3	3280.326	5.24	31.36	40.92	47.99	43.67	68.20	-24.53	peak
4	3946.885	6.20	32.60	41.37	48.82	46.25	74.00	-27.75	peak
5	11400.000	11.50	37.88	37.82	38.09	49.65	74.00	-24.35	peak
6	17100.000	14.14	42.66	40.32	35.46	51.94	68.20	-16.26	peak

Test Mode: 09; Polarity: Horizontal; Modulation: 802.11ac; Bandwidth: 40MHz; Channel: Low

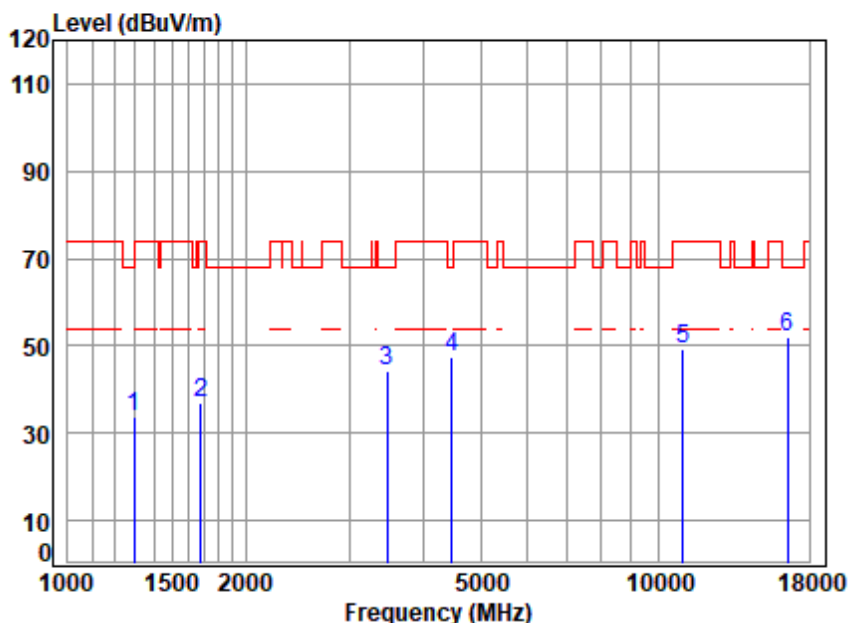


Site : chamber
Condition: 3m HORIZONTAL
Job No : 12337CR\12340CR
Mode : 5510 TX RSE
Note : 5G WIFI 11AC40

	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	1300.858	2.94	25.03	39.83	46.36	34.50	74.00	-39.50	peak
2	1644.019	3.38	26.44	40.03	47.42	37.21	68.20	-30.99	peak
3	3435.590	5.44	31.60	41.03	48.14	44.15	68.20	-24.05	peak
4	4405.090	6.67	33.44	41.79	47.73	46.05	68.20	-22.15	peak
5	11020.000	11.00	37.80	37.63	39.03	50.20	74.00	-23.80	peak
6	16530.000	14.78	42.22	40.46	35.50	52.04	68.20	-16.16	peak



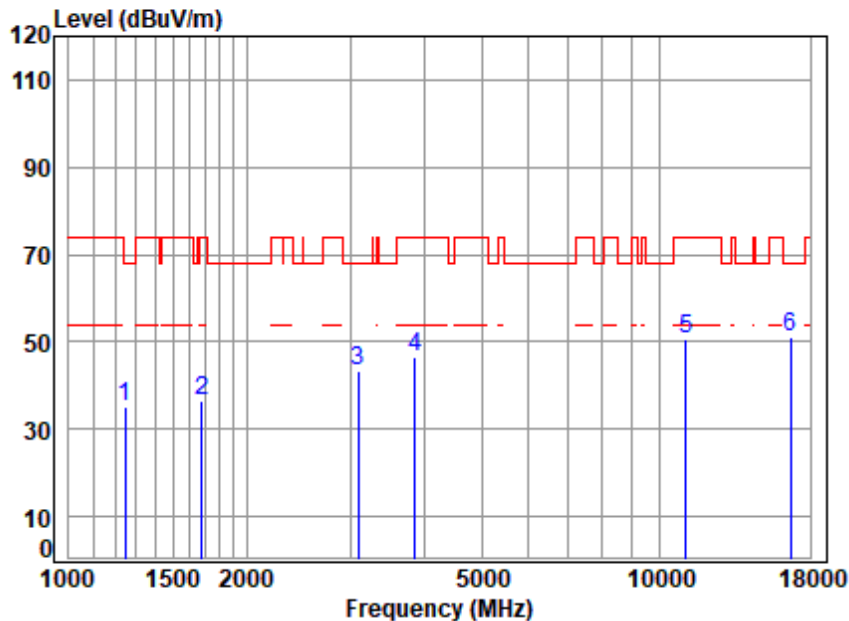
Test Mode: 09; Polarity: Vertical; Modulation:802.11ac; Bandwidth:40MHz; Channel:Low



Site : chamber
Condition: 3m VERTICAL
Job No : 12337CR\12340CR
Mode : 5510 TX RSE
Note : 5G WIFI 11AC40

	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	1297.103	2.94	25.01	39.83	45.47	33.59	68.20	-34.61	peak
2	1677.621	3.41	26.58	40.05	47.20	37.14	74.00	-36.86	peak
3	3475.541	5.49	31.66	41.06	48.33	44.42	68.20	-23.78	peak
4	4469.214	6.73	33.55	41.85	49.15	47.58	68.20	-20.62	peak
5	11020.000	11.00	37.80	37.63	38.24	49.41	74.00	-24.59	peak
6	16530.000	14.78	42.22	40.46	35.37	51.91	68.20	-16.29	peak

Test Mode: 09; Polarity: Horizontal; Modulation:802.11ac; Bandwidth:40MHz; Channel:middle

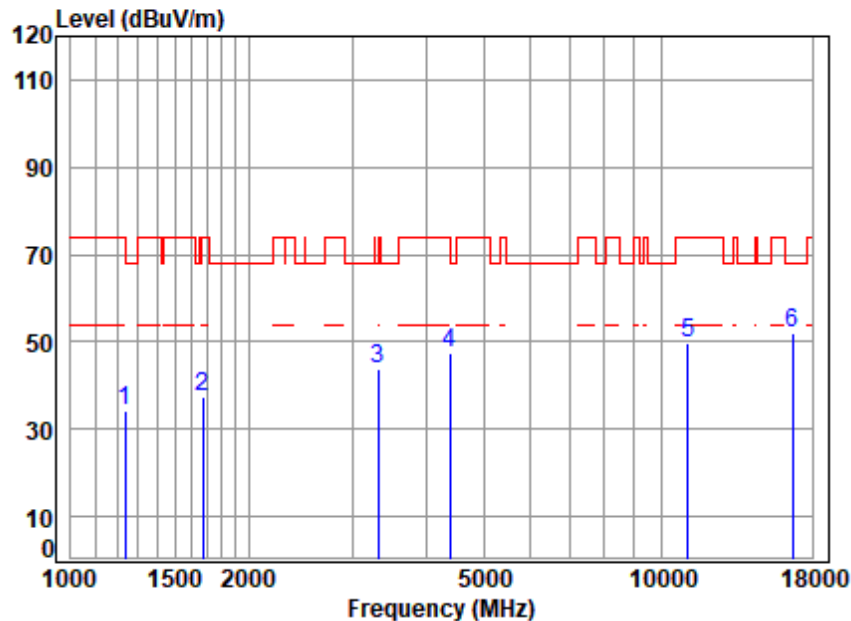


Site : chamber
Condition: 3m HORIZONTAL
Job No : 12337CR\12340CR
Mode : 5550 TX RSE
Note : 5G WIFI 11AC40

		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	1245.663	2.85	24.79	39.79	47.12	34.97	68.20	-33.23	peak
2	1677.621	3.41	26.58	40.05	46.42	36.36	74.00	-37.64	peak
3	3096.075	4.99	31.06	40.78	47.93	43.20	68.20	-25.00	peak
4	3856.668	6.07	32.43	41.31	49.31	46.50	74.00	-27.50	peak
5	11100.000	11.10	37.82	37.67	39.42	50.67	74.00	-23.33	peak
6	16650.000	14.62	42.32	40.43	34.66	51.17	68.20	-17.03	peak



Test Mode: 09; Polarity: Vertical; Modulation: 802.11ac; Bandwidth: 40MHz; Channel: middle

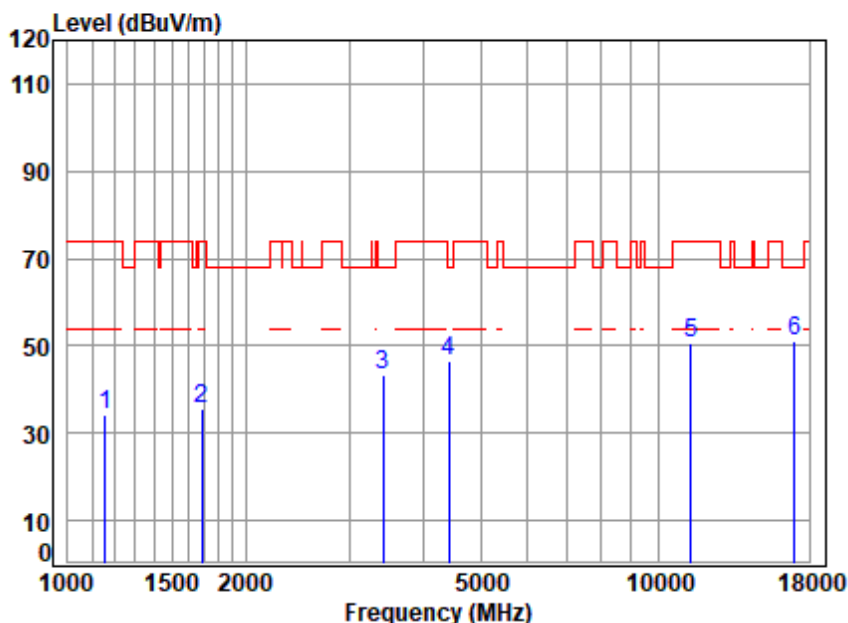


Site : chamber
Condition: 3m VERTICAL
Job No : 12337CR\12340CR
Mode : 5550 TX RSE
Note : 5G WIFI 11AC40

		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	1238.483	2.83	24.76	39.79	46.33	34.13	74.00	-39.87	peak
2	1672.779	3.41	26.56	40.05	47.38	37.30	74.00	-36.70	peak
3	3318.471	5.29	31.42	40.95	48.22	43.98	68.20	-24.22	peak
4	4392.376	6.66	33.42	41.78	48.97	47.27	74.00	-26.73	peak
5	11100.000	11.10	37.82	37.67	38.57	49.82	74.00	-24.18	peak
6	16650.000	14.62	42.32	40.43	35.45	51.96	68.20	-16.24	peak



Test Mode: 09; Polarity: Horizontal; Modulation:802.11ac; Bandwidth:40MHz; Channel:High

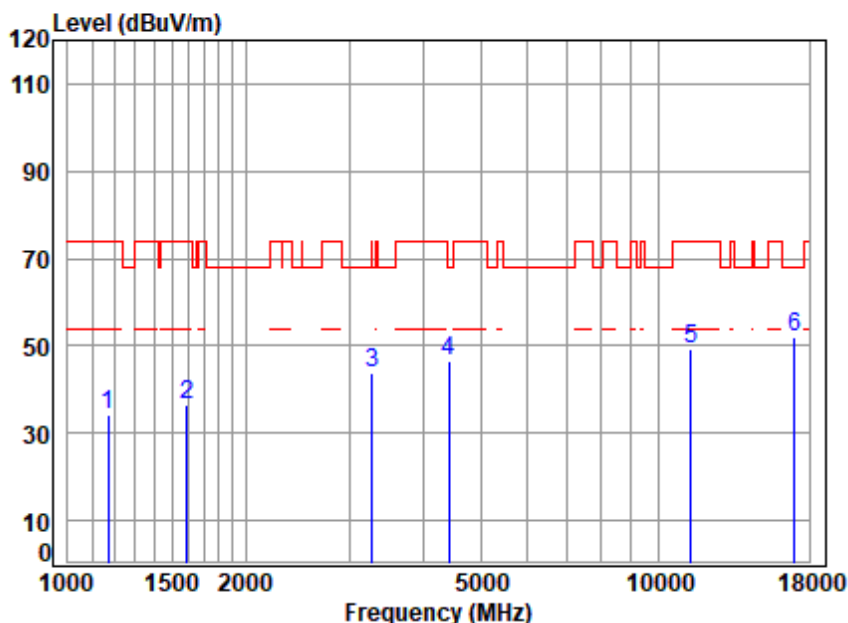


Site : chamber
Condition: 3m HORIZONTAL
Job No : 12337CR\12340CR
Mode : 5670 TX RSE
Note : 5G WIFI 11AC40

		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	1158.828	2.69	24.40	39.73	47.04	34.40	74.00	-39.60	peak
2	1687.347	3.42	26.62	40.05	45.65	35.64	74.00	-38.36	peak
3	3425.675	5.43	31.59	41.02	47.49	43.49	68.20	-24.71	peak
4	4417.841	6.68	33.46	41.80	48.17	46.51	68.20	-21.69	peak
5	11340.000	11.42	37.87	37.79	39.17	50.67	74.00	-23.33	peak
6	17010.000	14.17	42.61	40.34	34.49	50.93	68.20	-17.27	peak



Test Mode: 09; Polarity: Vertical; Modulation:802.11ac; Bandwidth:40MHz; Channel:High

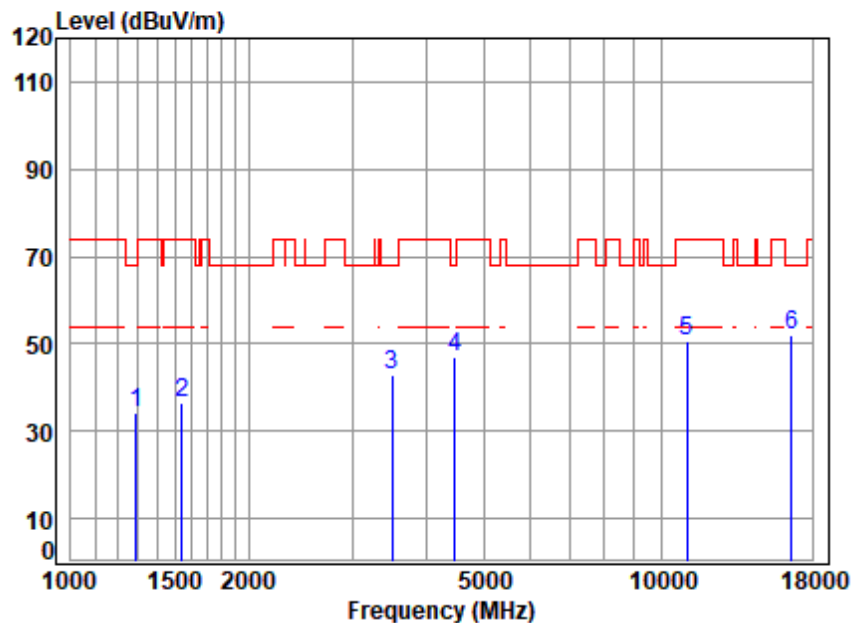


Site : chamber
Condition: 3m VERTICAL
Job No : 12337CR\12340CR
Mode : 5670 TX RSE
Note : 5G WIFI 11AC40

	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	1168.920	2.71	24.45	39.74	46.62	34.04	74.00	-39.96	peak
2	1592.571	3.34	26.22	40.00	46.95	36.51	74.00	-37.49	peak
3	3270.858	5.23	31.35	40.91	48.22	43.89	68.20	-24.31	peak
4	4417.841	6.68	33.46	41.80	48.31	46.65	68.20	-21.55	peak
5	11340.000	11.42	37.87	37.79	37.81	49.31	74.00	-24.69	peak
6	17010.000	14.17	42.61	40.34	35.73	52.17	68.20	-16.03	peak



Test Mode: 09; Polarity: Horizontal; Modulation:802.11ac; Bandwidth:80MHz; Channel:Low

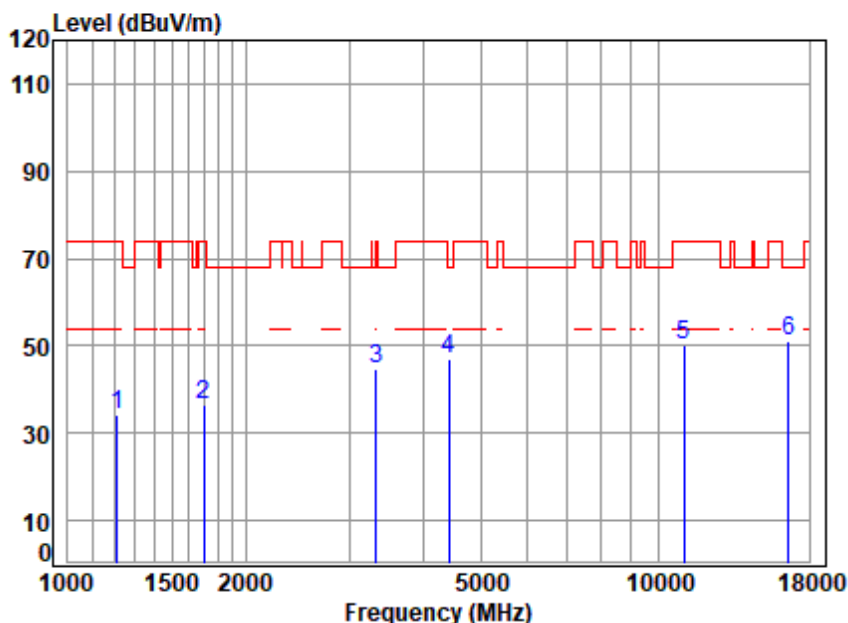


Site : chamber
Condition: 3m HORIZONTAL
Job No : 12337CR\12340CR
Mode : 5530 TX RSE
Note : 5G WIFI 11AC80

		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	1289.627	2.92	24.98	39.82	46.02	34.10	68.20	-34.10	peak
2	1542.733	3.30	26.00	39.98	47.09	36.41	74.00	-37.59	peak
3	3495.691	5.51	31.69	41.07	46.81	42.94	68.20	-25.26	peak
4	4469.214	6.73	33.55	41.85	48.68	47.11	68.20	-21.09	peak
5	11060.000	11.05	37.81	37.65	39.44	50.65	74.00	-23.35	peak
6	16590.000	14.70	42.27	40.45	35.51	52.03	68.20	-16.17	peak



Test Mode: 09; Polarity: Vertical; Modulation:802.11ac; Bandwidth:80MHz; Channel:Low

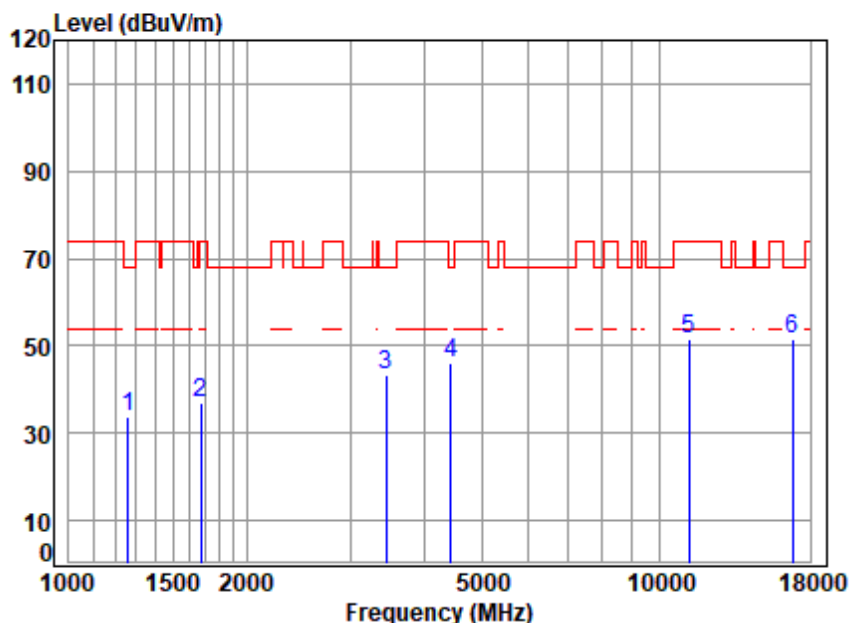


Site : chamber
Condition: 3m VERTICAL
Job No : 12337CR\12340CR
Mode : 5530 TX RSE
Note : 5G WIFI 11AC80

		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	1210.174	2.78	24.64	39.77	46.42	34.07	74.00	-39.93	peak
2	1702.042	3.43	26.68	40.06	46.64	36.69	74.00	-37.31	peak
3	3328.077	5.30	31.44	40.95	48.79	44.58	68.20	-23.62	peak
4	4417.841	6.68	33.46	41.80	48.49	46.83	68.20	-21.37	peak
5	11060.000	11.05	37.81	37.65	39.06	50.27	74.00	-23.73	peak
6	16590.000	14.70	42.27	40.45	34.79	51.31	68.20	-16.89	peak



Test Mode: 09; Polarity: Horizontal; Modulation:802.11ac; Bandwidth:80MHz; Channel:High

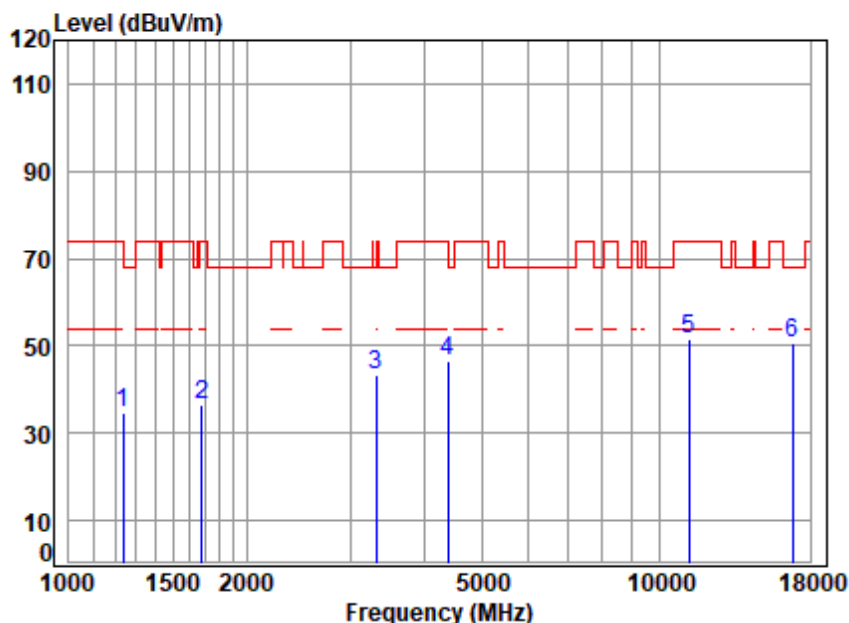


Site : chamber
Condition: 3m HORIZONTAL
Job No : 12337CR\12340CR
Mode : 5610 TX RSE
Note : 5G WIFI 11AC80

	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	1260.149	2.87	24.85	39.80	45.80	33.72	68.20	-34.48	peak
2	1672.779	3.41	26.56	40.05	46.85	36.77	74.00	-37.23	peak
3	3445.535	5.45	31.62	41.04	47.54	43.57	68.20	-24.63	peak
4	4430.628	6.70	33.48	41.81	47.83	46.20	68.20	-22.00	peak
5	11220.000	11.26	37.84	37.73	39.98	51.35	74.00	-22.65	peak
6	16830.000	14.39	42.47	40.39	35.23	51.70	68.20	-16.50	peak



Test Mode: 09; Polarity: Vertical; Modulation:802.11ac; Bandwidth:80MHz; Channel:High

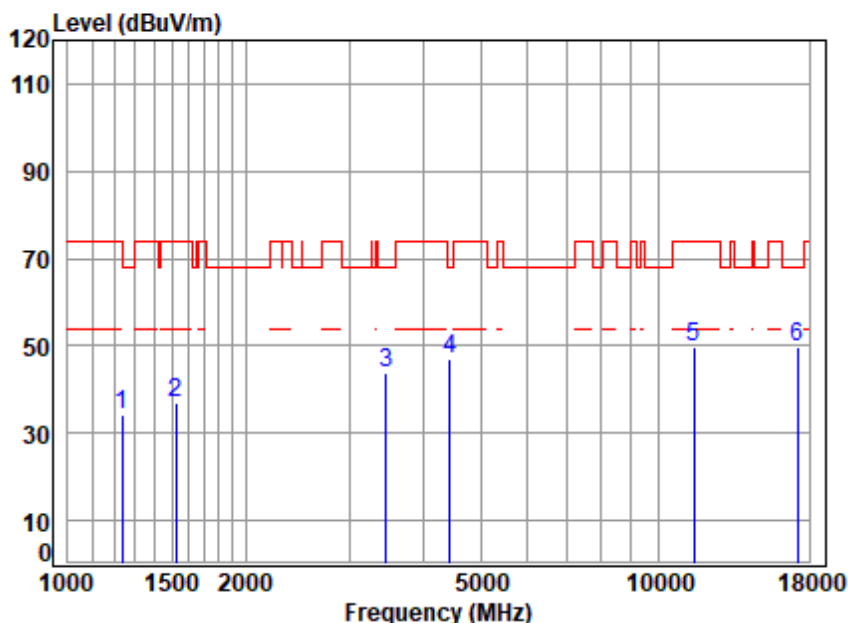


Site : chamber
Condition: 3m VERTICAL
Job No : 12337CR\12340CR
Mode : 5610 TX RSE
Note : 5G WIFI 11AC80

	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	1238.483	2.83	24.76	39.79	46.71	34.51	74.00	-39.49	peak
2	1682.477	3.42	26.60	40.05	46.64	36.61	74.00	-37.39	peak
3	3318.471	5.29	31.42	40.95	47.39	43.15	68.20	-25.05	peak
4	4392.376	6.66	33.42	41.78	48.03	46.33	74.00	-27.67	peak
5	11220.000	11.26	37.84	37.73	40.20	51.57	74.00	-22.43	peak
6	16830.000	14.39	42.47	40.39	33.97	50.44	68.20	-17.76	peak



Test Mode: 10; Polarity: Horizontal; Modulation:802.11a; Bandwidth:20MHz; Channel:Low

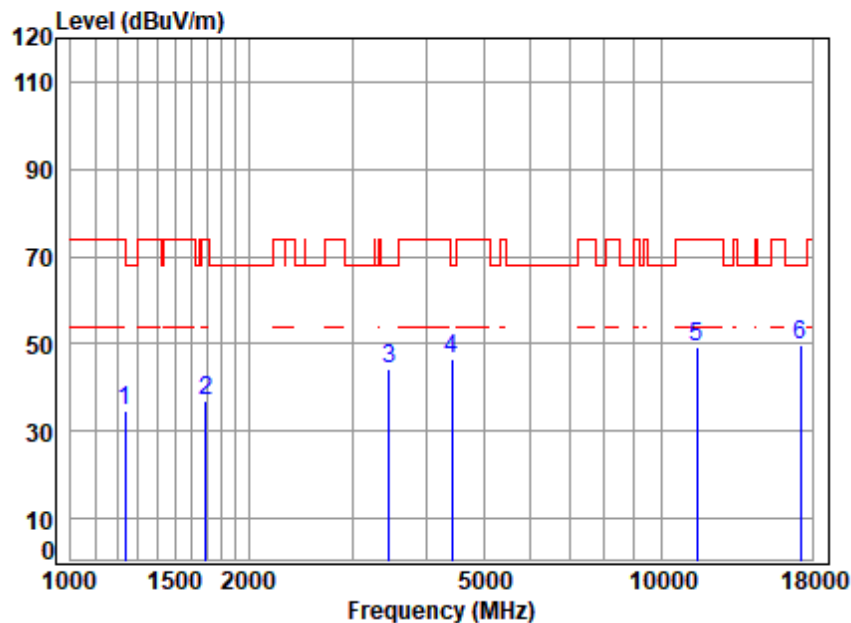


Site : chamber
Condition: 3m HORIZONTAL
Job No : 12337CR\12340CR
Mode : 5745 TX RSE
Note : 5G WIFI 11A

	Freq	Cable Loss	Ant Factor	Preamp Factor	Read Level	Level	Limit	Over	Remark
	MHz	dB	dB/m	dB	dBuV	dBuV/m	dBuV/m	dB	
1	1238.483	2.83	24.76	39.79	46.20	34.00	74.00	-40.00	peak
2	1525.000	3.28	25.91	39.97	47.64	36.86	74.00	-37.14	peak
3	3455.508	5.47	31.63	41.04	47.81	43.87	68.20	-24.33	peak
4	4430.628	6.70	33.48	41.81	48.68	47.05	68.20	-21.15	peak
5	11490.000	11.62	37.90	37.86	37.86	49.52	74.00	-24.48	peak
6	17235.000	14.09	42.74	40.28	33.20	49.75	68.20	-18.45	peak



Test Mode: 10; Polarity: Vertical; Modulation:802.11a; Bandwidth:20MHz; Channel:Low

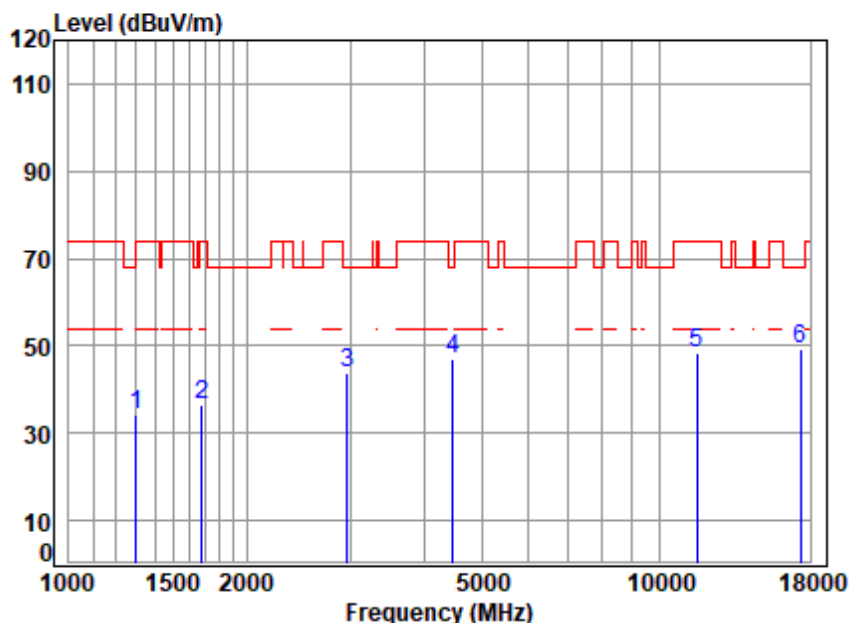


Site : chamber
Condition: 3m VERTICAL
Job No : 12337CR\12340CR
Mode : 5745 TX RSE
Note : 5G WIFI 11A

	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	2.83	24.76	39.79	46.81	34.61	74.00	-39.39	peak
2	1692.231	3.42	26.64	40.06	47.12	37.12	74.00	-36.88	peak
3	3455.508	5.47	31.63	41.04	48.42	44.48	68.20	-23.72	peak
4	4417.841	6.68	33.46	41.80	48.02	46.36	68.20	-21.84	peak
5	11490.000	11.62	37.90	37.86	37.52	49.18	74.00	-24.82	peak
6	17235.000	14.09	42.74	40.28	33.00	49.55	68.20	-18.65	peak



Test Mode: 10; Polarity: Horizontal; Modulation:802.11a; Bandwidth:20MHz; Channel:middle

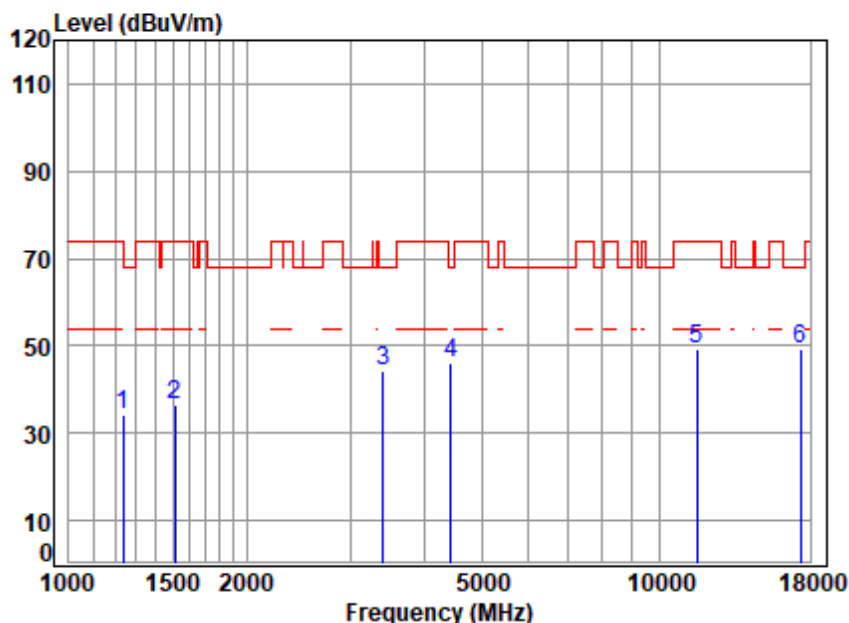


Site : chamber
Condition: 3m HORIZONTAL
Job No : 12337CR\12340CR
Mode : 5785 TX RSE
Note : 5G WIFI 11A

	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	1300.858	2.94	25.03	39.83	46.17	34.31	74.00	-39.69	peak
2	1677.621	3.41	26.58	40.05	46.51	36.45	74.00	-37.55	peak
3	2964.712	4.84	30.76	40.69	48.93	43.84	68.20	-24.36	peak
4	4469.214	6.73	33.55	41.85	48.75	47.18	68.20	-21.02	peak
5	11570.000	11.72	37.87	37.90	36.90	48.59	74.00	-25.41	peak
6	17355.000	14.06	42.81	40.25	32.63	49.25	68.20	-18.95	peak



Test Mode: 10; Polarity: Vertical; Modulation:802.11a; Bandwidth:20MHz; Channel:middle

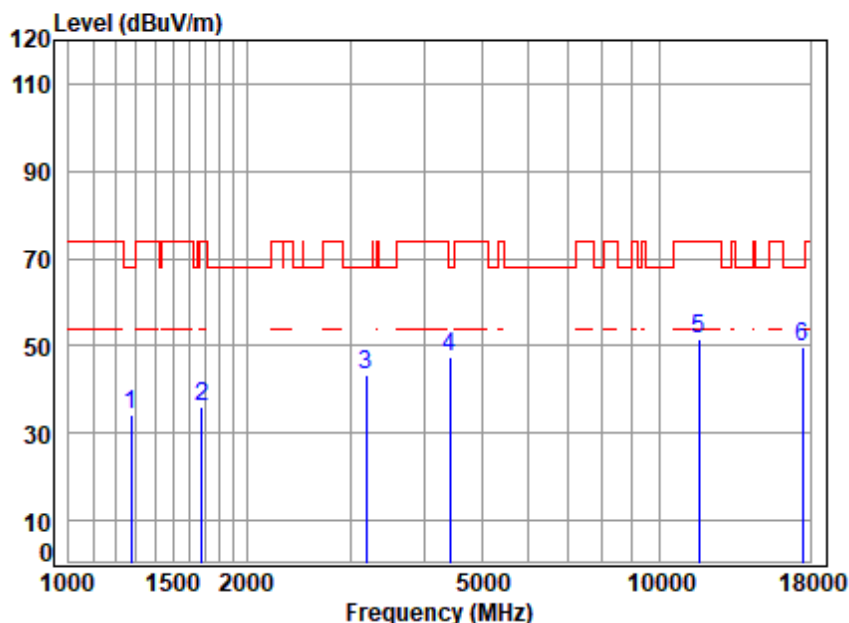


Site : chamber
Condition: 3m VERTICAL
Job No : 12337CR\12340CR
Mode : 5785 TX RSE
Note : 5G WIFI 11A

		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	1238.483	2.83	24.76	39.79	46.43	34.23	74.00	-39.77	peak
2	1511.833	3.27	25.85	39.96	47.49	36.65	74.00	-37.35	peak
3	3405.929	5.40	31.56	41.01	48.52	44.47	68.20	-23.73	peak
4	4443.453	6.71	33.50	41.82	47.78	46.17	68.20	-22.03	peak
5	11570.000	11.72	37.87	37.90	37.56	49.25	74.00	-24.75	peak
6	17355.000	14.06	42.81	40.25	32.50	49.12	68.20	-19.08	peak



Test Mode: 10; Polarity: Horizontal; Modulation:802.11a; Bandwidth:20MHz; Channel:High

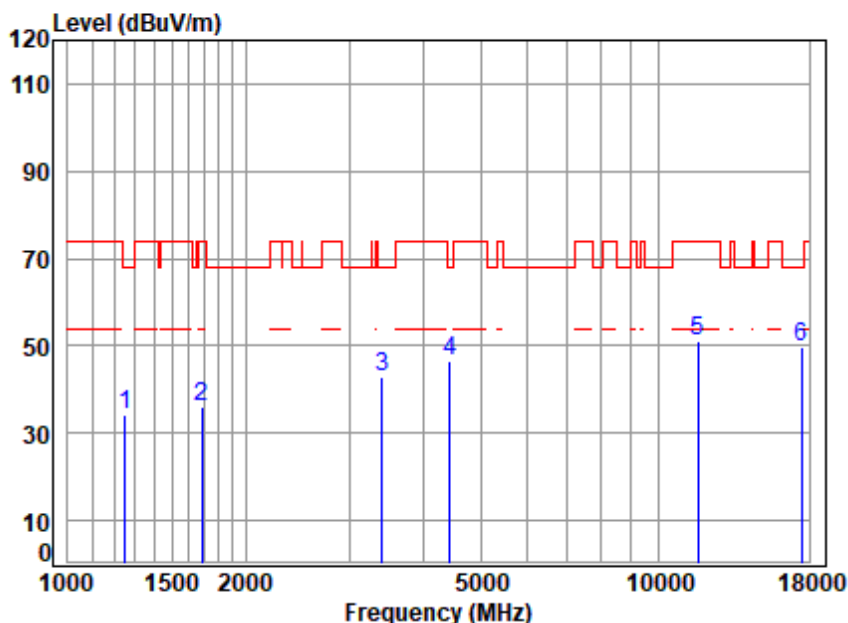


Site : chamber
Condition: 3m HORIZONTAL
Job No : 12337CR\12340CR
Mode : 5825 TX RSE
Note : 5G WIFI 11A

	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	1274.802	2.90	24.92	39.81	46.30	34.31	68.20	-33.89	peak
2	1682.477	3.42	26.60	40.05	45.87	35.84	74.00	-38.16	peak
3	3186.869	5.12	31.21	40.85	48.00	43.48	68.20	-24.72	peak
4	4417.841	6.68	33.46	41.80	49.00	47.34	68.20	-20.86	peak
5	11650.000	11.82	37.84	37.94	39.91	51.63	74.00	-22.37	peak
6	17475.000	14.02	42.89	40.23	32.83	49.51	68.20	-18.69	peak



Test Mode: 10; Polarity: Vertical; Modulation:802.11a; Bandwidth:20MHz; Channel:High

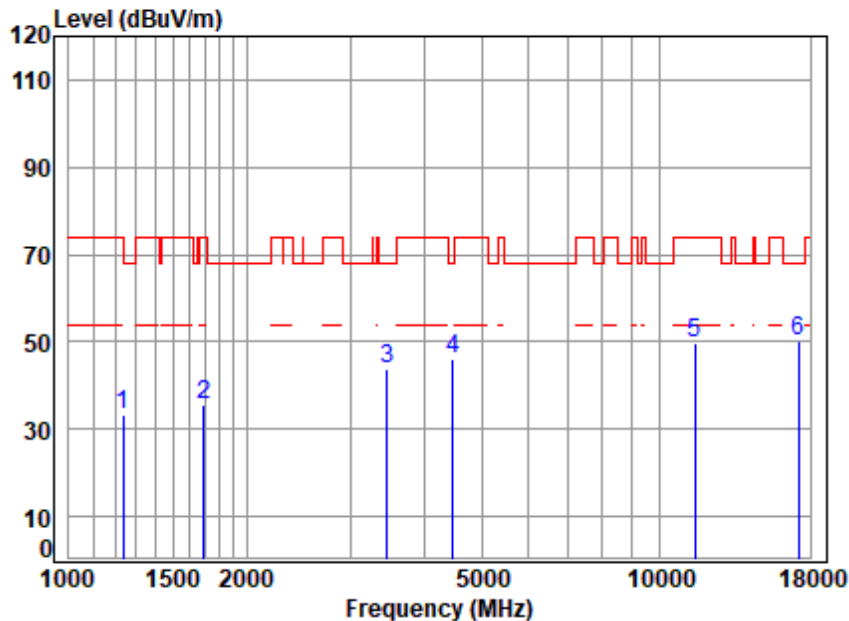


Site : chamber
Condition: 3m VERTICAL
Job No : 12337CR\12340CR
Mode : 5825 TX RSE
Note : 5G WIFI 11A

	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	1249.269	2.85	24.81	39.79	46.26	34.13	68.20	-34.07	peak
2	1687.347	3.42	26.62	40.05	46.06	36.05	74.00	-37.95	peak
3	3405.929	5.40	31.56	41.01	47.15	43.10	68.20	-25.10	peak
4	4443.453	6.71	33.50	41.82	48.32	46.71	68.20	-21.49	peak
5	11650.000	11.82	37.84	37.94	39.31	51.03	74.00	-22.97	peak
6	17475.000	14.02	42.89	40.23	33.25	49.93	68.20	-18.27	peak



Test Mode: 10; Polarity: Horizontal; Modulation:802.11n; Bandwidth:20MHz; Channel:Low

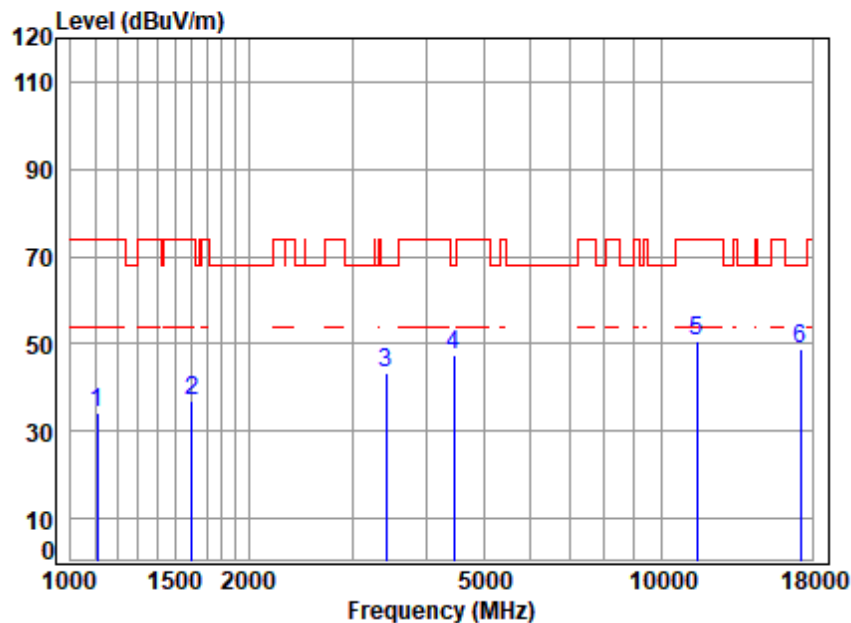


Site : chamber
Condition: 3m HORIZONTAL
Job No : 12337CR\12340CR
Mode : 5745 TX RSE
Note : 5G WIFI 11N20

	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	1234.909	2.83	24.74	39.78	45.57	33.36	74.00	-40.64	peak
2	1692.231	3.42	26.64	40.06	45.75	35.75	74.00	-38.25	peak
3	3455.508	5.47	31.63	41.04	47.78	43.84	68.20	-24.36	peak
4	4469.214	6.73	33.55	41.85	47.45	45.88	68.20	-22.32	peak
5	11490.000	11.62	37.90	37.86	37.99	49.65	74.00	-24.35	peak
6	17235.000	14.09	42.74	40.28	33.57	50.12	68.20	-18.08	peak



Test Mode: 10; Polarity: Vertical; Modulation:802.11n; Bandwidth:20MHz; Channel:Low

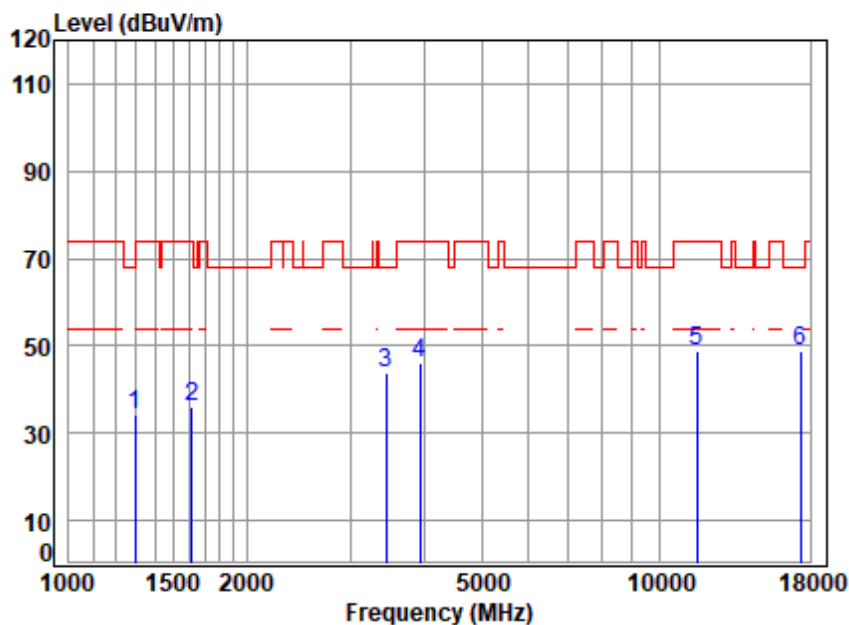


Site : chamber
Condition: 3m VERTICAL
Job No : 12337CR\12340CR
Mode : 5745 TX RSE
Note : 5G WIFI 11N20

	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	1109.660	2.59	24.16	39.69	46.99	34.05	74.00	-39.95	peak
2	1606.441	3.35	26.28	40.01	47.32	36.94	74.00	-37.06	peak
3	3415.787	5.42	31.57	41.02	47.37	43.34	68.20	-24.86	peak
4	4456.315	6.72	33.53	41.84	48.86	47.27	68.20	-20.93	peak
5	11490.000	11.62	37.90	37.86	38.76	50.42	74.00	-23.58	peak
6	17235.000	14.09	42.74	40.28	32.14	48.69	68.20	-19.51	peak



Test Mode: 10; Polarity: Horizontal; Modulation:802.11n; Bandwidth:20MHz; Channel:middle

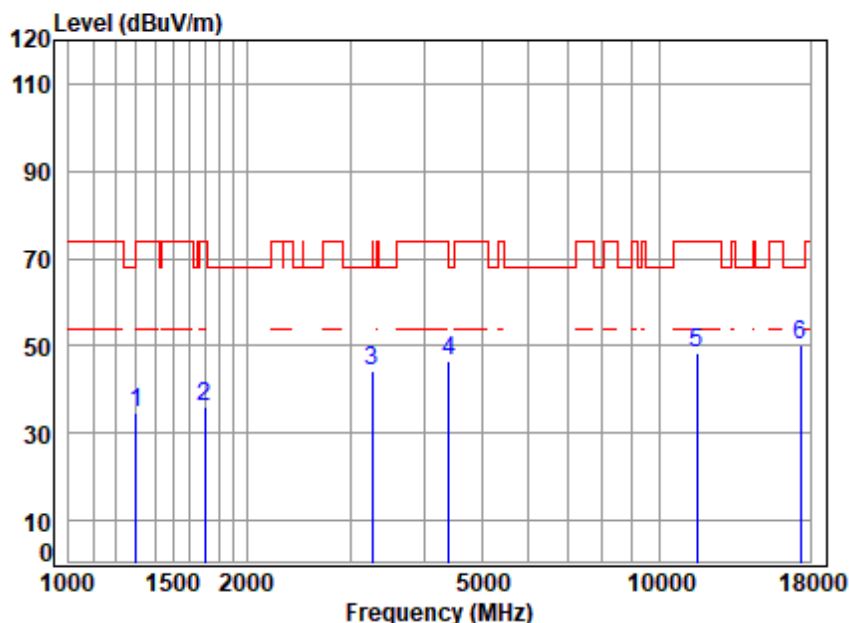


Site : chamber
Condition: 3m HORIZONTAL
Job No : 12337CR\12340CR
Mode : 5785 TX RSE
Note : 5G WIFI 11N20

	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	1293.359	2.93	25.00	39.82	45.91	34.02	68.20	-34.18	peak
2	1615.754	3.36	26.32	40.02	46.56	36.22	74.00	-37.78	peak
3	3445.535	5.45	31.62	41.04	47.99	44.02	68.20	-24.18	peak
4	3935.493	6.19	32.58	41.36	48.76	46.17	74.00	-27.83	peak
5	11570.000	11.72	37.87	37.90	37.36	49.05	74.00	-24.95	peak
6	17355.000	14.06	42.81	40.25	32.24	48.86	68.20	-19.34	peak



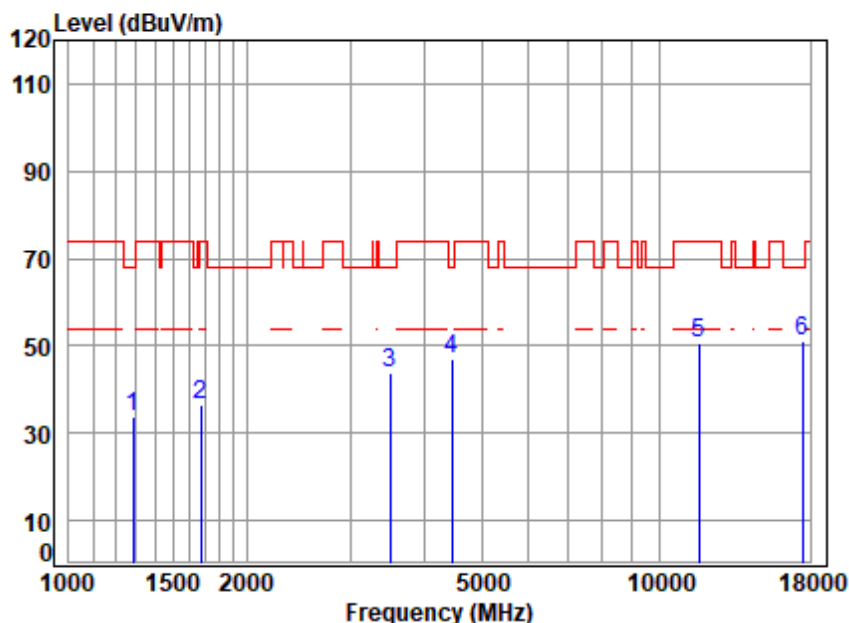
Test Mode: 10; Polarity: Vertical; Modulation:802.11n; Bandwidth:20MHz; Channel:middle



Site : chamber
Condition: 3m VERTICAL
Job No : 12337CR\12340CR
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	1300.858	2.94	25.03	39.83	46.32	34.46	74.00	-39.54	peak
2	1697.129	3.43	26.66	40.06	46.08	36.11	74.00	-37.89	peak
3	3261.418	5.22	31.33	40.90	48.51	44.16	74.00	-29.84	peak
4	4405.090	6.67	33.44	41.79	48.00	46.32	68.20	-21.88	peak
5	11570.000	11.72	37.87	37.90	36.69	48.38	74.00	-25.62	peak
6	17355.000	14.06	42.81	40.25	33.45	50.07	68.20	-18.13	peak

Test Mode: 10; Polarity: Horizontal; Modulation:802.11n; Bandwidth:20MHz; Channel:High



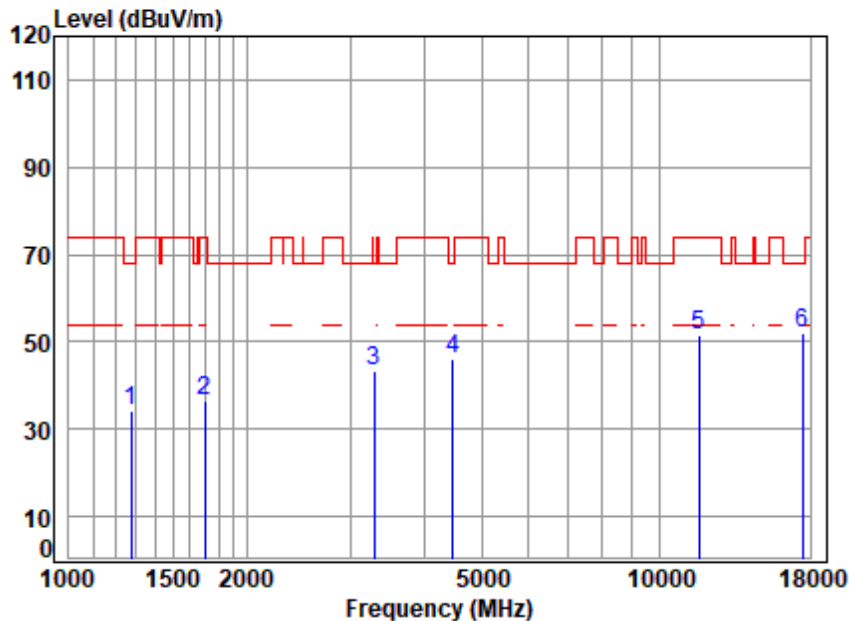
Site : chamber
Condition: 3m HORIZONTAL
Job No : 12337CR\12340CR
Mode : 5825 TX RSE
Note : 5G WIFI 11N20

	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	1285.904	2.92	24.96	39.82	45.82	33.88	68.20	-34.32	peak
2	1672.779	3.41	26.56	40.05	46.59	36.51	74.00	-37.49	peak
3	3495.691	5.51	31.69	41.07	47.60	43.73	68.20	-24.47	peak
4	4456.315	6.72	33.53	41.84	48.70	47.11	68.20	-21.09	peak
5	11650.000	11.82	37.84	37.94	39.05	50.77	74.00	-23.23	peak
6	17475.000	14.02	42.89	40.23	34.40	51.08	68.20	-17.12	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.

Test Mode: 10; Polarity: Vertical; Modulation:802.11n; Bandwidth:20MHz; Channel:High

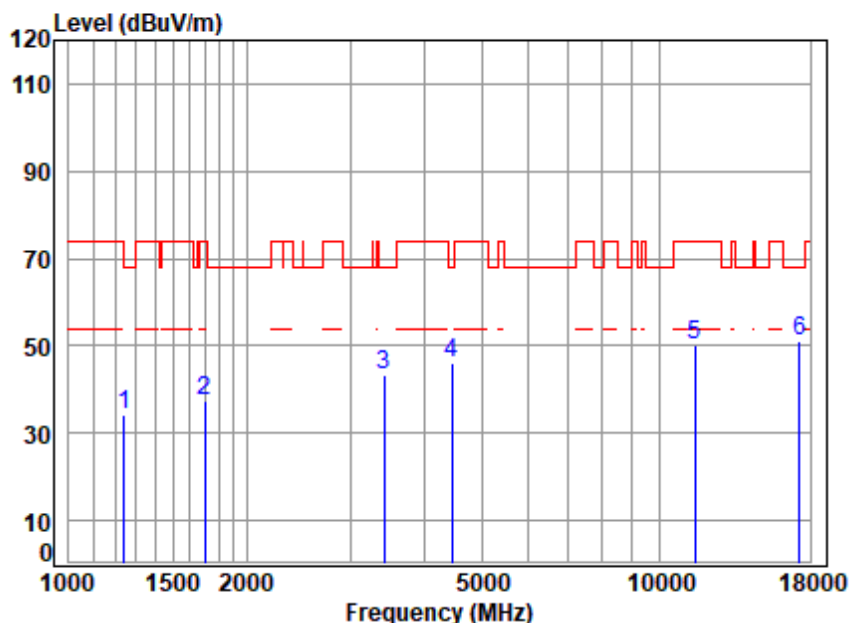


Site : chamber
Condition: 3m VERTICAL
Job No : 12337CR\12340CR
Mode : 5825 TX RSE
Note : 5G WIFI 11N20

	Freq	Cable Loss	Ant Factor	Preamp Factor	Read Level	Level	Limit	Over	Remark
	MHz	dB	dB/m	dB	dBuV	dBuV/m	dBuV/m	dB	
1	1274.802	2.90	24.92	39.81	46.17	34.18	68.20	-34.02	peak
2	1697.129	3.43	26.66	40.06	46.43	36.46	74.00	-37.54	peak
3	3289.821	5.25	31.38	40.92	47.79	43.50	68.20	-24.70	peak
4	4469.214	6.73	33.55	41.85	47.60	46.03	68.20	-22.17	peak
5	11650.000	11.82	37.84	37.94	39.87	51.59	74.00	-22.41	peak
6	17475.000	14.02	42.89	40.23	35.17	51.85	68.20	-16.35	peak



Test Mode: 10; Polarity: Horizontal; Modulation:802.11n; Bandwidth:40MHz; Channel:Low

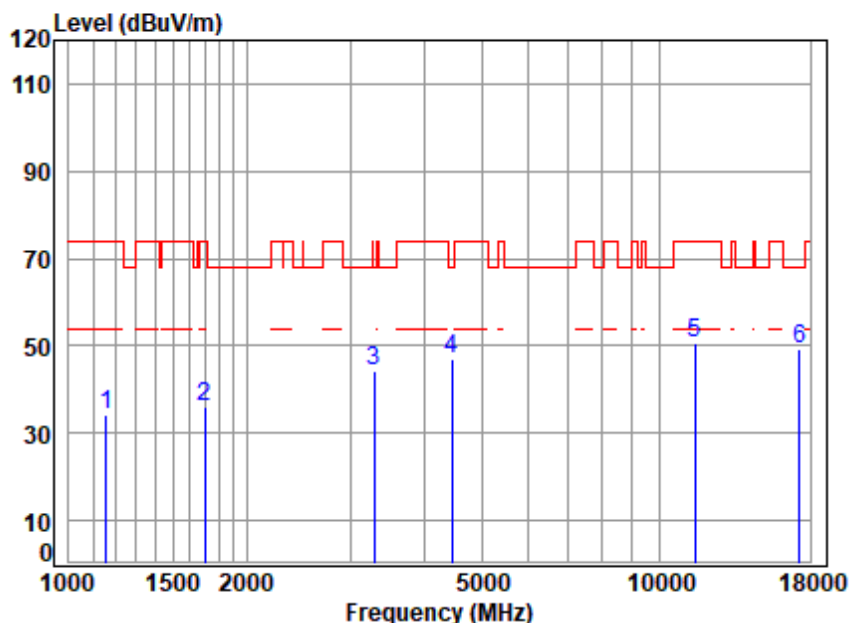


Site : chamber
Condition: 3m HORIZONTAL
Job No : 12337CR\12340CR
Mode : 5755 TX RSE
Note : 5G WIFI 11N40

	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	1242.068	2.84	24.78	39.79	46.18	34.01	68.20	-34.19	peak
2	1697.129	3.43	26.66	40.06	47.48	37.51	74.00	-36.49	peak
3	3425.675	5.43	31.59	41.02	47.20	43.20	68.20	-25.00	peak
4	4456.315	6.72	33.53	41.84	47.59	46.00	68.20	-22.20	peak
5	11510.000	11.64	37.90	37.87	38.51	50.18	74.00	-23.82	peak
6	17265.000	14.08	42.76	40.28	34.72	51.28	68.20	-16.92	peak



Test Mode: 10; Polarity: Vertical; Modulation:802.11n; Bandwidth:40MHz; Channel:Low

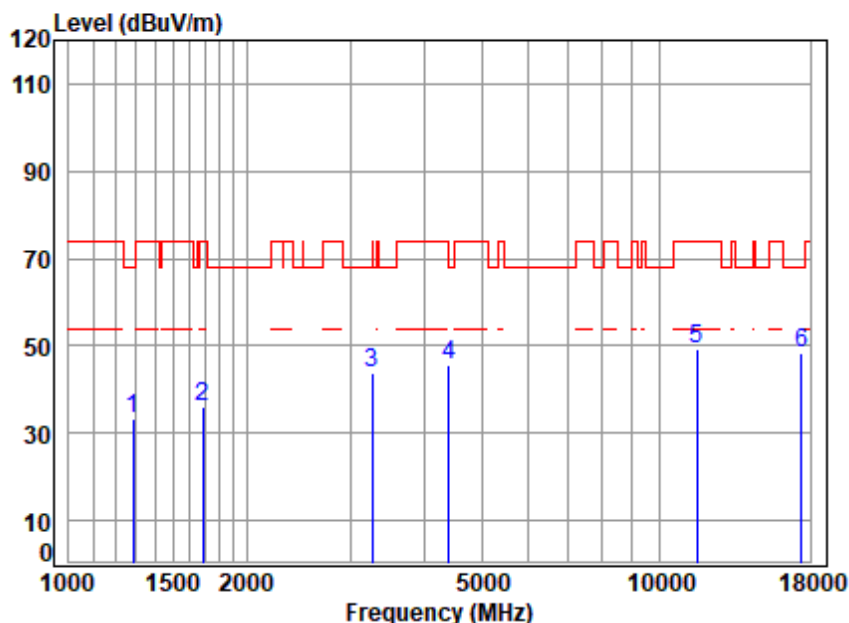


Site : chamber
Condition: 3m VERTICAL
Job No : 12337CR\12340CR
Mode : 5755 TX RSE
Note : 5G WIFI 11N40

	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	1158.828	2.69	24.40	39.73	46.89	34.25	74.00	-39.75	peak
2	1697.129	3.43	26.66	40.06	45.96	35.99	74.00	-38.01	peak
3	3289.821	5.25	31.38	40.92	48.66	44.37	68.20	-23.83	peak
4	4456.315	6.72	33.53	41.84	48.58	46.99	68.20	-21.21	peak
5	11510.000	11.64	37.90	37.87	39.13	50.80	74.00	-23.20	peak
6	17265.000	14.08	42.76	40.28	32.88	49.44	68.20	-18.76	peak



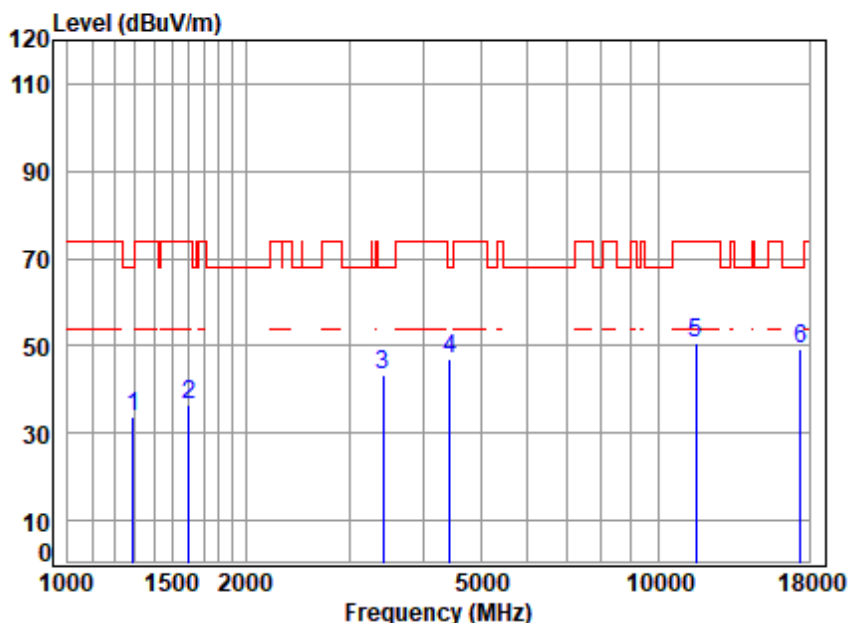
Test Mode: 10; Polarity: Horizontal; Modulation:802.11n; Bandwidth:40MHz; Channel:High



Site : chamber
Condition: 3m HORIZONTAL
Job No : 12337CR\12340CR
Mode : 5795 TX RSE
Note : 5G WIFI 11N40

	Freq	Cable Loss	Ant Factor	Preamp Factor	Read Level	Level	Limit	Over	Remark
	MHz	dB	dB/m	dB	dBuV	dBuV/m	dBuV/m	dB	
1	1285.904	2.92	24.96	39.82	45.33	33.39	68.20	-34.81	peak
2	1687.347	3.42	26.62	40.05	46.20	36.19	74.00	-37.81	peak
3	3261.418	5.22	31.33	40.90	48.14	43.79	74.00	-30.21	peak
4	4405.090	6.67	33.44	41.79	47.28	45.60	68.20	-22.60	peak
5	11590.000	11.74	37.86	37.91	37.44	49.13	74.00	-24.87	peak
6	17385.000	14.05	42.83	40.25	31.93	48.56	68.20	-19.64	peak

Test Mode: 10; Polarity: Vertical; Modulation:802.11n; Bandwidth:40MHz; Channel:High

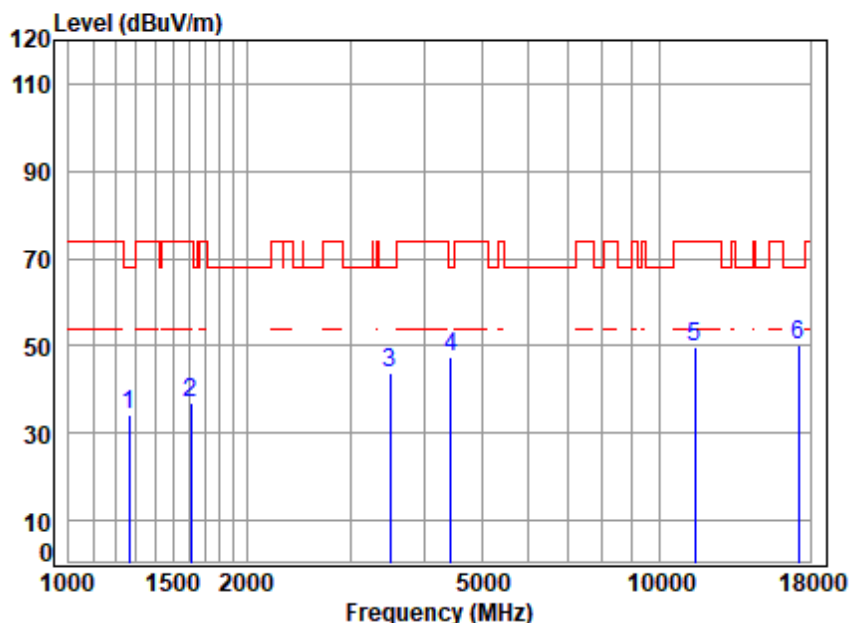


Site : chamber
Condition: 3m VERTICAL
Job No : 12337CR\12340CR
Mode : 5795 TX RSE
Note : 5G WIFI 11N40

	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	1289.627	2.92	24.98	39.82	45.83	33.91	68.20	-34.29	peak
2	1606.441	3.35	26.28	40.01	46.92	36.54	74.00	-37.46	peak
3	3415.787	5.42	31.57	41.02	47.57	43.54	68.20	-24.66	peak
4	4443.453	6.71	33.50	41.82	48.41	46.80	68.20	-21.40	peak
5	11590.000	11.74	37.86	37.91	38.87	50.56	74.00	-23.44	peak
6	17385.000	14.05	42.83	40.25	32.59	49.22	68.20	-18.98	peak



Test Mode: 10; Polarity: Horizontal; Modulation:802.11ac; Bandwidth:20MHz; Channel:Low

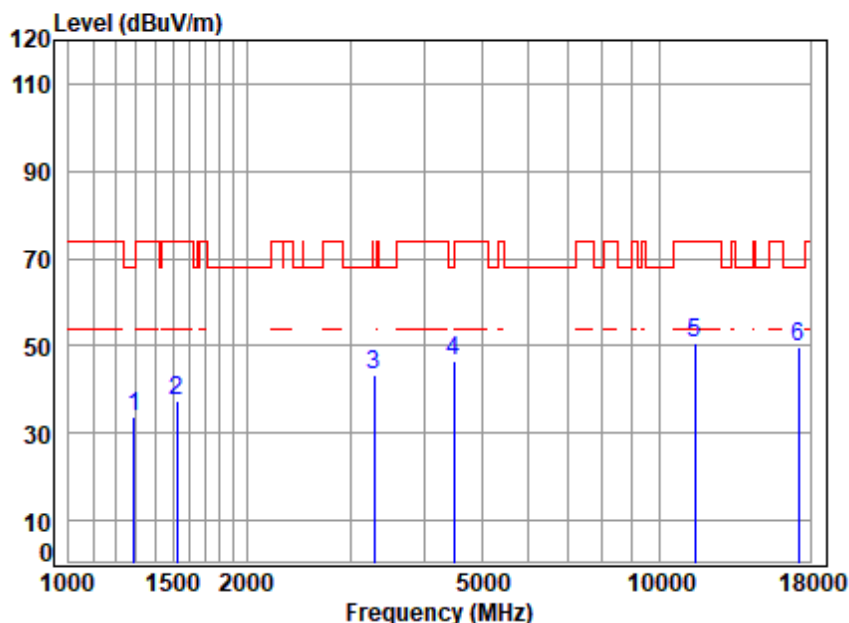


Site : chamber
Condition: 3m HORIZONTAL
Job No : 12337CR\12340CR
Mode : 5745 TX RSE
Note : 5G WIFI 11AC20

	Freq	Cable Loss	Ant Factor	Preamp Factor	Read Level	Level	Limit	Over	Remark
	MHz	dB	dB/m	dB	dBuV	dBuV/m	dBuV/m	dB	
1	1267.454	2.89	24.89	39.81	46.08	34.05	68.20	-34.15	peak
2	1611.091	3.36	26.30	40.01	47.12	36.77	74.00	-37.23	peak
3	3495.691	5.51	31.69	41.07	47.63	43.76	68.20	-24.44	peak
4	4430.628	6.70	33.48	41.81	48.89	47.26	68.20	-20.94	peak
5	11490.000	11.62	37.90	37.86	37.92	49.58	74.00	-24.42	peak
6	17235.000	14.09	42.74	40.28	33.56	50.11	68.20	-18.09	peak



Test Mode: 10; Polarity: Vertical; Modulation:802.11ac; Bandwidth:20MHz; Channel:Low

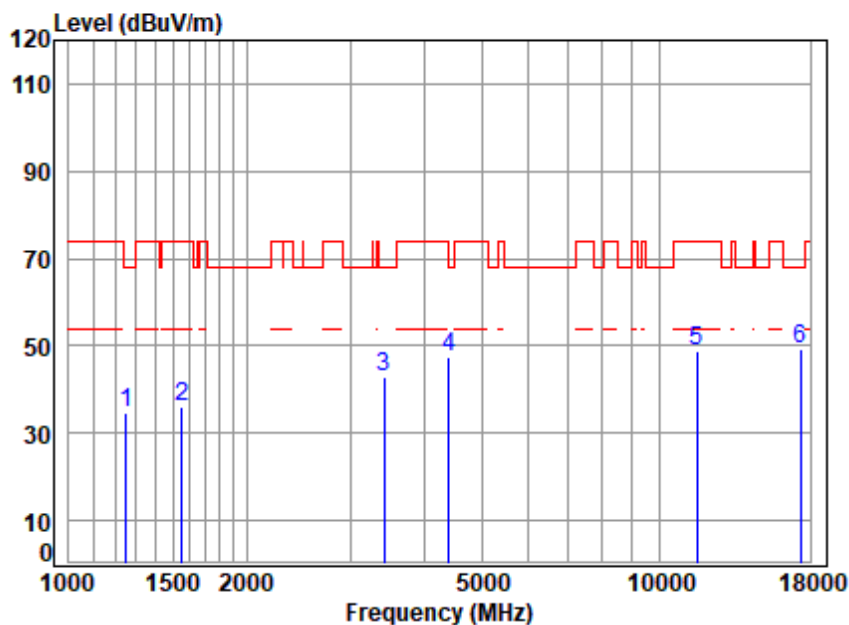


Site : chamber
Condition: 3m VERTICAL
Job No : 12337CR\12340CR
Mode : 5745 TX RSE
Note : 5G WIFI 11AC20

	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	1289.627	2.92	24.98	39.82	45.70	33.78	68.20	-34.42	peak
2	1525.000	3.28	25.91	39.97	48.10	37.32	74.00	-36.68	peak
3	3289.821	5.25	31.38	40.92	47.67	43.38	68.20	-24.82	peak
4	4482.150	6.74	33.57	41.86	48.28	46.73	68.20	-21.47	peak
5	11490.000	11.62	37.90	37.86	39.10	50.76	74.00	-23.24	peak
6	17235.000	14.09	42.74	40.28	33.25	49.80	68.20	-18.40	peak



Test Mode: 10; Polarity: Horizontal; Modulation:802.11ac; Bandwidth:20MHz; Channel:middle

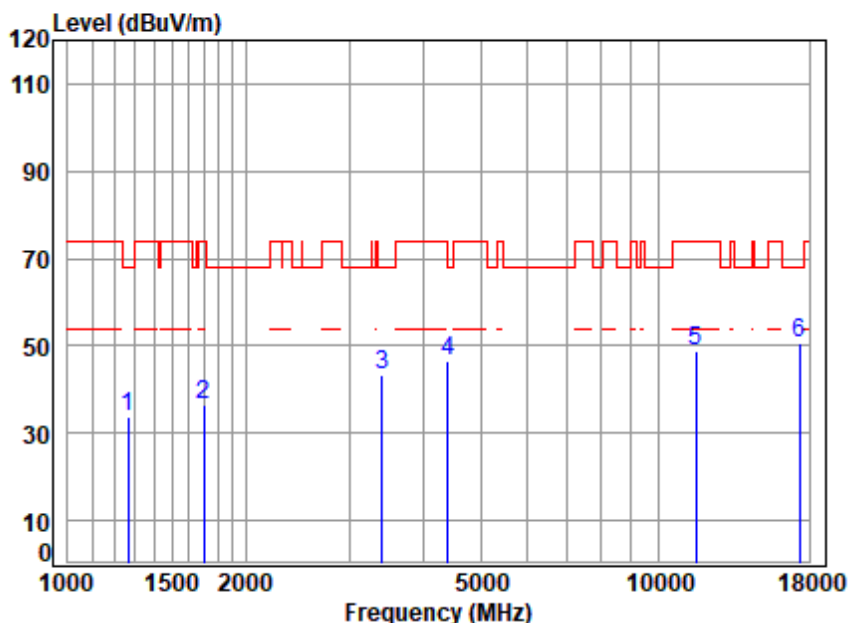


Site : chamber
Condition: 3m HORIZONTAL
Job No : 12337CR\12340CR
Mode : 5785 TX RSE
Note : 5G WIFI 11AC20

	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	1249.269	2.85	24.81	39.79	46.80	34.67	68.20	-33.53	peak
2	1551.677	3.31	26.04	39.98	46.84	36.21	74.00	-37.79	peak
3	3415.787	5.42	31.57	41.02	47.03	43.00	68.20	-25.20	peak
4	4405.090	6.67	33.44	41.79	48.95	47.27	68.20	-20.93	peak
5	11570.000	11.72	37.87	37.90	37.19	48.88	74.00	-25.12	peak
6	17355.000	14.06	42.81	40.25	32.67	49.29	68.20	-18.91	peak



Test Mode: 10; Polarity: Vertical; Modulation:802.11ac; Bandwidth:20MHz; Channel:middle

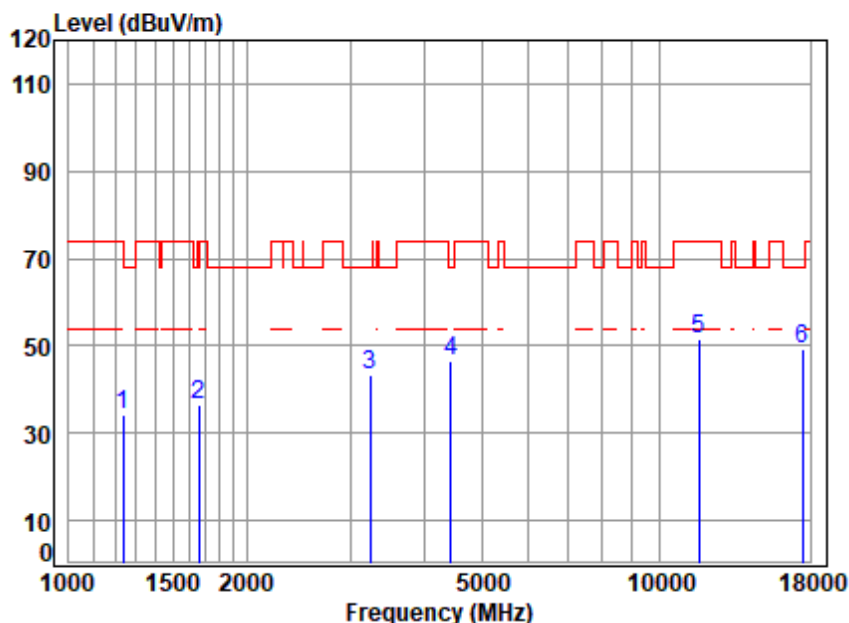


Site : chamber
Condition: 3m VERTICAL
Job No : 12337CR\12340CR
Mode : 5785 TX RSE
Note : 5G WIFI 11AC20

		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	2.88	24.87	39.80	45.95	33.90	68.20	-34.30	peak
2	1697.129	3.43	26.66	40.06	46.42	36.45	74.00	-37.55	peak
3	3405.929	5.40	31.56	41.01	47.23	43.18	68.20	-25.02	peak
4	4405.090	6.67	33.44	41.79	48.20	46.52	68.20	-21.68	peak
5	11570.000	11.72	37.87	37.90	37.19	48.88	74.00	-25.12	peak
6	17355.000	14.06	42.81	40.25	34.19	50.81	68.20	-17.39	peak



Test Mode: 10; Polarity: Horizontal; Modulation:802.11ac; Bandwidth:20MHz; Channel:High

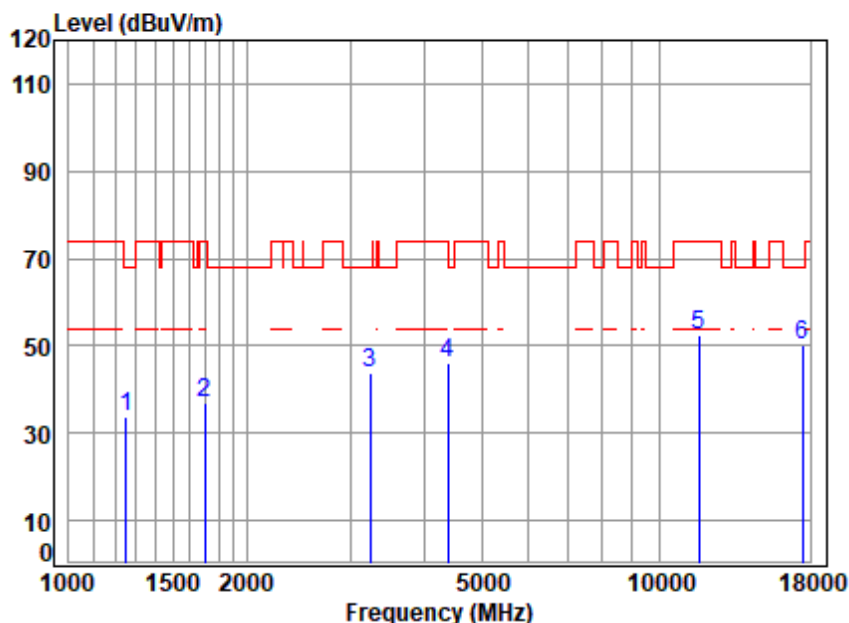


Site : chamber
Condition: 3m HORIZONTAL
Job No : 12337CR\12340CR
Mode : 5825 TX RSE
Note : 5G WIFI 11AC20

	Freq	Cable Loss	Ant Factor	Preamp Factor	Read Level	Level	Limit	Over	Remark
	MHz	dB	dB/m	dB	dBuV	dBuV/m	dBuV/m	dB	
1	1234.909	2.83	24.74	39.78	46.24	34.03	74.00	-39.97	peak
2	1658.337	3.40	26.50	40.04	46.76	36.62	68.20	-31.58	peak
3	3233.260	5.18	31.29	40.88	47.65	43.24	68.20	-24.96	peak
4	4443.453	6.71	33.50	41.82	48.00	46.39	68.20	-21.81	peak
5	11650.000	11.82	37.84	37.94	39.79	51.51	74.00	-22.49	peak
6	17475.000	14.02	42.89	40.23	32.81	49.49	68.20	-18.71	peak



Test Mode: 10; Polarity: Vertical; Modulation:802.11ac; Bandwidth:20MHz; Channel:High

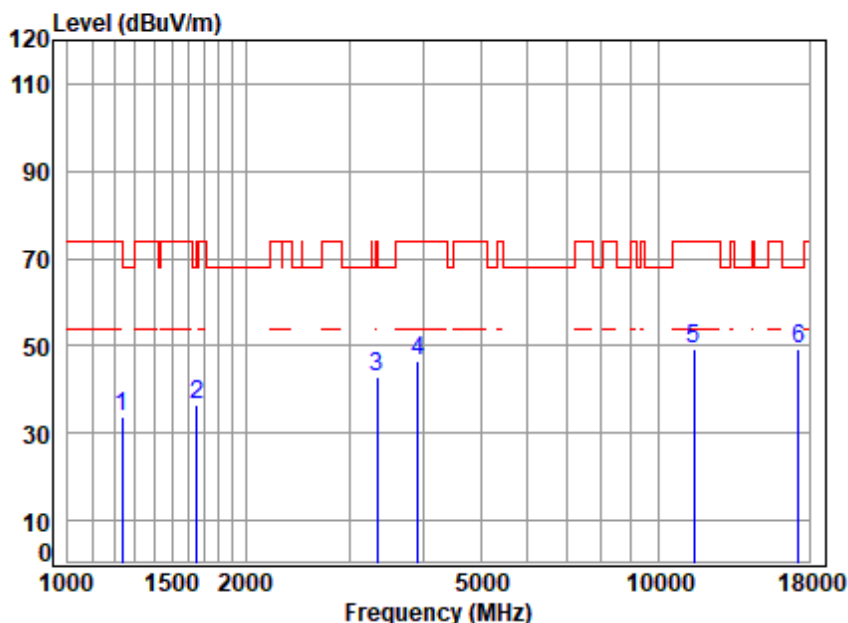


Site : chamber
Condition: 3m VERTICAL
Job No : 12337CR\12340CR
Mode : 5825 TX RSE
Note : 5G WIFI 11AC20

	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	1249.269	2.85	24.81	39.79	45.82	33.69	68.20	-34.51	peak
2	1697.129	3.43	26.66	40.06	47.13	37.16	74.00	-36.84	peak
3	3233.260	5.18	31.29	40.88	48.38	43.97	68.20	-24.23	peak
4	4392.376	6.66	33.42	41.78	47.58	45.88	74.00	-28.12	peak
5	11650.000	11.82	37.84	37.94	40.61	52.33	74.00	-21.67	peak
6	17475.000	14.02	42.89	40.23	33.68	50.36	68.20	-17.84	peak



Test Mode: 10; Polarity: Horizontal; Modulation:802.11ac; Bandwidth:40MHz; Channel:Low

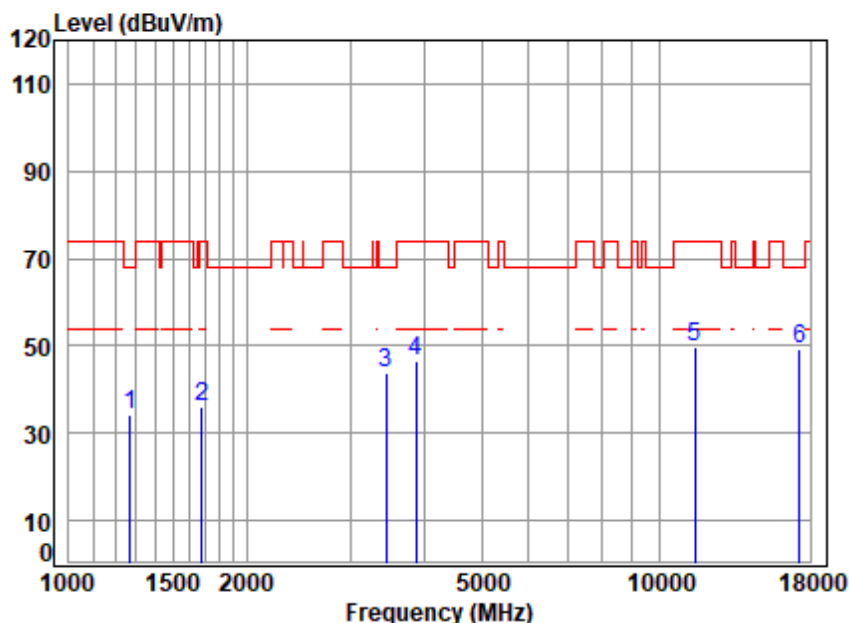


Site : chamber
Condition: 3m HORIZONTAL
Job No : 12337CR\12340CR
Mode : 5755 TX RSE
Note : 5G WIFI 11AC40

		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	1238.483	2.83	24.76	39.79	45.91	33.71	74.00	-40.29	peak
2	1653.550	3.39	26.48	40.04	46.70	36.53	68.20	-31.67	peak
3	3347.371	5.33	31.47	40.97	47.25	43.08	74.00	-30.92	peak
4	3924.135	6.17	32.56	41.35	49.10	46.48	74.00	-27.52	peak
5	11510.000	11.64	37.90	37.87	37.62	49.29	74.00	-24.71	peak
6	17265.000	14.08	42.76	40.28	32.88	49.44	68.20	-18.76	peak



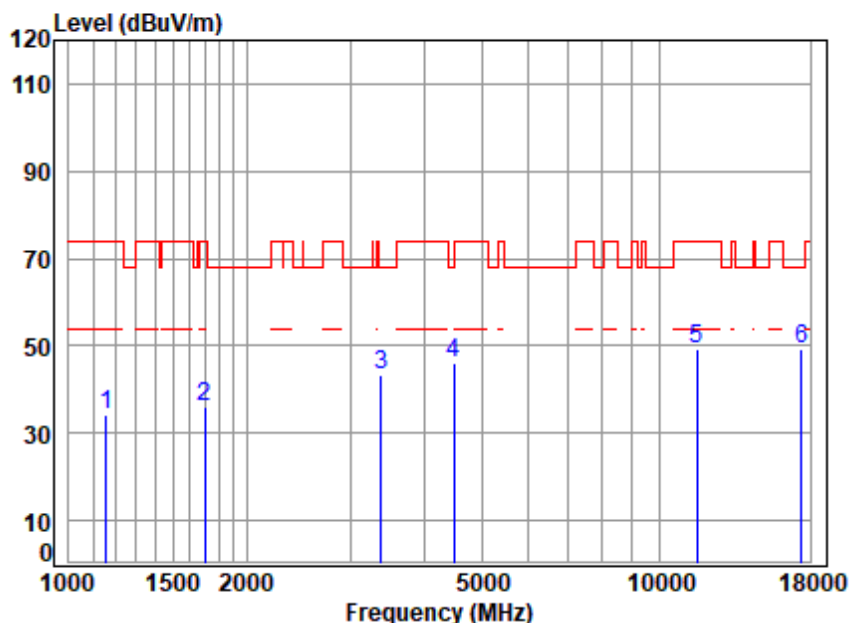
Test Mode: 10; Polarity: Vertical; Modulation:802.11ac; Bandwidth:40MHz; Channel:Low



Site : chamber
Condition: 3m VERTICAL
Job No : 12337CR\12340CR
Mode : 5755 TX RSE
Note : 5G WIFI 11AC40

	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	1271.123	2.89	24.90	39.81	46.06	34.04	68.20	-34.16	peak
2	1677.621	3.41	26.58	40.05	46.15	36.09	74.00	-37.91	peak
3	3445.535	5.45	31.62	41.04	47.91	43.94	68.20	-24.26	peak
4	3867.831	6.09	32.45	41.32	49.33	46.55	74.00	-27.45	peak
5	11510.000	11.64	37.90	37.87	38.06	49.73	74.00	-24.27	peak
6	17265.000	14.08	42.76	40.28	32.61	49.17	68.20	-19.03	peak

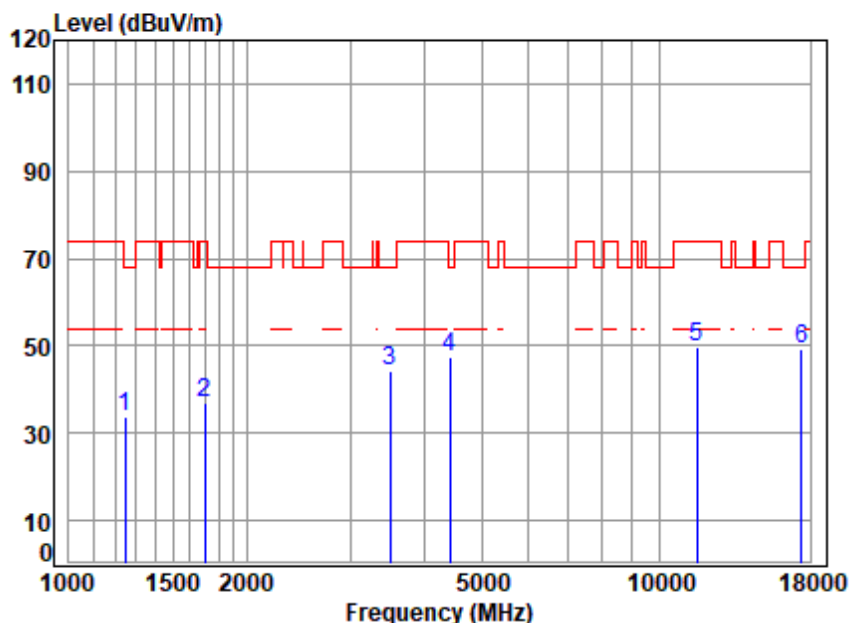
Test Mode: 10; Polarity: Horizontal; Modulation:802.11ac; Bandwidth:40MHz; Channel:High



Site : chamber
Condition: 3m HORIZONTAL
Job No : 12337CR\12340CR
Mode : 5795 TX RSE
Note : 5G WIFI 11AC40

	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	1158.828	2.69	24.40	39.73	46.83	34.19	74.00	-39.81	peak
2	1697.129	3.43	26.66	40.06	46.19	36.22	74.00	-37.78	peak
3	3376.523	5.37	31.51	40.99	47.67	43.56	68.20	-24.64	peak
4	4482.150	6.74	33.57	41.86	47.61	46.06	68.20	-22.14	peak
5	11590.000	11.74	37.86	37.91	37.54	49.23	74.00	-24.77	peak
6	17385.000	14.05	42.83	40.25	32.73	49.36	68.20	-18.84	peak

Test Mode: 10; Polarity: Vertical; Modulation:802.11ac; Bandwidth:40MHz; Channel:High



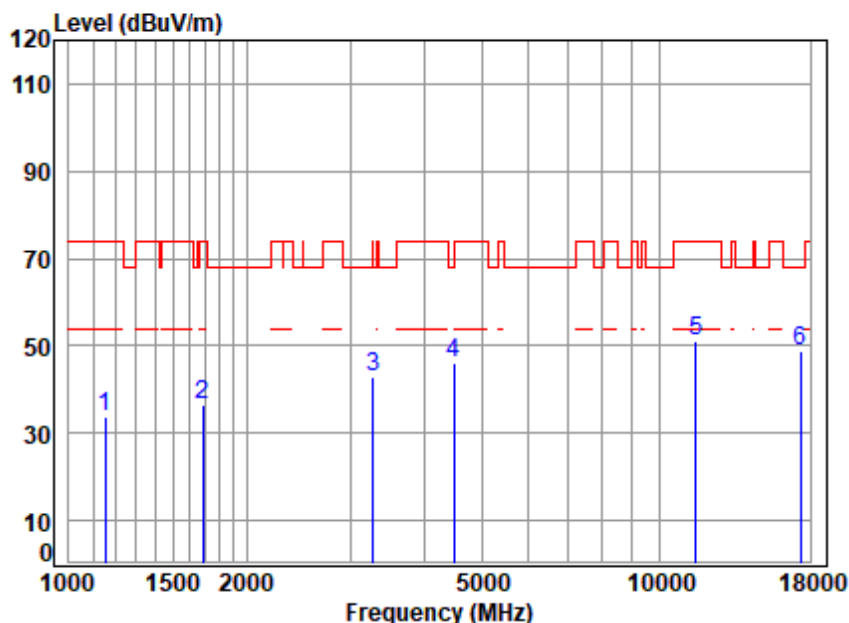
Site : chamber
Condition: 3m VERTICAL
Job No : 12337CR\12340CR
Mode : 5795 TX RSE
Note : 5G WIFI 11AC40

	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	1245.663	2.85	24.79	39.79	45.76	33.61	68.20	-34.59	peak
2	1697.129	3.43	26.66	40.06	46.96	36.99	74.00	-37.01	peak
3	3495.691	5.51	31.69	41.07	48.18	44.31	68.20	-23.89	peak
4	4417.841	6.68	33.46	41.80	49.31	47.65	68.20	-20.55	peak
5	11590.000	11.74	37.86	37.91	37.82	49.51	74.00	-24.49	peak
6	17385.000	14.05	42.83	40.25	32.53	49.16	68.20	-19.04	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.

Test Mode: 10; Polarity: Horizontal; Modulation:802.11ac; Bandwidth:80MHz; Channel:middle

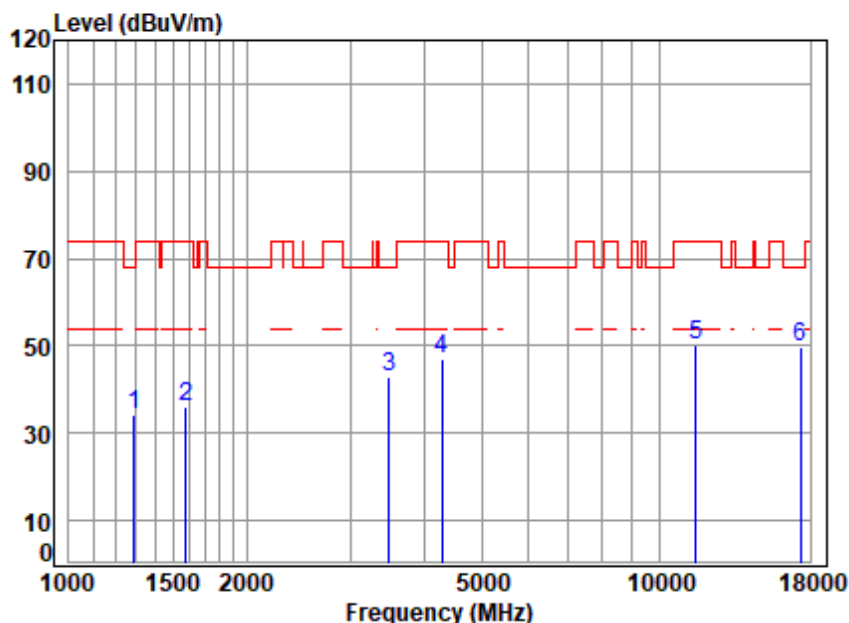


Site : chamber
Condition: 3m HORIZONTAL
Job No : 12337CR\12340CR
Mode : 5775 TX RSE
Note : 5G WIFI 11AC80

	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	1152.148	2.67	24.37	39.72	46.51	33.83	74.00	-40.17	peak
2	1687.347	3.42	26.62	40.05	46.49	36.48	74.00	-37.52	peak
3	3270.858	5.23	31.35	40.91	47.26	42.93	68.20	-25.27	peak
4	4495.125	6.76	33.59	41.87	47.66	46.14	68.20	-22.06	peak
5	11550.000	11.69	37.88	37.89	39.50	51.18	74.00	-22.82	peak
6	17325.000	14.07	42.80	40.26	32.41	49.02	68.20	-19.18	peak



Test Mode: 10; Polarity: Vertical; Modulation:802.11ac; Bandwidth:80MHz; Channel:middle

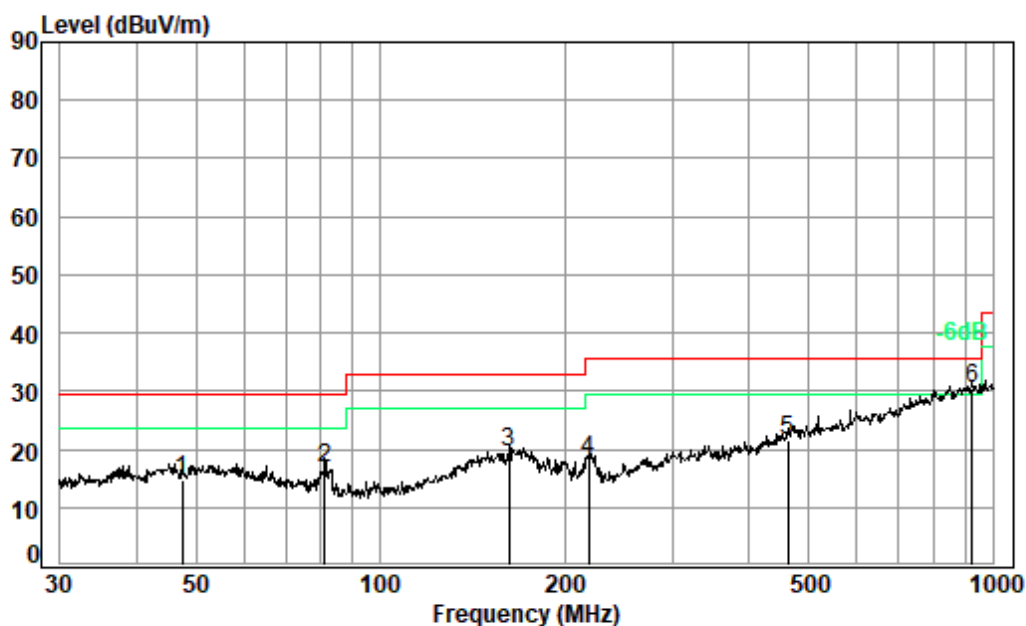


Site : chamber
Condition: 3m VERTICAL
Job No : 12337CR\12340CR
Mode : 5775 TX RSE
Note : 5G WIFI 11AC80

		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	1289.627	2.92	24.98	39.82	46.06	34.14	68.20	-34.06	peak
2	1578.822	3.33	26.16	40.00	46.45	35.94	74.00	-38.06	peak
3	3485.601	5.50	31.68	41.07	46.65	42.76	68.20	-25.44	peak
4	4279.589	6.56	33.22	41.67	48.66	46.77	74.00	-27.23	peak
5	11550.000	11.69	37.88	37.89	38.48	50.16	74.00	-23.84	peak
6	17325.000	14.07	42.80	40.26	33.23	49.84	68.20	-18.36	peak



Test Mode: 09; Polarity: Horizontal



Condition: 10m HORIZONTAL

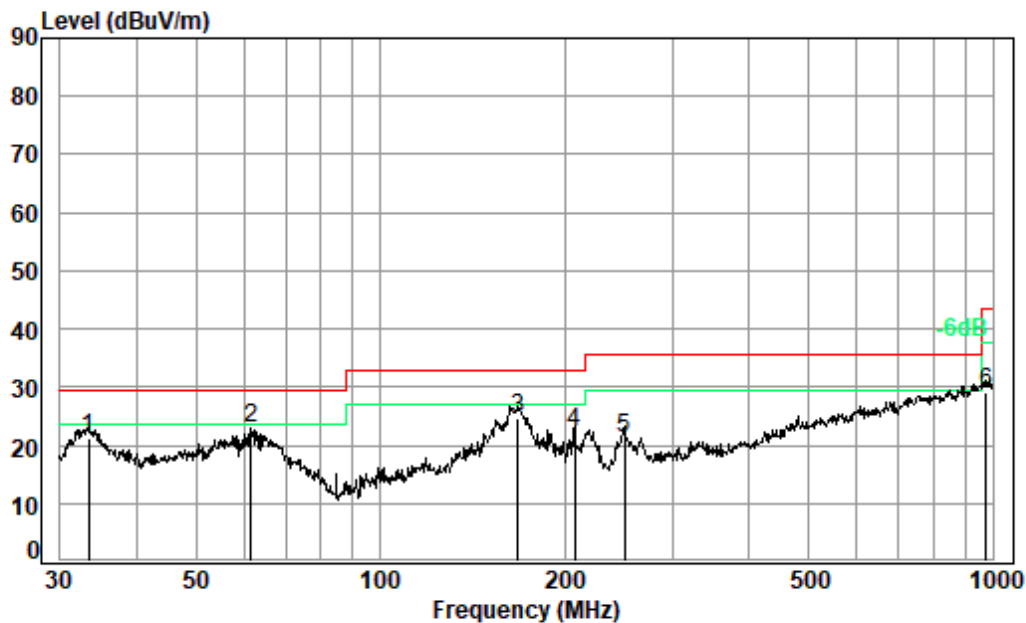
Job No. : 12337CR

Test Mode: 09

		Ant	Preamp	Cable	Read		Limit	Over	
	Freq	Factor	Factor	Loss	Level	Level	Line	Limit	Remark
	MHz	dB/m	dB	dB	dBuV	dBuV/m	dBuV/m	dB	
1	47.492	20.28	32.50	0.95	26.12	14.85	29.50	-14.65	QP
2	81.212	14.53	32.47	1.18	33.39	16.63	29.50	-12.87	QP
3	162.041	19.70	32.42	1.52	30.57	19.37	33.00	-13.63	QP
4	219.075	16.00	32.40	1.76	32.78	18.14	35.60	-17.46	QP
5	462.346	23.62	32.30	2.66	27.66	21.64	35.60	-13.96	QP
6 pp	925.756	29.80	31.36	3.50	28.44	30.38	35.60	-5.22	QP



Test Mode: 09; Polarity: Vertical



Condition: 10m VERTICAL

Job No. : 12337CR

Test Mode: 09

		Ant	Preamp	Cable	Read		Limit	Over	
	Freq	Factor	Factor	Loss	Level	Level	Line	Limit	Remark
	MHz	dB/m	dB	dB	dBuV	dBuV/m	dBuV/m	dB	
1	33.445	19.21	32.50	0.89	33.52	21.12	29.50	-8.38	QP
2	61.562	19.10	32.48	1.06	35.35	23.03	29.50	-6.47	QP
3	167.824	19.41	32.41	1.53	36.19	24.72	33.00	-8.28	QP
4	207.850	16.06	32.40	1.69	37.04	22.39	33.00	-10.61	QP
5	250.301	18.09	32.40	1.96	33.47	21.12	35.60	-14.48	QP
6	975.753	30.14	30.91	3.64	26.24	29.11	43.50	-14.39	QP



The test was performed at a 10m test site. According to below formulate and the test data at 10m test distance,

$$L_3 / L_{10} = D_{10} / D_3$$

Note:

L₃: Level @ 3m distance. Unit: uV/m;

L₁₀: Level @ 10m distance. Unit: uV/m;

D₃: 3m distance. Unit: m

D₁₀: 10m distance. Unit: m

The level at 3m test distance is below:

Frequency (MHz)	Level @ 10m (dBuV/m)	Level @ 10m (uV/m)	Level @ 3m (uV/m)	Level @ 3m (dBuV/m)	Limit @ 3m (dBuV/m)	Margin (dB)	Ant. Polarization
33.445	21.12	11.38	37.92	31.58	40.00	-8.42	V
61.562	23.03	14.17	47.25	33.49	40.00	-6.51	V
167.824	24.72	17.22	57.40	35.18	43.50	-8.32	V
207.850	22.39	13.17	43.89	32.85	43.50	-10.65	V
250.301	21.12	11.38	37.92	31.58	46.00	-14.42	V
975.753	29.11	28.54	95.14	39.57	54.00	-14.43	V
47.492	14.85	5.53	18.42	25.31	40.00	-14.69	H
81.212	16.63	6.78	22.61	27.09	40.00	-12.91	H
162.041	19.37	9.30	31.00	29.83	43.50	-13.67	H
219.075	18.14	8.07	26.91	28.60	46.00	-17.40	H
462.346	21.64	12.08	40.26	32.10	46.00	-13.90	H
925.756	30.38	33.04	110.12	40.84	46.00	-5.16	H



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

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

SGS-CSTC Standards Technical Services Co., Ltd.
Shenzhen Branch, China, 518057, EEC 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

7.9 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

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

*(1) For transmitters operating in the 5.15-5.25 GHz band: All emissions outside of the 5.15-5.35 GHz band shall not exceed an e.i.r.p. of -27 dBm/MHz.

(2) For transmitters operating in the 5.25-5.35 GHz band: All emissions outside of the 5.15-5.35 GHz band shall not exceed an e.i.r.p. of -27 dBm/MHz.

(3) For transmitters operating in the 5.47-5.725 GHz band: All emissions outside of the 5.47-5.725 GHz band shall not exceed an e.i.r.p. of -27 dBm/MHz.

(4) For transmitters operating in the 5.725-5.85 GHz band:

(i) All emissions shall be limited to a level of -27 dBm/MHz at 75 MHz or more above or below the band edge increasing linearly to 10 dBm/MHz at 25 MHz above or below the band edge, and from 25 MHz above or below the band edge increasing linearly to a level of 15.6 dBm/MHz at 5 MHz above or below the band edge, and from 5 MHz above or below the band edge increasing linearly to a level of 27 dBm/MHz at the band edge.

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.

7.9.1 E.U.T. Operation

Operating Environment:

Temperature: 21.8 °C

Humidity: 39.0 % RH

Atmospheric Pressure: 1010 mbar



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) 83071443, or email: CN.Doccheck@sgs.com

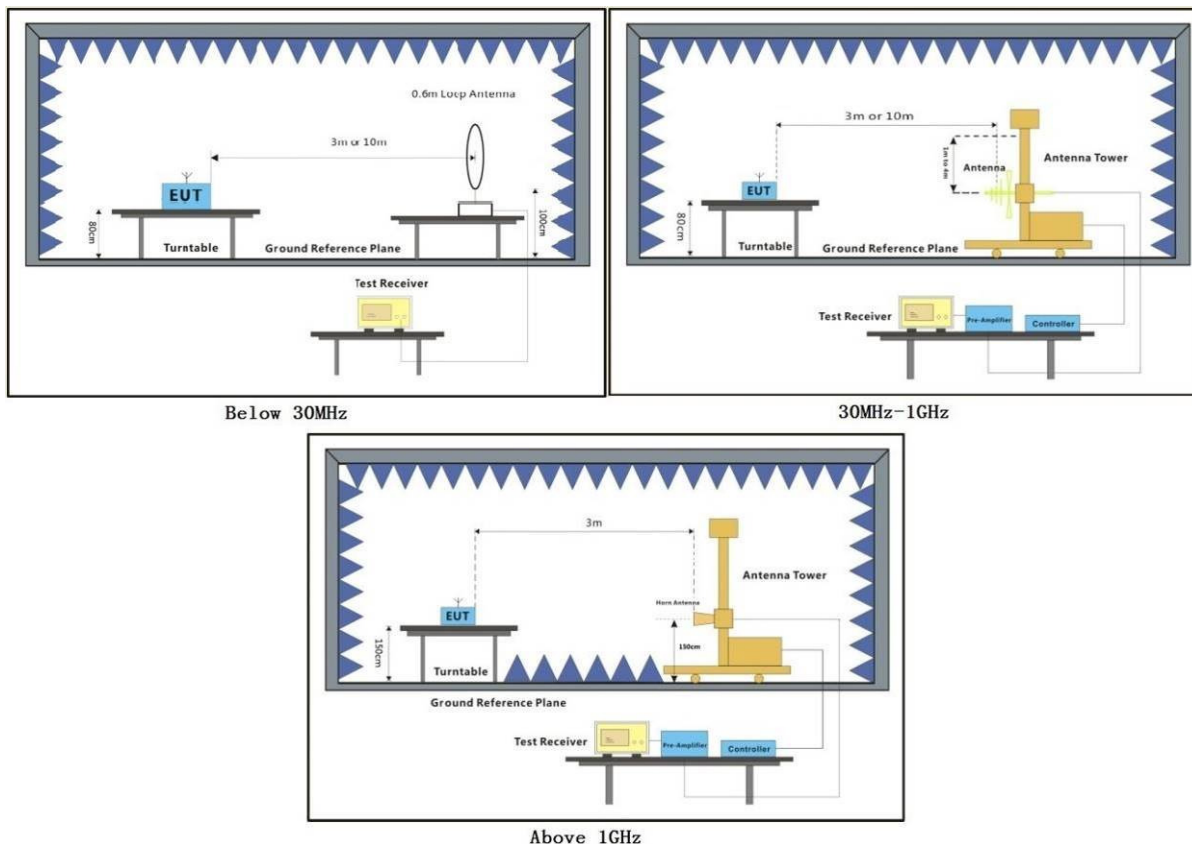
SGS-CSTC Standards Technical Services Co., Ltd.
Shenzhen Branch Laboratory

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

7.9.2 Test Mode Description

Pre-scan / Final test	Mode Code	Description
Final test	09	TX mode (U-NII-2C)_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 802.11ac(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.
Final test	10	TX mode (U-NII-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 802.11ac(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.

7.9.3 Test Setup Diagram



7.9.4 Measurement Procedure and Data

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

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

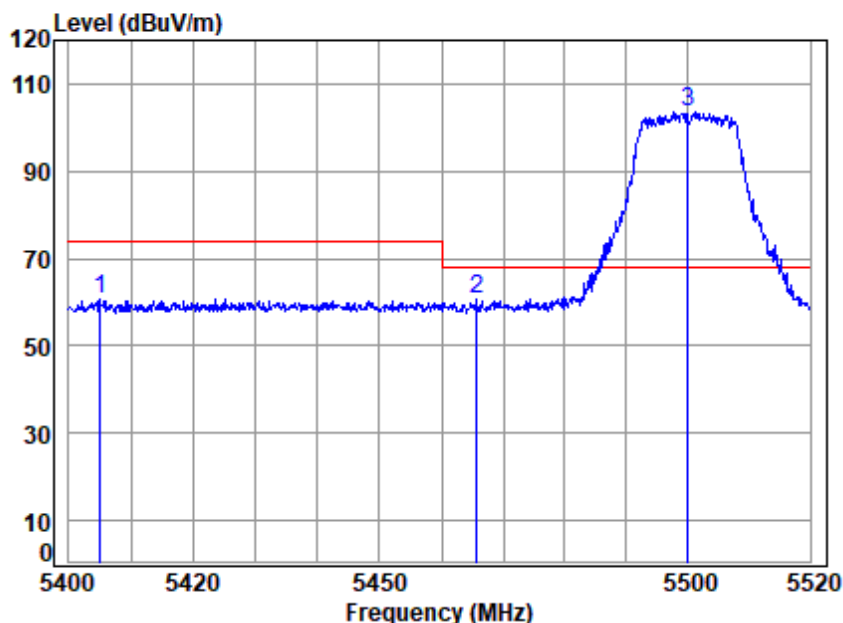


Unless otherwise agreed in writing, this document is issued by the Company subject to its General Conditions of Service printed overleaf, available on request or accessible at <http://www.sgs.com/en/Terms-and-Conditions.aspx> and, for electronic format documents, subject to Terms and Conditions for Electronic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

SGS-CSTC Standards Technical Services 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

Test Mode: 09; Polarity: Horizontal; Modulation:802.11a; Bandwidth:20MHz; Channel:Low

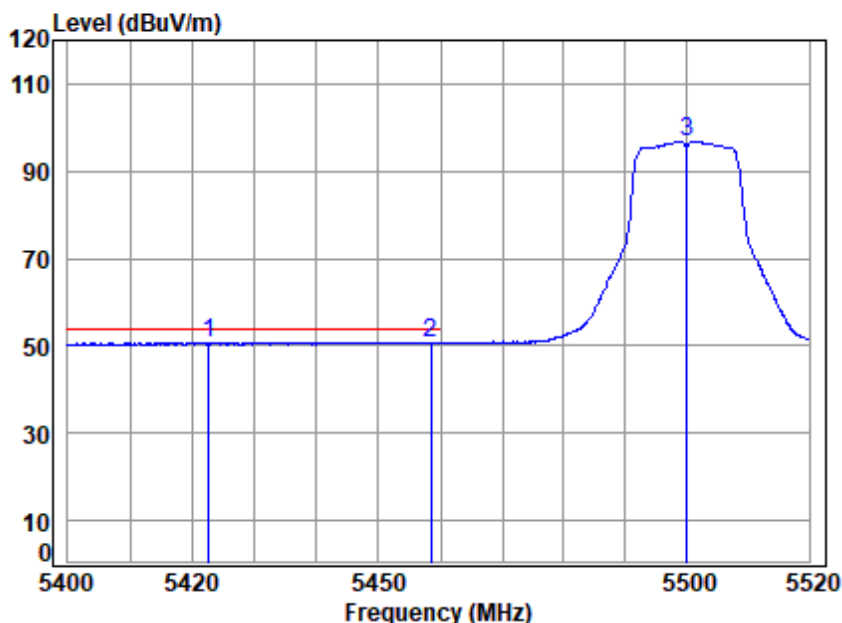


Site : chamber
Condition: 3m HORIZONTAL
Job No : 12337CR\12340CR
Mode : 5500 Band edge
: 5G WIFI 11A

		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	5404.987	8.02	34.53	42.34	60.40	60.61	74.00	-13.39 peak
2	5465.793	8.12	34.57	42.35	60.47	60.81	68.20	-7.39 peak
3 *	5500.000	8.18	34.60	42.35	103.23	103.66	68.20	35.46 peak



Test Mode: 09; Polarity: Horizontal; Modulation:802.11a; Bandwidth:20MHz; Channel:Low

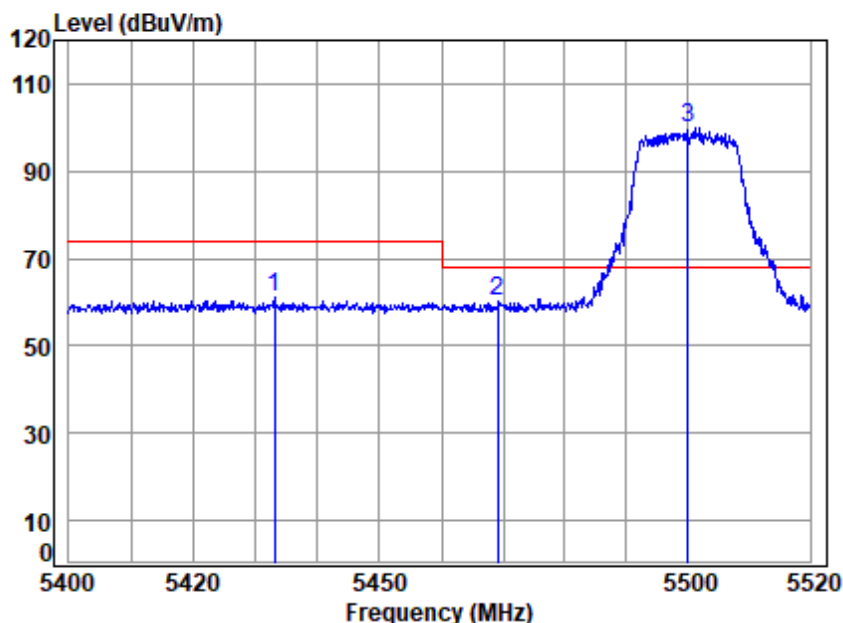


Site : chamber
Condition: 3m HORIZONTAL
Job No : 12337CR\12340CR
Mode : 5500 Band edge
: 5G WIFI 11A

		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	5422.598	8.05	34.54	42.34	50.34	50.59	54.00	-3.41 Peak
2	5458.471	8.11	34.57	42.35	50.50	50.83	54.00	-3.17 Average
3	5500.000	8.18	34.60	42.35	96.48	96.91	-----	----- Average



Test Mode: 09; Polarity: Vertical; Modulation:802.11a; Bandwidth:20MHz; Channel:Low

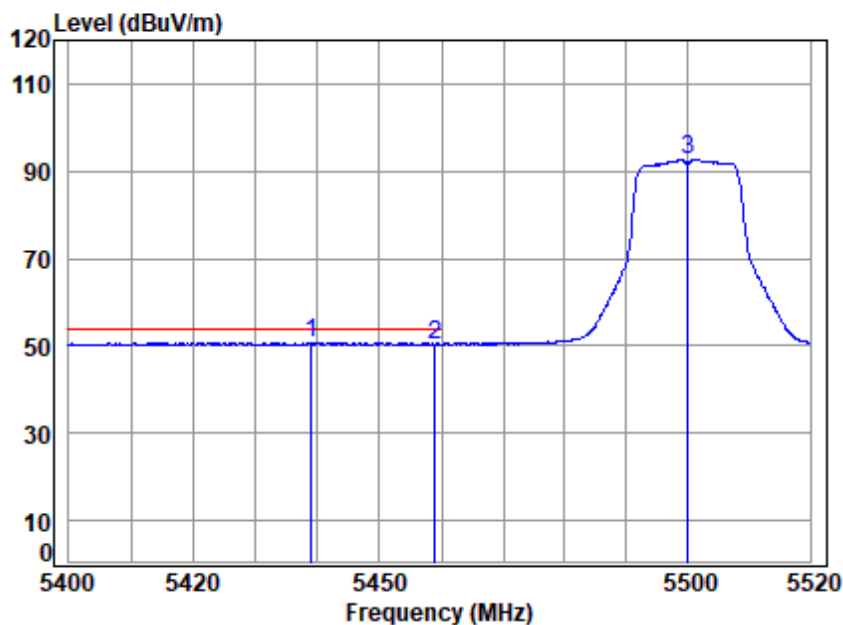


Site : chamber
Condition: 3m VERTICAL
Job No : 12337CR\12340CR
Mode : 5500 Band edge
: 5G WIFI 11A

		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	5432.977	8.07	34.55	42.35	60.75	61.02	74.00	-12.98 Peak
2	5469.158	8.13	34.58	42.35	60.03	60.39	68.20	-7.81 peak
3 *	5500.000	8.18	34.60	42.35	99.37	99.80	68.20	31.60 Peak



Test Mode: 09; Polarity: Vertical; Modulation:802.11a; Bandwidth:20MHz; Channel:Low

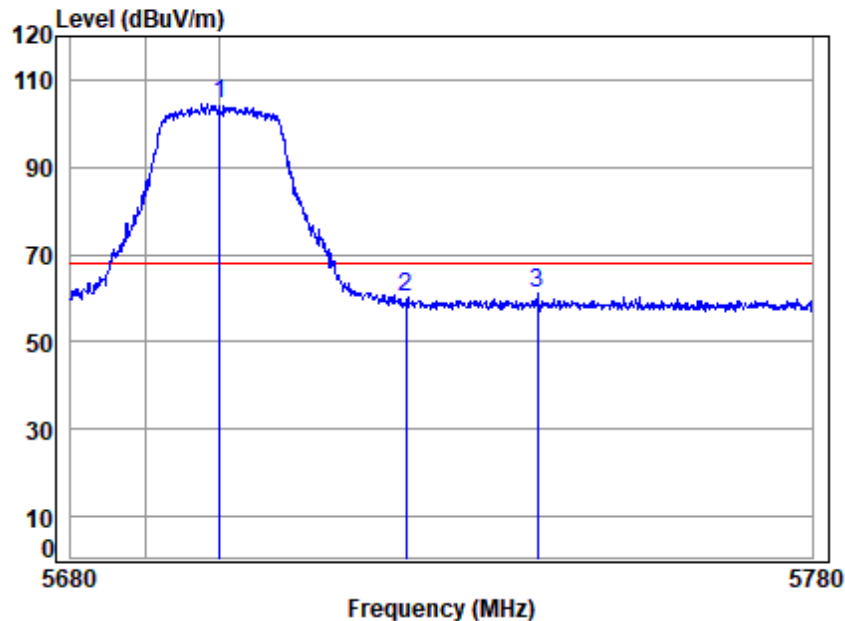


Site : chamber
Condition: 3m VERTICAL
Job No : 12337CR\12340CR
Mode : 5500 Band edge
: 5G WIFI 11A

		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	5439.070	8.08	34.55	42.35	50.33	50.61	54.00	-3.39 Average
2	5458.950	8.11	34.57	42.35	50.03	50.36	54.00	-3.64 Peak
3	5500.000	8.18	34.60	42.35	92.22	92.65	-----	----- Average



Test Mode: 09; Polarity: Horizontal; Modulation:802.11a; Bandwidth:20MHz; Channel:High

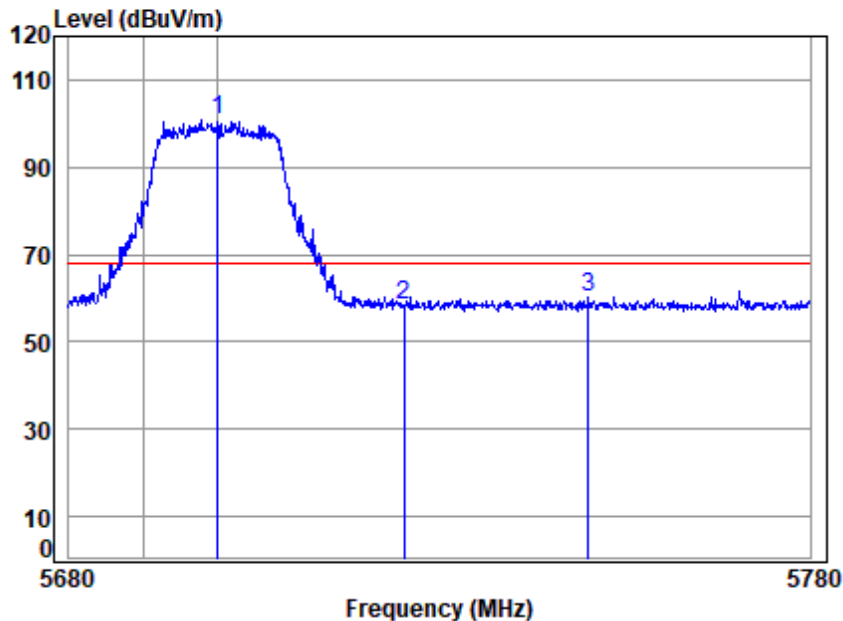


Site : chamber
Condition: 3m HORIZONTAL
Job No : 12337CR\12340CR
Mode : 5700 Band edge
: 5G WIFI 11A

		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 *	5700.000	8.21	34.81	42.37	103.80	104.45	68.20	36.25 peak
2	5725.000	8.22	34.83	42.37	59.42	60.10	68.20	-8.10 peak
3	5742.696	8.22	34.85	42.38	60.26	60.95	68.20	-7.25 peak



Test Mode: 09; Polarity: Vertical; Modulation:802.11a; Bandwidth:20MHz; Channel:High

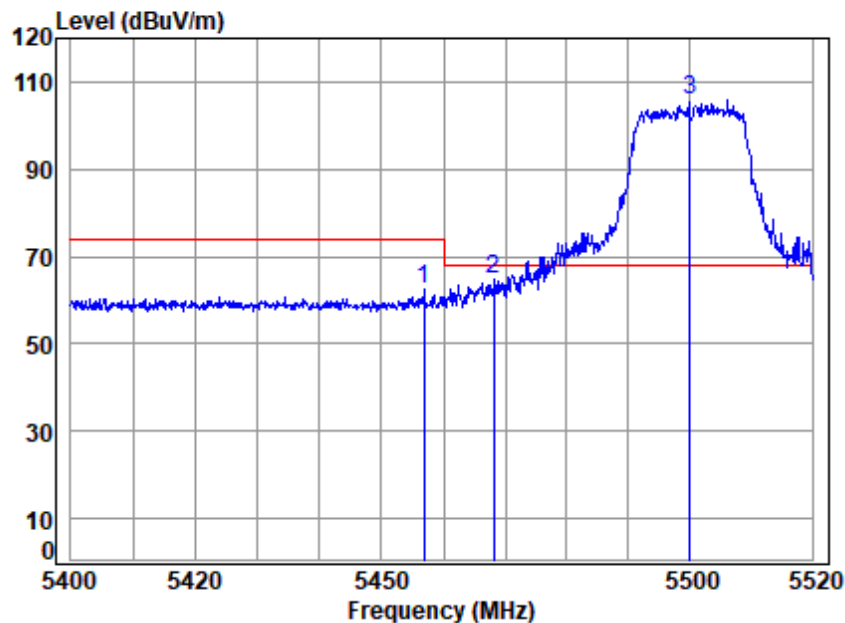


Site : chamber
Condition: 3m VERTICAL
Job No : 12337CR\12340CR
Mode : 5700 Band edge
: 5G WIFI 11A

		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 *	5700.000	8.21	34.81	42.37	100.02	100.67	68.20	32.47 Peak
2	5725.000	8.22	34.83	42.37	57.63	58.31	68.20	-9.89 Peak
3	5749.917	8.22	34.86	42.38	59.66	60.36	68.20	-7.84 Peak



Test Mode: 09; Polarity: Horizontal; Modulation:802.11n; Bandwidth:20MHz; Channel:Low

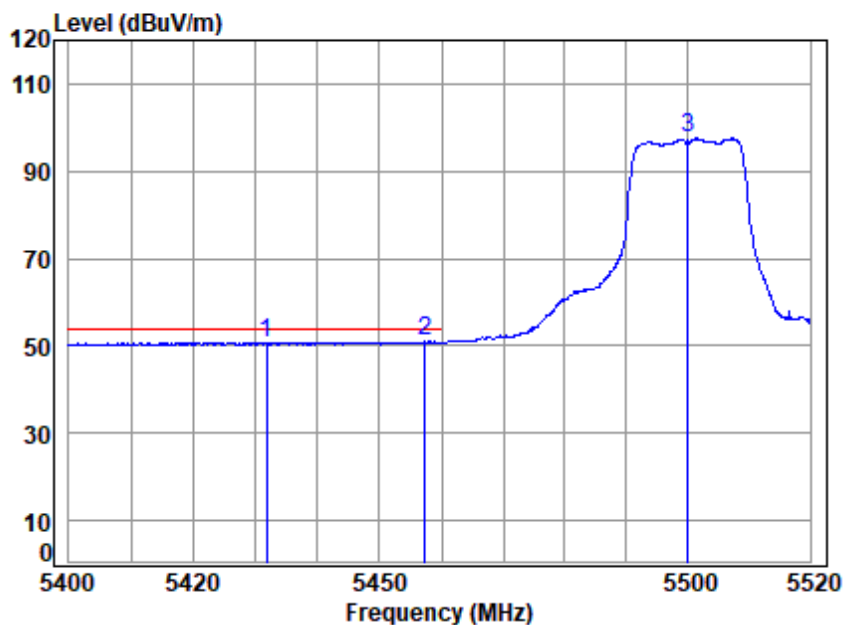


Site : chamber
Condition: 3m HORIZONTAL
Job No : 12337CR\12340CR
Mode : 5500 Band edge
: 5G WIFI 11N20

		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	5456.911	8.11	34.57	42.35	62.31	62.64	74.00	-11.36 peak
2	5468.197	8.13	34.58	42.35	64.35	64.71	68.20	-3.49 peak
3 *	5500.000	8.18	34.60	42.35	105.50	105.93	68.20	37.73 peak



Test Mode: 09; Polarity: Horizontal; Modulation:802.11n; Bandwidth:20MHz; Channel:Low

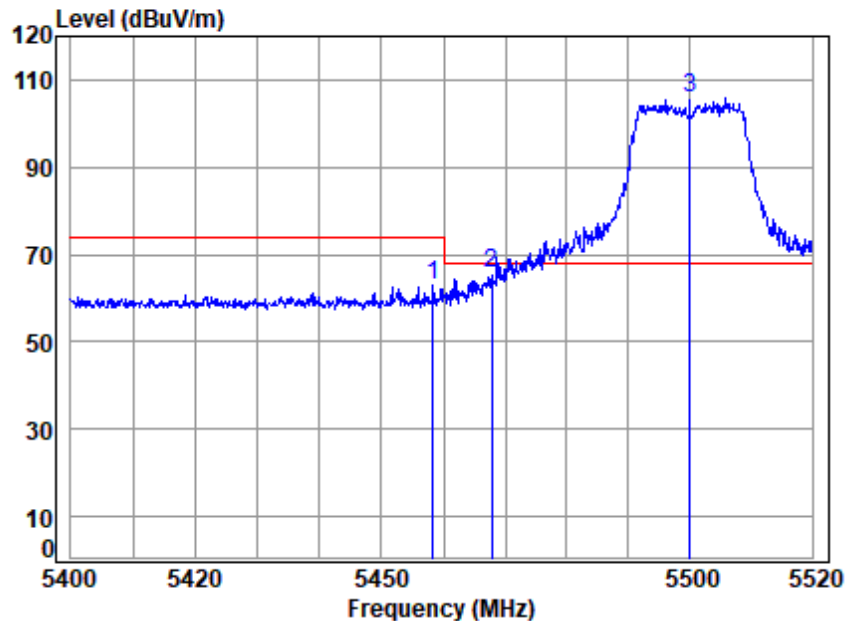


Site : chamber
Condition: 3m HORIZONTAL
Job No : 12337CR\12340CR
Mode : 5500 Band edge
: 5G WIFI 11N20

		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	5431.782	8.06	34.55	42.35	50.22	50.48	54.00	-3.52 Peak
2	5457.391	8.11	34.57	42.35	50.61	50.94	54.00	-3.06 Average
3	5500.000	8.18	34.60	42.35	97.01	97.44	-----	----- Average



Test Mode: 09; Polarity: Vertical; Modulation:802.11n; Bandwidth:20MHz; Channel:Low

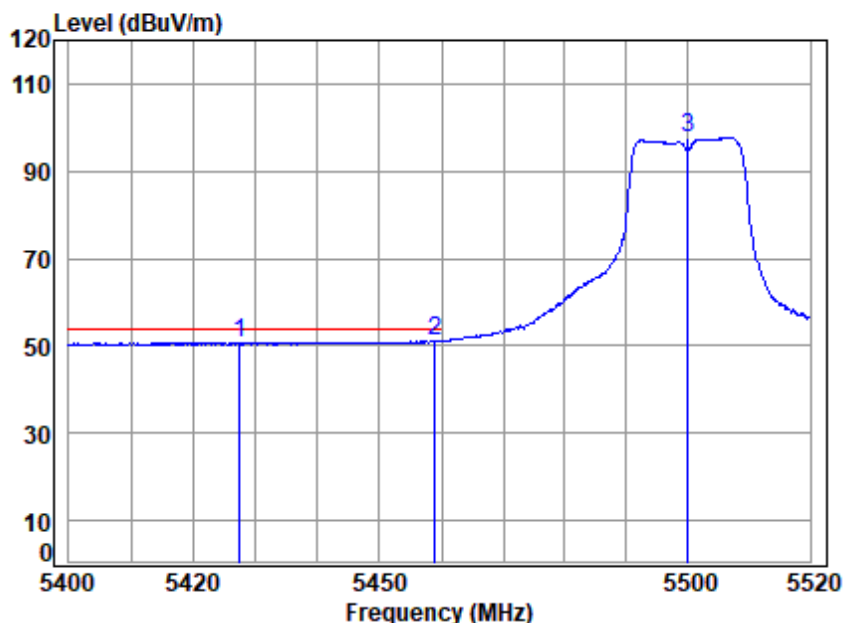


Site : chamber
Condition: 3m VERTICAL
Job No : 12337CR\12340CR
Mode : 5500 Band edge
: 5G WIFI 11N20

		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	5458.351	8.11	34.57	42.35	62.85	63.18	74.00	-10.82 Peak
2	5467.836	8.13	34.58	42.35	65.50	65.86	68.20	-2.34 peak
3 *	5500.000	8.18	34.60	42.35	105.36	105.79	68.20	37.59 Peak



Test Mode: 09; Polarity: Vertical; Modulation:802.11n; Bandwidth:20MHz; Channel:Low

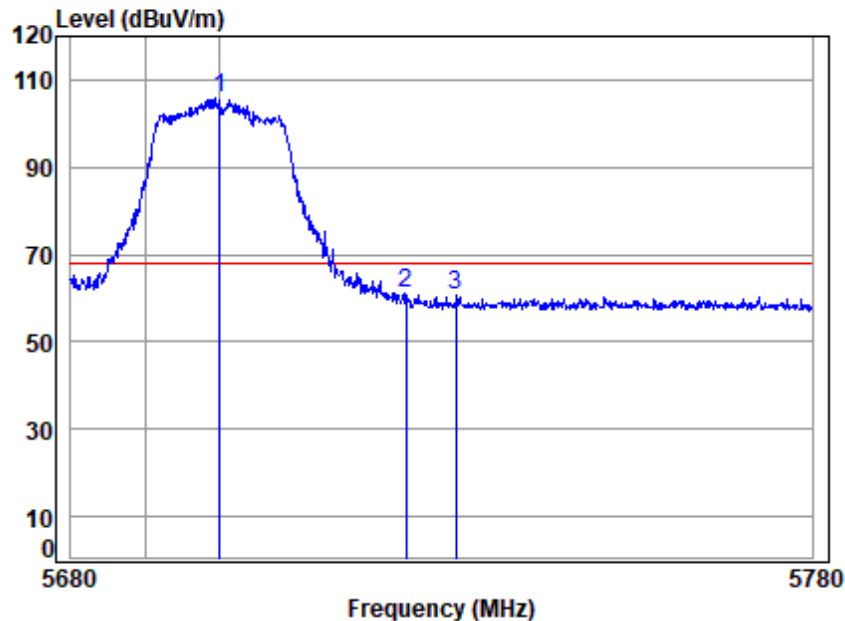


Site : chamber
Condition: 3m VERTICAL
Job No : 12337CR\12340CR
Mode : 5500 Band edge
: 5G WIFI 11N20

		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	5427.367	8.06	34.54	42.34	50.18	50.44	54.00	-3.56 Peak
2	5458.950	8.11	34.57	42.35	50.76	51.09	54.00	-2.91 Average
3	5500.000	8.18	34.60	42.35	97.27	97.70	-----	----- Average



Test Mode: 09; Polarity: Horizontal; Modulation:802.11n; Bandwidth:20MHz; Channel:High

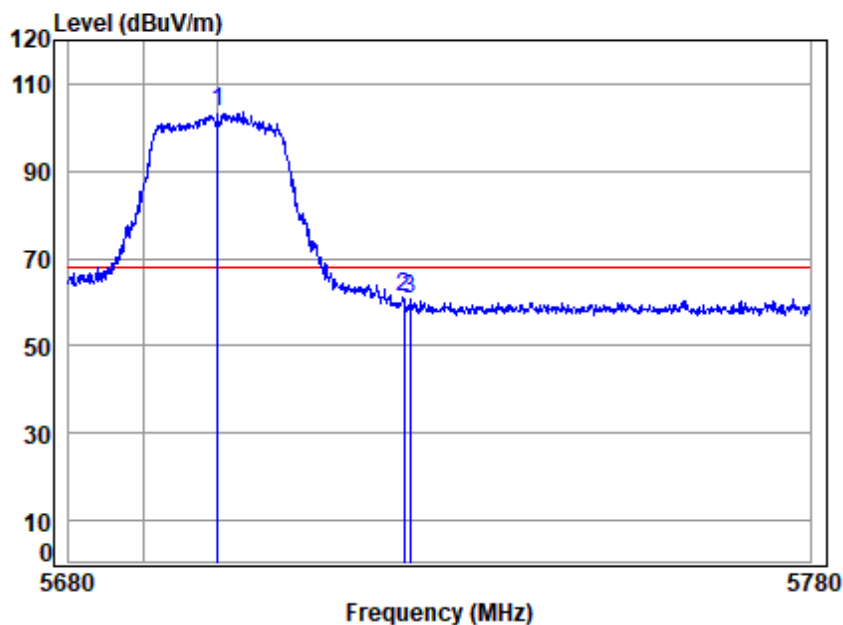


Site : chamber
Condition: 3m HORIZONTAL
Job No : 12337CR\12340CR
Mode : 5700 Band edge
: 5G WIFI 11N20

		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 *	5700.000	8.21	34.81	42.37	105.42	106.07	68.20	37.87 peak
2	5725.000	8.22	34.83	42.37	60.62	61.30	68.20	-6.90 peak
3	5731.782	8.22	34.84	42.37	59.95	60.64	68.20	-7.56 peak



Test Mode: 09; Polarity: Vertical; Modulation:802.11n; Bandwidth:20MHz; Channel:High

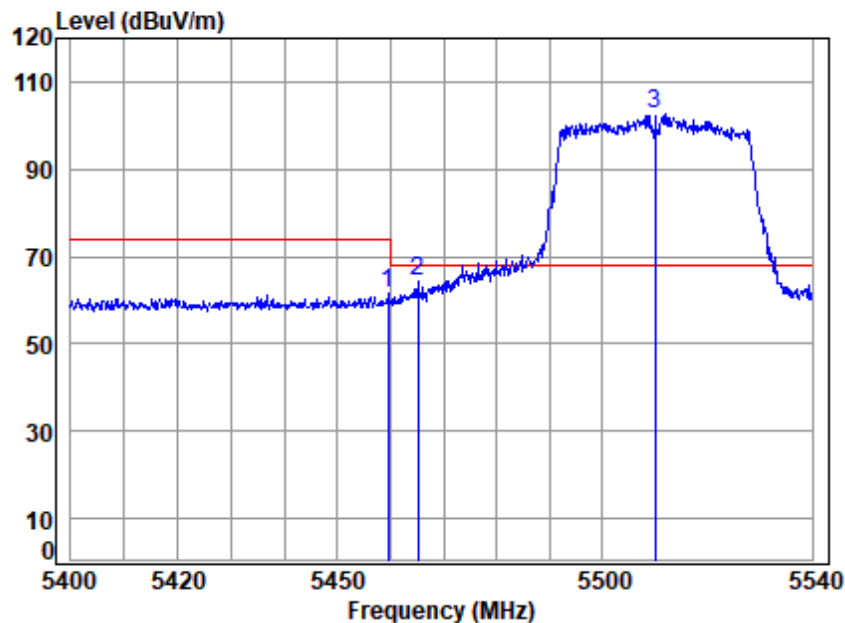


Site : chamber
Condition: 3m VERTICAL
Job No : 12337CR\12340CR
Mode : 5700 Band edge
: 5G WIFI 11N20

		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 *	5700.000	8.21	34.81	42.37	102.89	103.54	68.20	35.34 Peak
2	5725.000	8.22	34.83	42.37	60.41	61.09	68.20	-7.11 Peak
3	5725.783	8.22	34.83	42.37	60.23	60.91	68.20	-7.29 Peak



Test Mode: 09; Polarity: Horizontal; Modulation:802.11n; Bandwidth:40MHz; Channel:Low

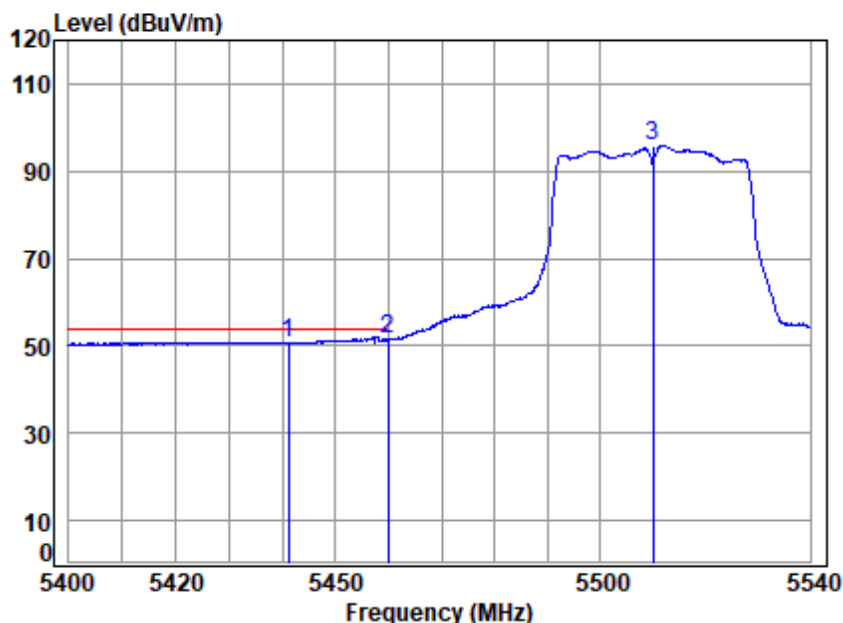


Site : chamber
Condition: 3m HORIZONTAL
Job No : 12337CR\12340CR
Mode : 5510 Band edge
: 5G WIFI 11N40

		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	5459.481	8.11	34.57	42.35	61.07	61.40	74.00	-12.60 peak
2	5465.074	8.12	34.57	42.35	64.22	64.56	68.20	-3.64 peak
3 *	5510.000	8.18	34.61	42.35	102.18	102.62	68.20	34.42 peak



Test Mode: 09; Polarity: Horizontal; Modulation:802.11n; Bandwidth:40MHz; Channel:Low

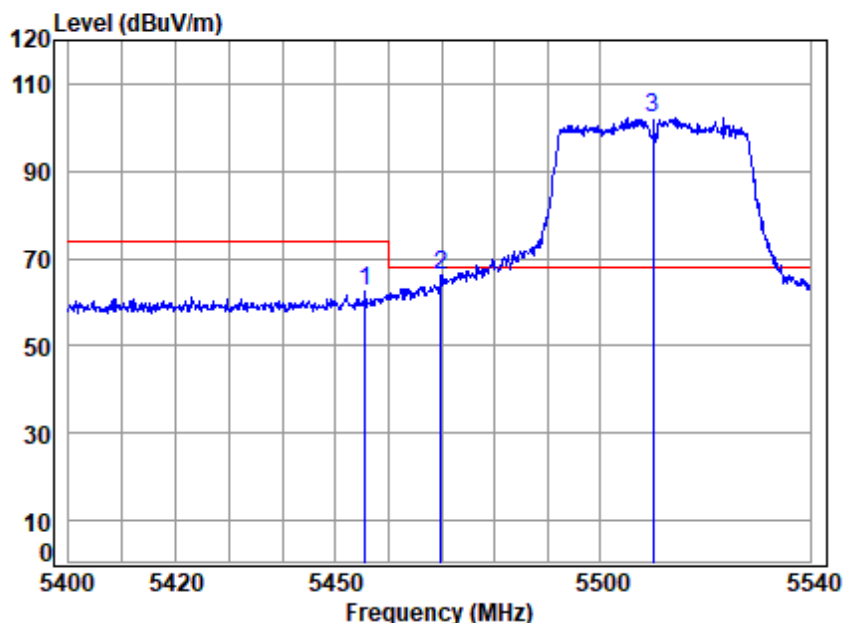


Site : chamber
Condition: 3m HORIZONTAL
Job No : 12337CR\12340CR
Mode : 5510 Band edge
: 5G WIFI 11N40

		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	5441.207	8.08	34.55	42.35	50.49	50.77	54.00	-3.23 Peak
2	5459.901	8.11	34.57	42.35	51.22	51.55	54.00	-2.45 Average
3	5510.000	8.18	34.61	42.35	95.52	95.96	-----	----- Average



Test Mode: 09; Polarity: Vertical; Modulation:802.11n; Bandwidth:40MHz; Channel:Low

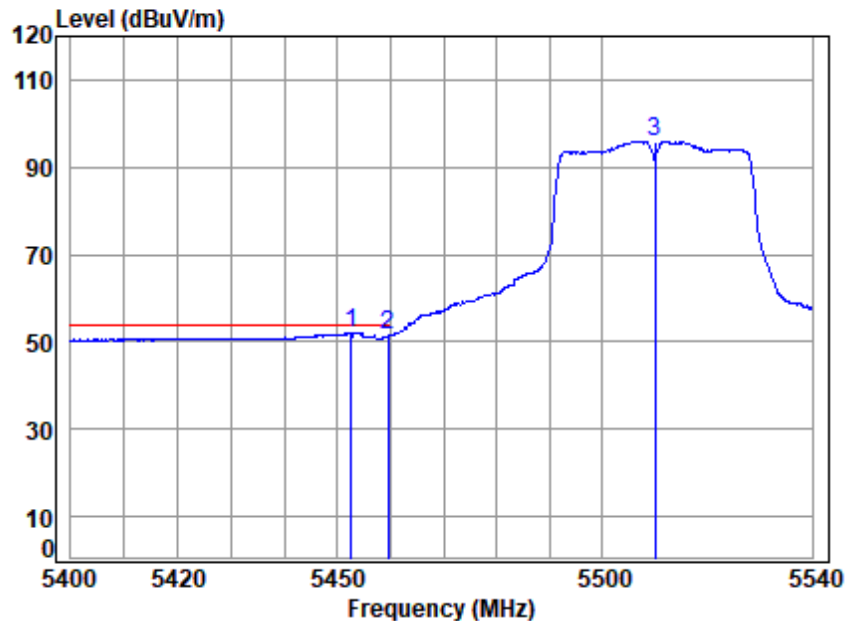


Site : chamber
Condition: 3m VERTICAL
Job No : 12337CR\12340CR
Mode : 5510 Band edge
: 5G WIFI 11N40

		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	5455.570	8.11	34.57	42.35	62.32	62.65	74.00	-11.35 Peak
2	5469.832	8.13	34.58	42.35	65.62	65.98	68.20	-2.22 peak
3 *	5510.000	8.18	34.61	42.35	101.95	102.39	68.20	34.19 Peak



Test Mode: 09; Polarity: Vertical; Modulation:802.11n; Bandwidth:40MHz; Channel:Low

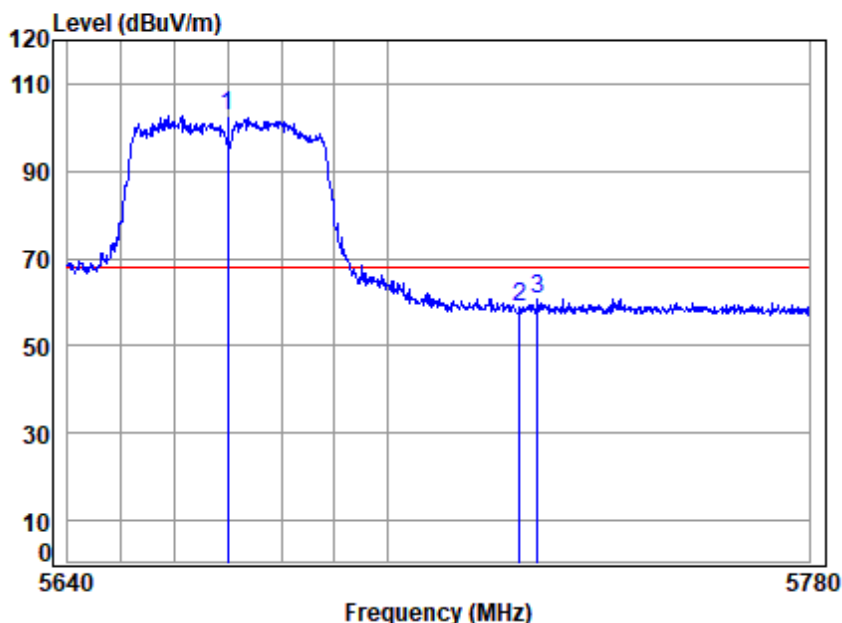


Site : chamber
Condition: 3m VERTICAL
Job No : 12337CR\12340CR
Mode : 5510 Band edge
: 5G WIFI 11N40

		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	5452.499	8.10	34.56	42.35	51.69	52.00	54.00	-2.00 Peak
2	5459.481	8.11	34.57	42.35	51.09	51.42	54.00	-2.58 Average
3	5510.000	8.18	34.61	42.35	95.58	96.02	-----	----- Average



Test Mode: 09; Polarity: Horizontal; Modulation:802.11n; Bandwidth:40MHz; Channel:High

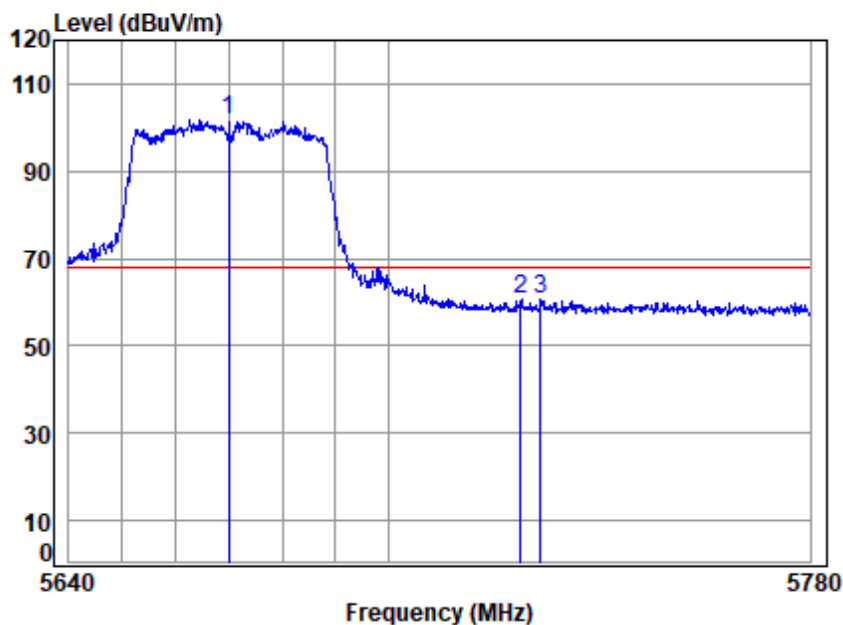


Site : chamber
Condition: 3m HORIZONTAL
Job No : 12337CR\12340CR
Mode : 5670 Band edge
: 5G WIFI 11N40

	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 * 5670.000	8.21	34.77	42.37	102.23	102.84	68.20	34.64	peak
2 5725.000	8.22	34.83	42.37	57.99	58.67	68.20	-9.53	peak
3 5728.361	8.22	34.83	42.37	60.03	60.71	68.20	-7.49	peak



Test Mode: 09; Polarity: Vertical; Modulation:802.11n; Bandwidth:40MHz; Channel:High

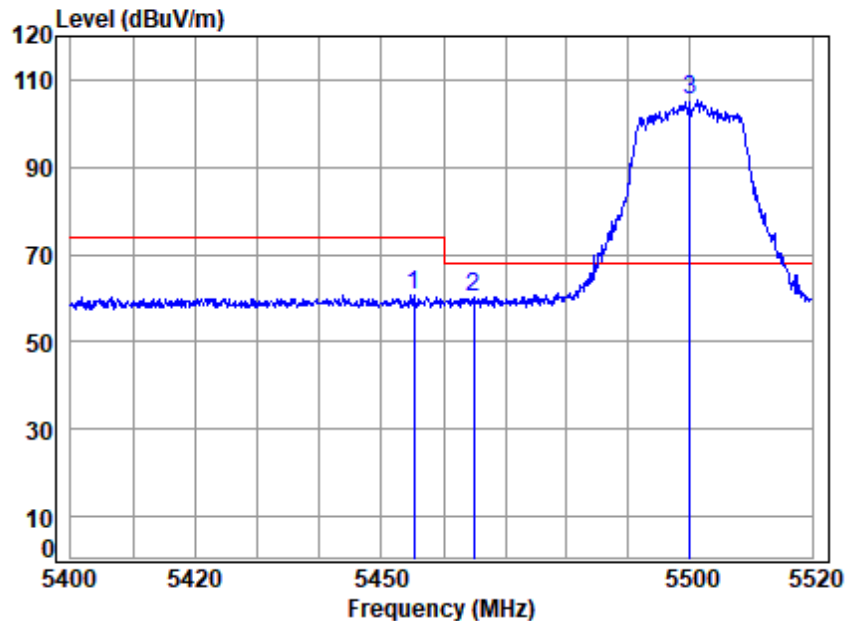


Site : chamber
Condition: 3m VERTICAL
Job No : 12337CR\12340CR
Mode : 5670 Band edge
: 5G WIFI 11N40

	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 * 5670.000	8.21	34.77	42.37	100.96	101.57	68.20	33.37	Peak
2 5725.000	8.22	34.83	42.37	59.84	60.52	68.20	-7.68	Peak
3 5728.783	8.22	34.83	42.37	59.83	60.51	68.20	-7.69	Peak



Test Mode: 09; Polarity: Horizontal; Modulation:802.11ac; Bandwidth:20MHz; Channel:Low

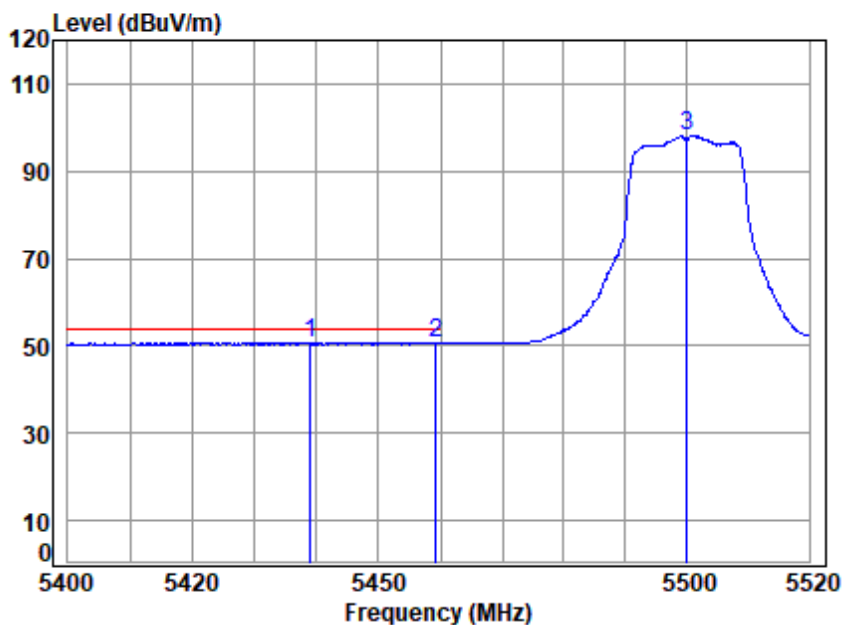


Site : chamber
Condition: 3m HORIZONTAL
Job No : 12337CR\12340CR
Mode : 5500 Band edge
: 5G WIFI 11AC20

		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	5455.232	8.10	34.57	42.35	60.30	60.62	74.00	-13.38 peak
2	5464.953	8.12	34.57	42.35	59.89	60.23	68.20	-7.97 peak
3 *	5500.000	8.18	34.60	42.35	105.01	105.44	68.20	37.24 peak



Test Mode: 09; Polarity: Horizontal; Modulation:802.11ac; Bandwidth:20MHz; Channel:Low

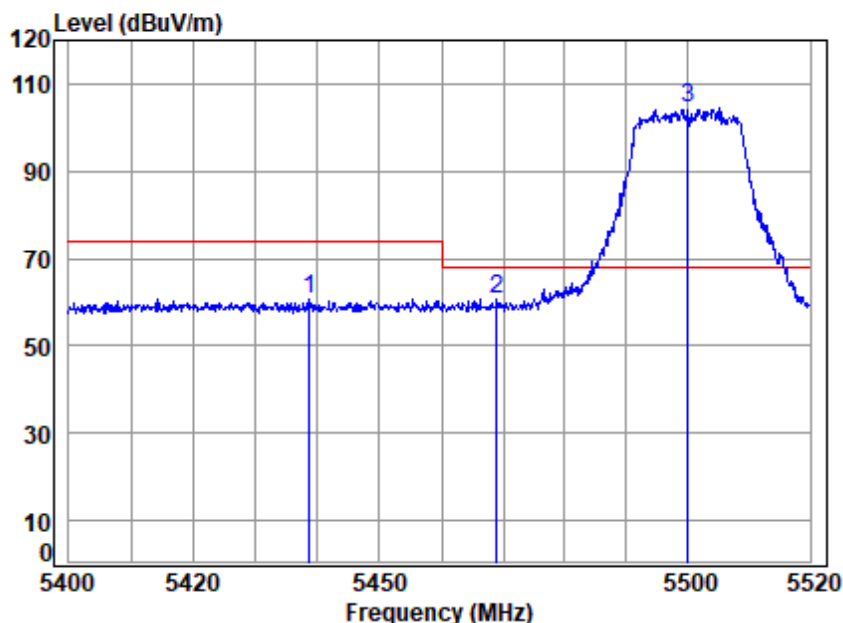


Site : chamber
Condition: 3m HORIZONTAL
Job No : 12337CR\12340CR
Mode : 5500 Band edge
: 5G WIFI 11AC20

		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	5438.950	8.08	34.55	42.35	50.33	50.61	54.00	-3.39 Average
2	5459.190	8.11	34.57	42.35	50.22	50.55	54.00	-3.45 Peak
3	5500.000	8.18	34.60	42.35	97.73	98.16	-----	----- Average



Test Mode: 09; Polarity: Vertical; Modulation:802.11ac; Bandwidth:20MHz; Channel:Low

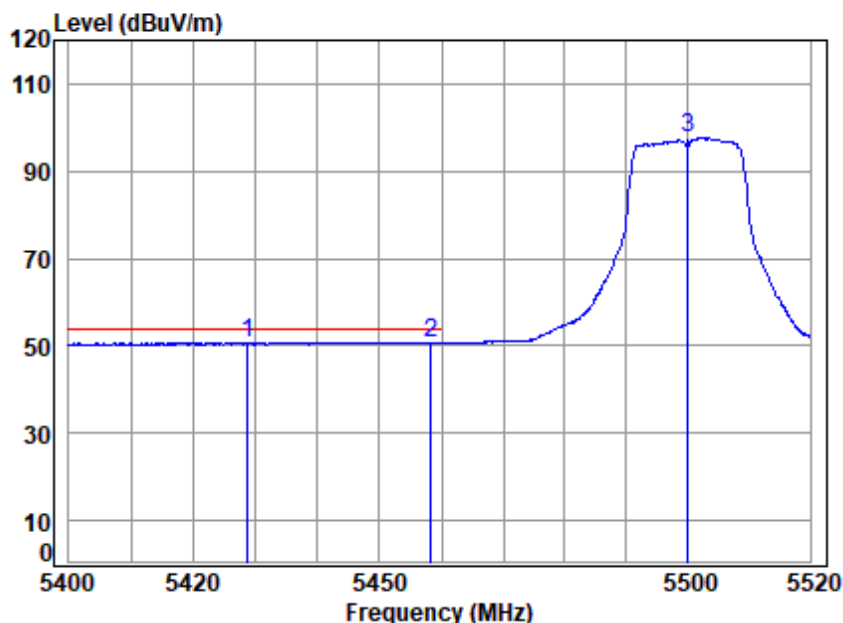


Site : chamber
Condition: 3m VERTICAL
Job No : 12337CR\12340CR
Mode : 5500 Band edge
: 5G WIFI 11AC20

		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	5438.591	8.08	34.55	42.35	60.34	60.62	74.00	-13.38 Peak
2	5468.918	8.13	34.58	42.35	60.28	60.64	68.20	-7.56 peak
3 *	5500.000	8.18	34.60	42.35	103.92	104.35	68.20	36.15 Peak



Test Mode: 09; Polarity: Vertical; Modulation:802.11ac; Bandwidth:20MHz; Channel:Low

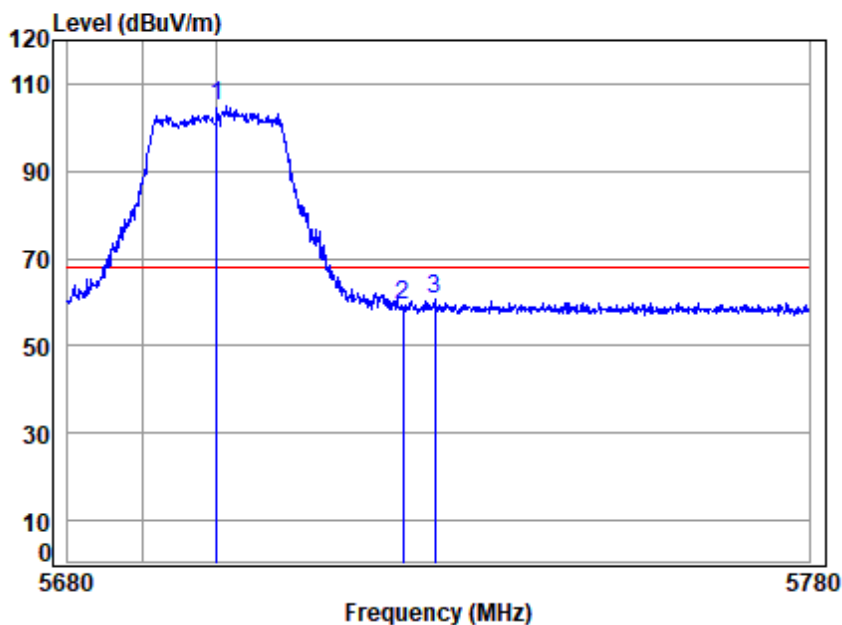


Site : chamber
Condition: 3m VERTICAL
Job No : 12337CR\12340CR
Mode : 5500 Band edge
: 5G WIFI 11AC20

		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	5428.798	8.06	34.55	42.35	50.30	50.56	54.00	-3.44 Peak
2	5458.230	8.11	34.57	42.35	50.41	50.74	54.00	-3.26 Average
3	5500.000	8.18	34.60	42.35	97.28	97.71	-----	----- Average



Test Mode: 09; Polarity: Horizontal; Modulation:802.11ac; Bandwidth:20MHz; Channel:High

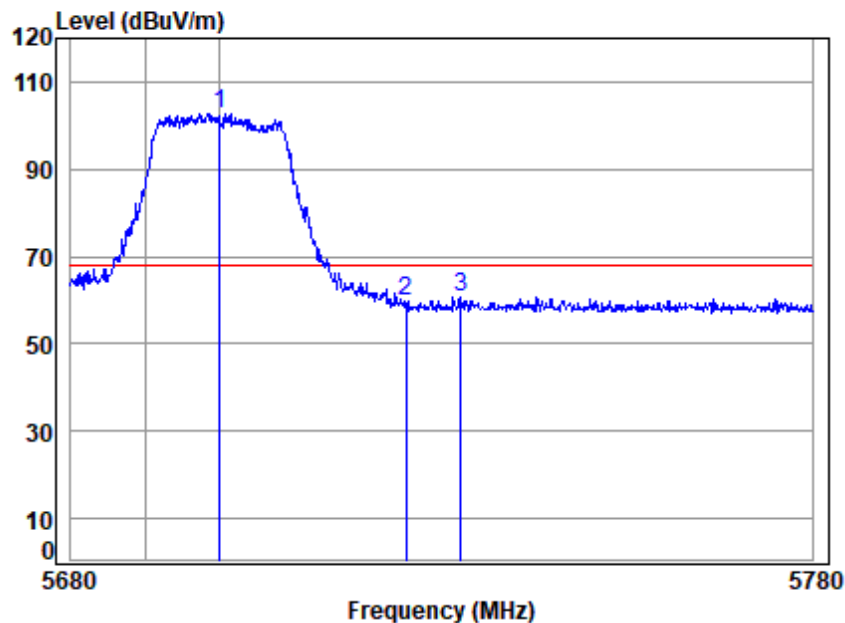


Site : chamber
Condition: 3m HORIZONTAL
Job No : 12337CR\12340CR
Mode : 5700 Band edge
: 5G WIFI 11AC20

		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 *	5700.000	8.21	34.81	42.37	104.30	104.95	68.20	36.75 peak
2	5725.000	8.22	34.83	42.37	58.63	59.31	68.20	-8.89 peak
3	5729.282	8.22	34.83	42.37	59.80	60.48	68.20	-7.72 peak



Test Mode: 09; Polarity: Vertical; Modulation:802.11ac; Bandwidth:20MHz; Channel:High



Site : chamber
Condition: 3m VERTICAL
Job No : 12337CR\12340CR
Mode : 5700 Band edge
: 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 *	5700.000	8.21	34.81	42.37	102.22	102.87	68.20	34.67	Peak
2	5725.000	8.22	34.83	42.37	58.87	59.55	68.20	-8.65	Peak
3	5732.382	8.22	34.84	42.37	60.20	60.89	68.20	-7.31	Peak

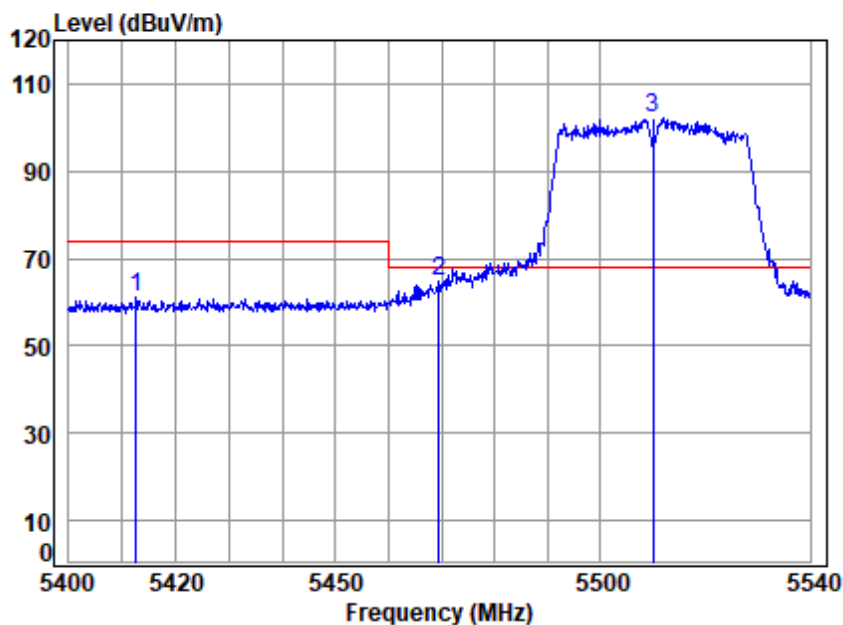


Unless otherwise agreed in writing, this document is issued by the Company subject to its General Conditions of Service printed overleaf, available on request or accessible at <http://www.sgs.com/en/Terms-and-Conditions.aspx> and, for electronic format documents, subject to Terms and Conditions for Electronic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

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

Test Mode: 09; Polarity: Horizontal; Modulation:802.11ac; Bandwidth:40MHz; Channel:Low

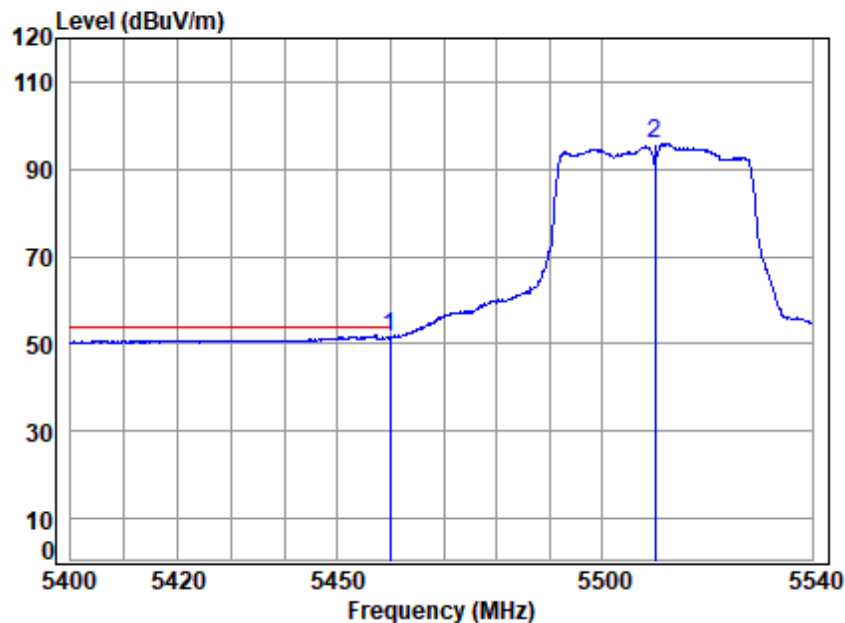


Site : chamber
Condition: 3m HORIZONTAL
Job No : 12337CR\12340CR
Mode : 5510 Band edge
: 5G WIFI 11AC40

		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	5412.592	8.03	34.53	42.34	60.92	61.14	74.00	-12.86 peak
2	5469.412	8.13	34.58	42.35	64.23	64.59	68.20	-3.61 peak
3 *	5510.000	8.18	34.61	42.35	101.87	102.31	68.20	34.11 peak



Test Mode: 09; Polarity: Horizontal; Modulation:802.11ac; Bandwidth:40MHz; Channel:Low

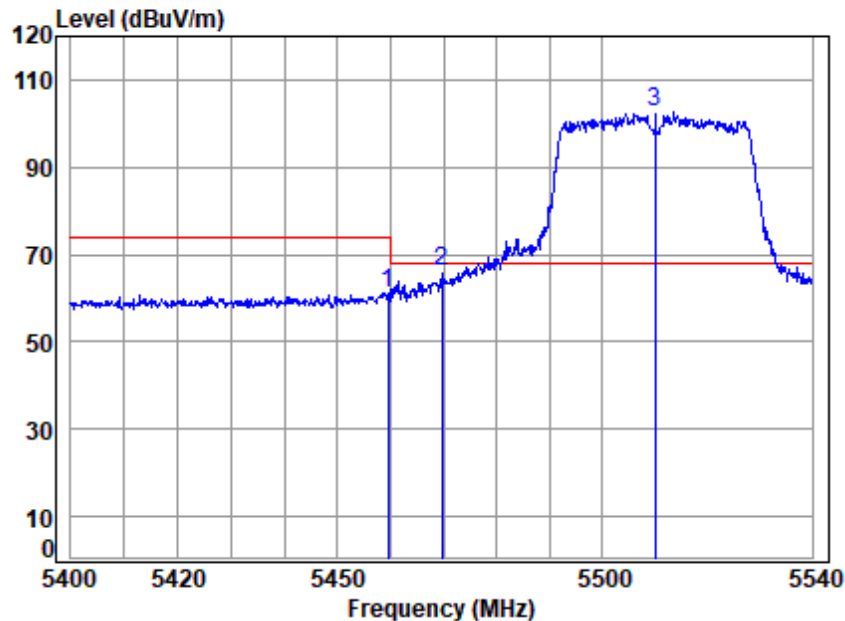


Site : chamber
Condition: 3m HORIZONTAL
Job No : 12337CR\12340CR
Mode : 5510 Band edge
: 5G WIFI 11AC40

		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	5459.901	8.11	34.57	42.35	51.23	51.56	54.00	-2.44 Average
2	5510.000	8.18	34.61	42.35	95.40	95.84	-----	----- Average



Test Mode: 09; Polarity: Vertical; Modulation:802.11ac; Bandwidth:40MHz; Channel:Low

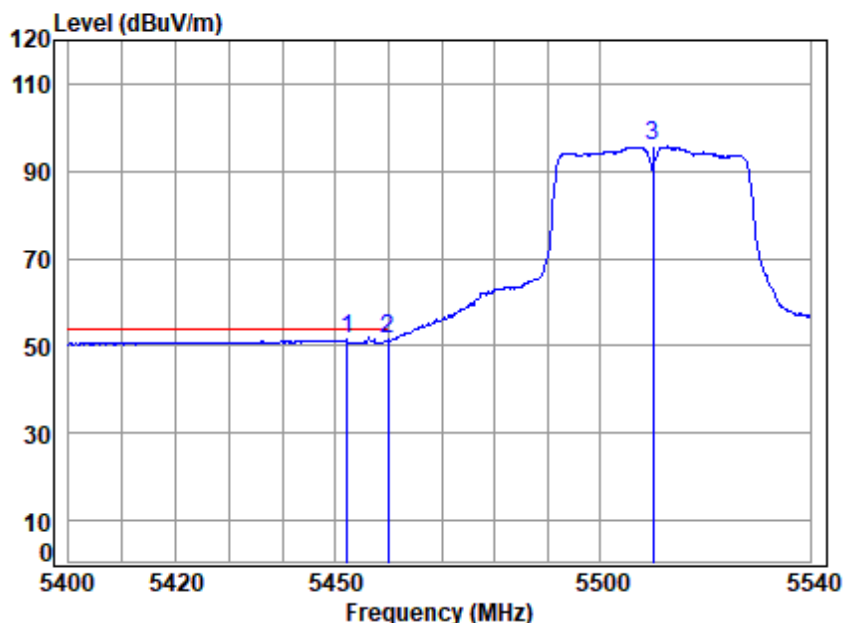


Site : chamber
Condition: 3m VERTICAL
Job No : 12337CR\12340CR
Mode : 5510 Band edge
: 5G WIFI 11AC40

		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	5459.481	8.11	34.57	42.35	61.03	61.36	74.00	-12.64	Peak
2	5469.692	8.13	34.58	42.35	65.68	66.04	68.20	-2.16	peak
3 *	5510.000	8.18	34.61	42.35	102.31	102.75	68.20	34.55	Peak



Test Mode: 09; Polarity: Vertical; Modulation:802.11ac; Bandwidth:40MHz; Channel:Low

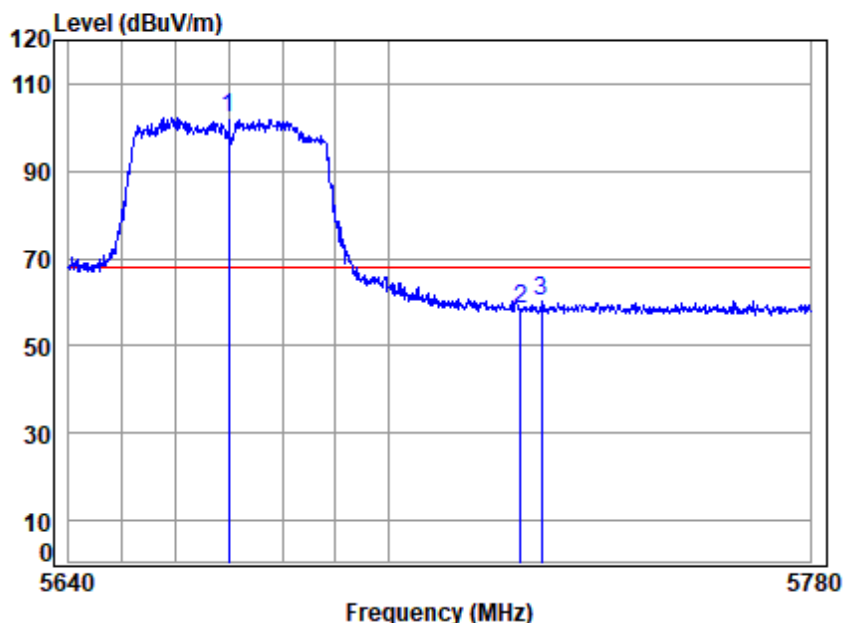


Site : chamber
Condition: 3m VERTICAL
Job No : 12337CR\12340CR
Mode : 5510 Band edge
: 5G WIFI 11AC40

		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	5452.220	8.10	34.56	42.35	51.21	51.52	54.00	-2.48 Peak
2	5459.901	8.11	34.57	42.35	51.03	51.36	54.00	-2.64 Average
3	5510.000	8.18	34.61	42.35	95.18	95.62	-----	----- Average



Test Mode: 09; Polarity: Horizontal; Modulation:802.11ac; Bandwidth:40MHz; Channel:High

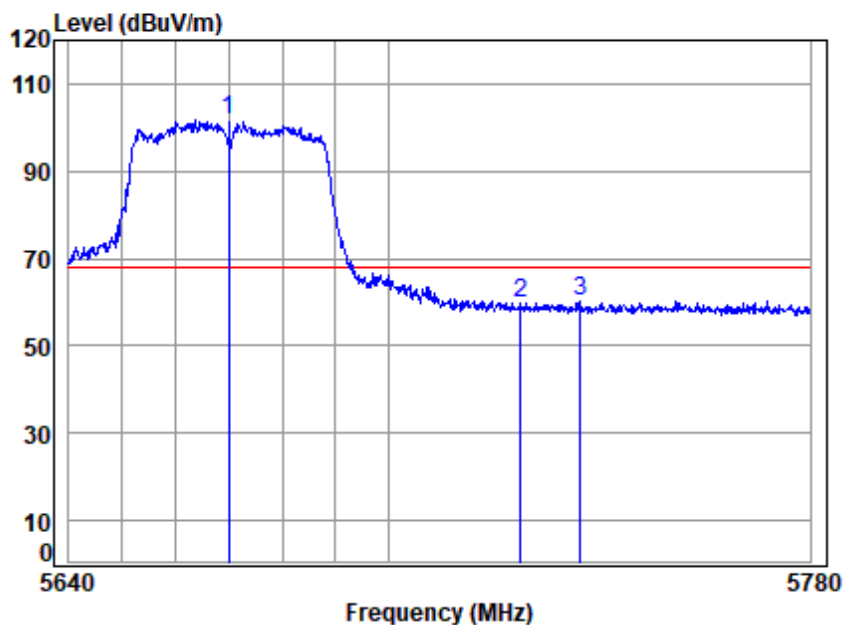


Site : chamber
Condition: 3m HORIZONTAL
Job No : 12337CR\12340CR
Mode : 5670 Band edge
: 5G WIFI 11AC40

	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 * 5670.000	8.21	34.77	42.37	101.73	102.34	68.20	34.14	peak
2 5725.000	8.22	34.83	42.37	57.90	58.58	68.20	-9.62	peak
3 5728.923	8.22	34.83	42.37	59.44	60.12	68.20	-8.08	peak



Test Mode: 09; Polarity: Vertical; Modulation:802.11ac; Bandwidth:40MHz; Channel:High

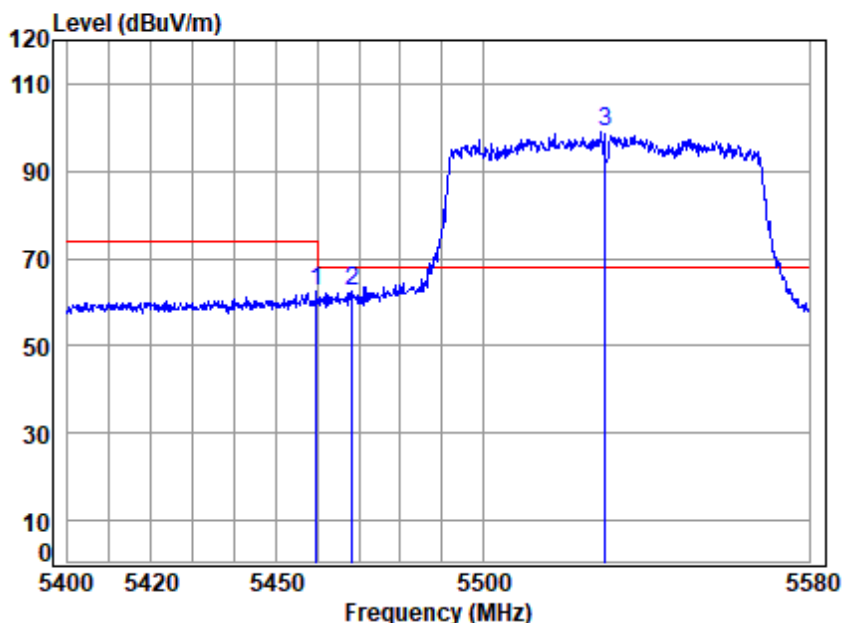


Site : chamber
Condition: 3m VERTICAL
Job No : 12337CR\12340CR
Mode : 5670 Band edge
: 5G WIFI 11AC40

	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 *	5670.000	8.21	34.77	42.37	101.17	101.78	68.20	33.58	Peak
2	5725.000	8.22	34.83	42.37	58.87	59.55	68.20	-8.65	Peak
3	5736.232	8.22	34.84	42.38	59.58	60.26	68.20	-7.94	Peak



Test Mode: 09; Polarity: Horizontal; Modulation:802.11ac; Bandwidth:80MHz; Channel:Low

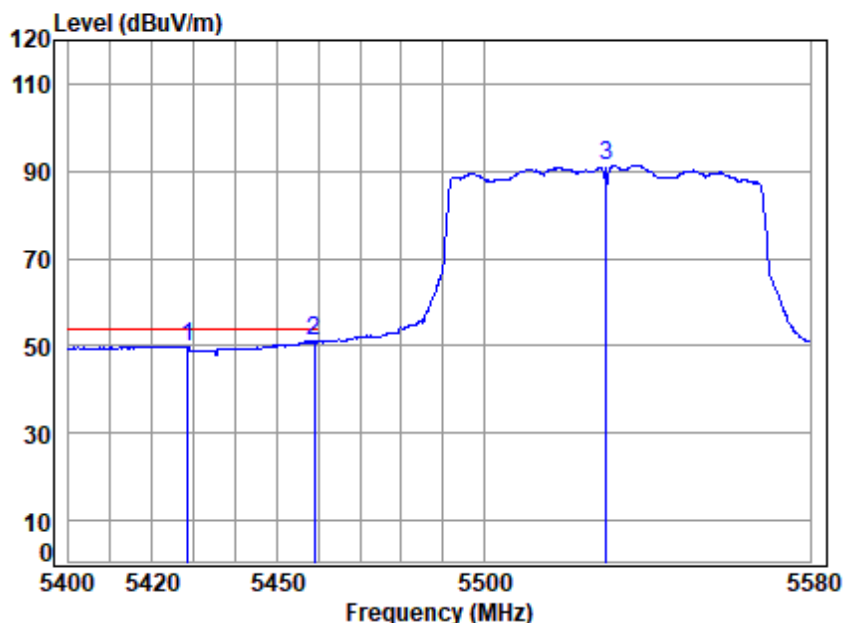


Site : chamber
Condition: 3m HORIZONTAL
Job No : 12337CR\12340CR
Mode : 5530 Band edge
: 5G WIFI 11AC80

		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	5459.644	8.11	34.57	42.35	62.15	62.48	74.00	-11.52 peak
2	5468.423	8.13	34.58	42.35	62.01	62.37	68.20	-5.83 peak
3 *	5530.000	8.19	34.63	42.36	98.40	98.86	68.20	30.66 peak



Test Mode: 09; Polarity: Horizontal; Modulation:802.11ac; Bandwidth:80MHz; Channel:Low

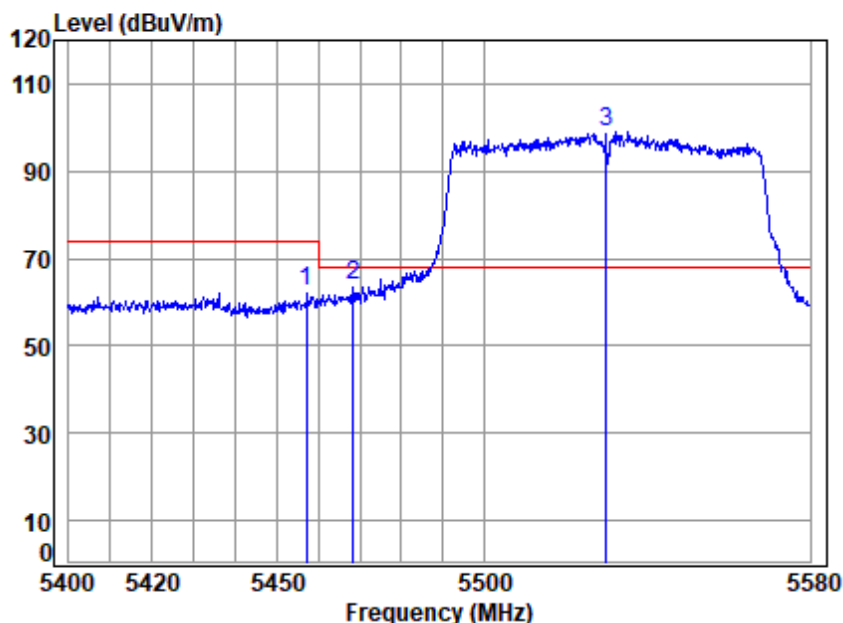


Site : chamber
Condition: 3m HORIZONTAL
Job No : 12337CR\12340CR
Mode : 5530 Band edge
: 5G WIFI 11AC80

		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	5428.583	8.06	34.55	42.35	49.49	49.75	54.00	-4.25 Peak
2	5458.928	8.11	34.57	42.35	50.81	51.14	54.00	-2.86 Average
3	5530.000	8.19	34.63	42.36	90.88	91.34	-----	----- Average



Test Mode: 09; Polarity: Vertical; Modulation:802.11ac; Bandwidth:80MHz; Channel:Low

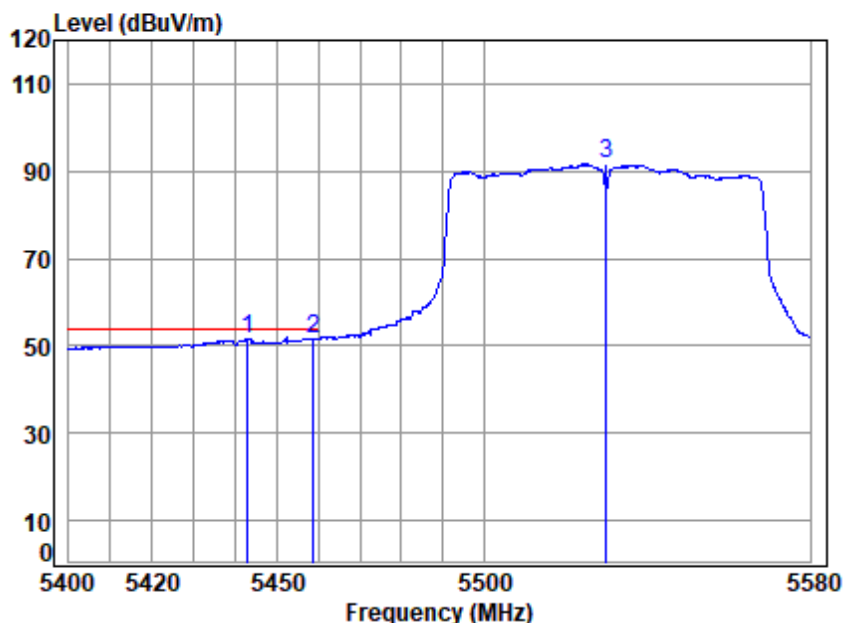


Site : chamber
Condition: 3m VERTICAL
Job No : 12337CR\12340CR
Mode : 5530 Band edge
: 5G WIFI 11AC80

		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	5457.138	8.11	34.57	42.35	62.34	62.67	74.00	-11.33 Peak
2	5468.423	8.13	34.58	42.35	63.31	63.67	68.20	-4.53 peak
3 *	5530.000	8.19	34.63	42.36	98.66	99.12	68.20	30.92 Peak



Test Mode: 09; Polarity: Vertical; Modulation:802.11ac; Bandwidth:80MHz; Channel:Low

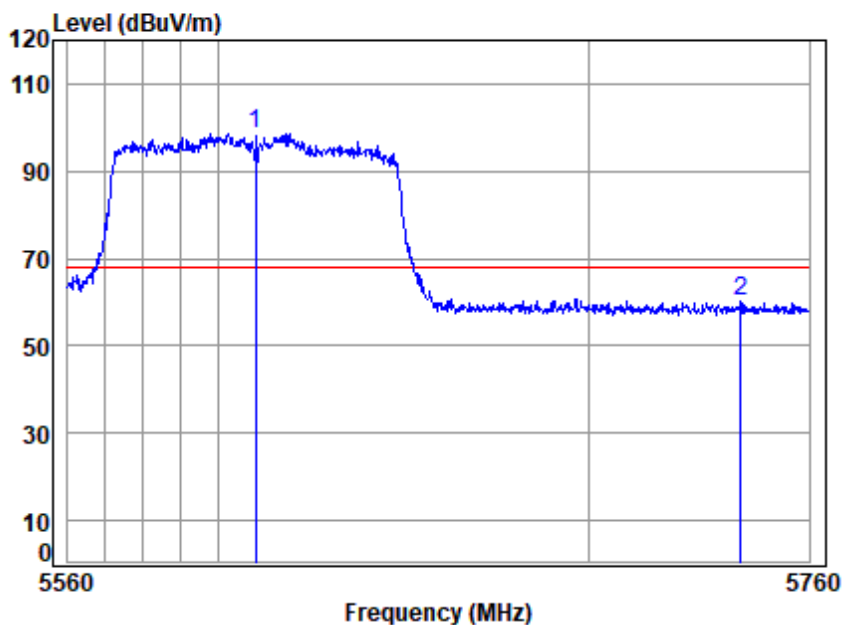


Site : chamber
Condition: 3m VERTICAL
Job No : 12337CR\12340CR
Mode : 5530 Band edge
: 5G WIFI 11AC80

		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	5443.020	8.08	34.56	42.35	51.43	51.72	54.00	-2.28 Peak
2	5458.749	8.11	34.57	42.35	51.40	51.73	54.00	-2.27 Average
3	5530.000	8.19	34.63	42.36	91.12	91.58	-----	----- Average



Test Mode: 09; Polarity: Horizontal; Modulation:802.11ac; Bandwidth:80MHz; Channel:High

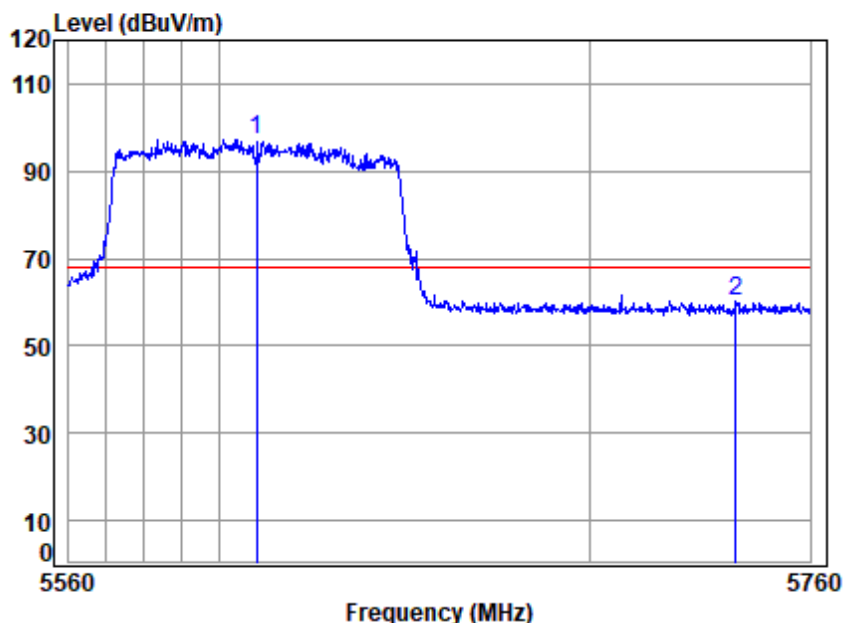


Site : chamber
Condition: 3m HORIZONTAL
Job No : 12337CR\12340CR
Mode : 5610 Band edge
: 5G WIFI 11AC80

	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 * 5610.000	8.20	34.71	42.36	98.12	98.67	68.20	30.47	peak
2 5741.303	8.22	34.85	42.38	59.50	60.19	68.20	-8.01	peak



Test Mode: 09; Polarity: Vertical; Modulation:802.11ac; Bandwidth:80MHz; Channel:High

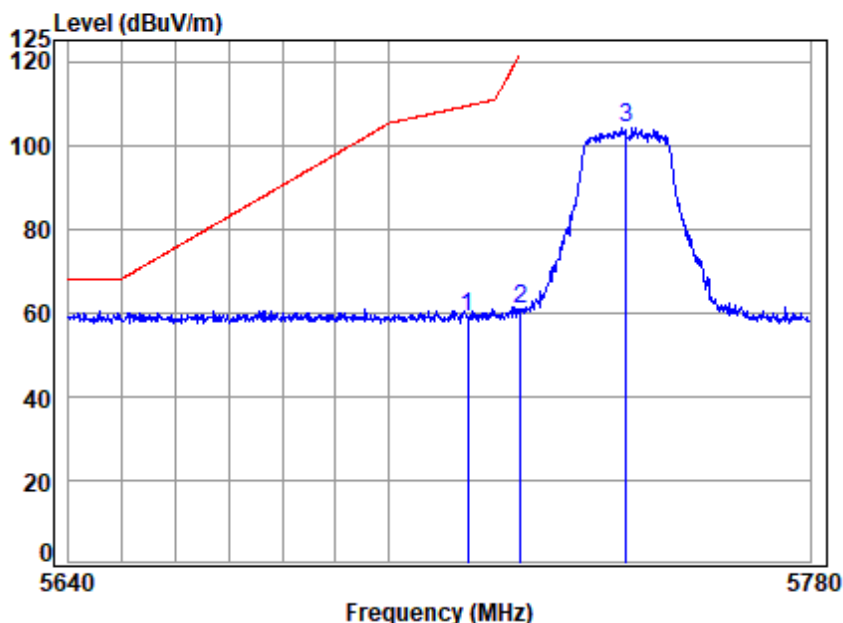


Site : chamber
Condition: 3m VERTICAL
Job No : 12337CR\12340CR
Mode : 5610 Band edge
: 5G WIFI 11AC80

	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 * 5610.000	8.20	34.71	42.36	96.78	97.33	68.20	29.13	Peak
2 5739.681	8.22	34.85	42.38	59.50	60.19	68.20	-8.01	Peak



Test Mode: 10; Polarity: Horizontal; Modulation:802.11a; Bandwidth:20MHz; Channel:Low

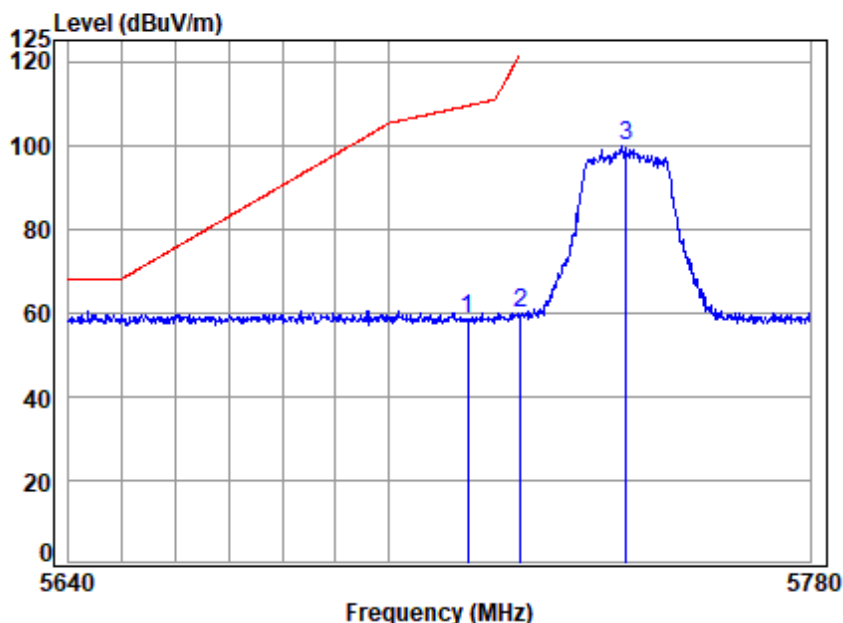


Site : chamber
Condition: 3m HORIZONTAL
Job No : 12337CR\12340CR
Mode : 5745 Band edge
: 5G WIFI 11A

		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	8.22	34.82	42.37	58.06	58.73	109.40	-50.67 peak
2	5725.000	8.22	34.83	42.37	60.24	60.92	122.20	-61.28 peak
3	5745.000	8.22	34.85	42.38	103.30	103.99	-----	----- peak



Test Mode: 10; Polarity: Vertical; Modulation:802.11a; Bandwidth:20MHz; Channel:Low

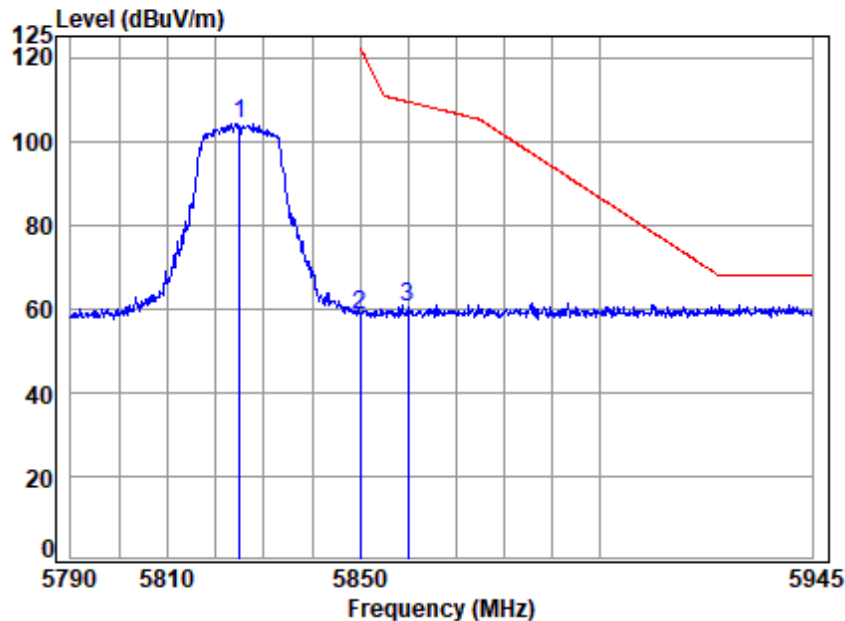


Site : chamber
Condition: 3m VERTICAL
Job No : 12337CR\12340CR
Mode : 5745 Band edge
: 5G WIFI 11A

		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	8.22	34.82	42.37	57.83	58.50	109.40	-50.90 peak
2	5725.000	8.22	34.83	42.37	58.99	59.67	122.20	-62.53 peak
3	5745.000	8.22	34.85	42.38	99.15	99.84	-----	----- peak



Test Mode: 10; Polarity: Horizontal; Modulation:802.11a; Bandwidth:20MHz; Channel:High

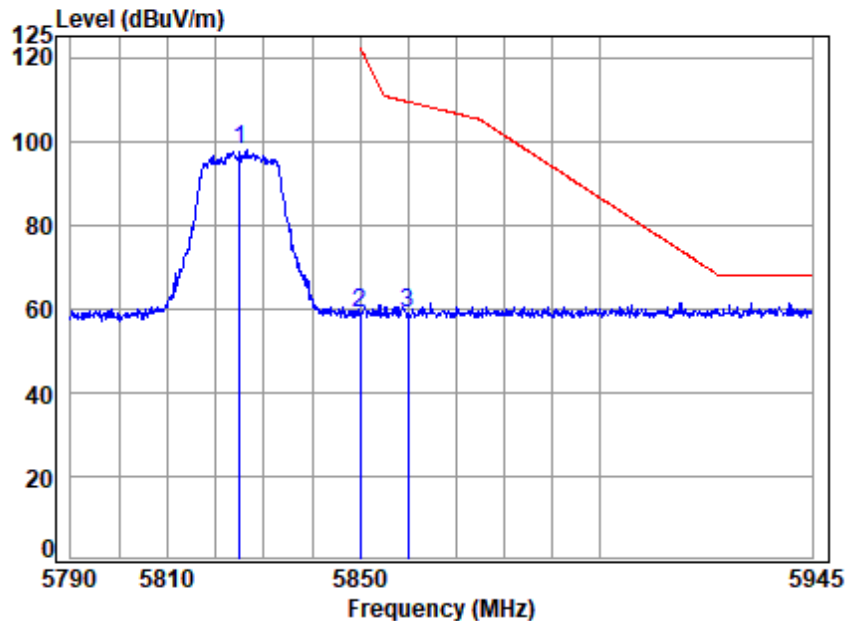


Site : chamber
Condition: 3m HORIZONTAL
Job No : 12337CR\12340CR
Mode : 5825 Band edge
: 5G WIFI 11A

		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	5825.000	8.23	34.93	42.38	103.41	104.19	-----	----- peak
2	5850.000	8.24	34.95	42.39	57.83	58.63	122.20	-63.57 peak
3	5860.000	8.24	34.96	42.39	59.46	60.27	109.40	-49.13 peak



Test Mode: 10; Polarity: Vertical; Modulation:802.11a; Bandwidth:20MHz; Channel:High

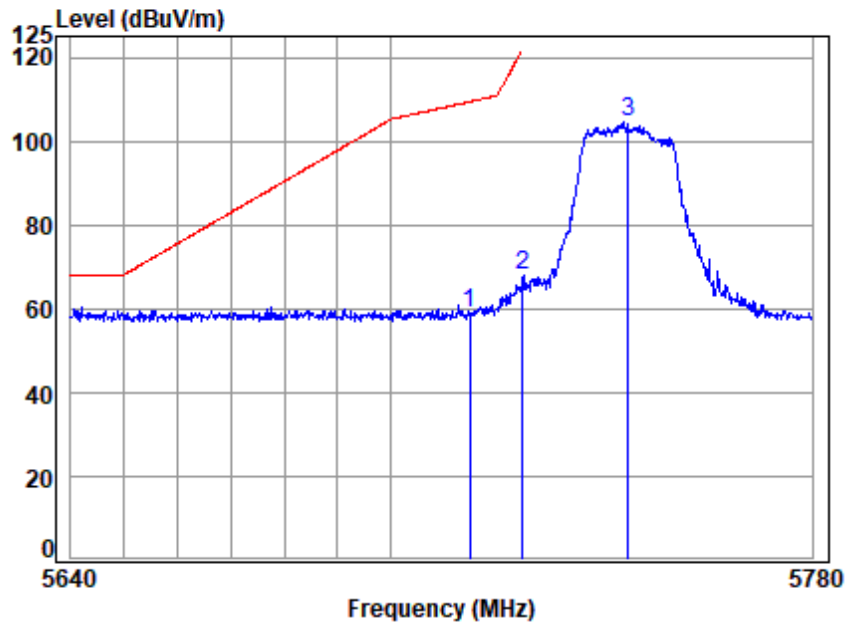


Site : chamber
Condition: 3m VERTICAL
Job No : 12337CR\12340CR
Mode : 5825 Band edge
: 5G WIFI 11A

		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	5825.000	8.23	34.93	42.38	96.94	97.72	-----	----- peak
2	5850.000	8.24	34.95	42.39	58.15	58.95	122.20	-63.25 peak
3	5860.000	8.24	34.96	42.39	58.29	59.10	109.40	-50.30 peak



Test Mode: 10; Polarity: Horizontal; Modulation:802.11n; Bandwidth:20MHz; Channel:Low



Site : chamber
Condition: 3m HORIZONTAL
Job No : 12337CR\12340CR
Mode : 5745 Band edge
: 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	5715.000	8.22	34.82	42.37	58.16	58.83	109.40	-50.57 peak
2	5725.000	8.22	34.83	42.37	67.10	67.78	122.20	-54.42 peak
3	5745.000	8.22	34.85	42.38	104.02	104.71	-----	----- peak

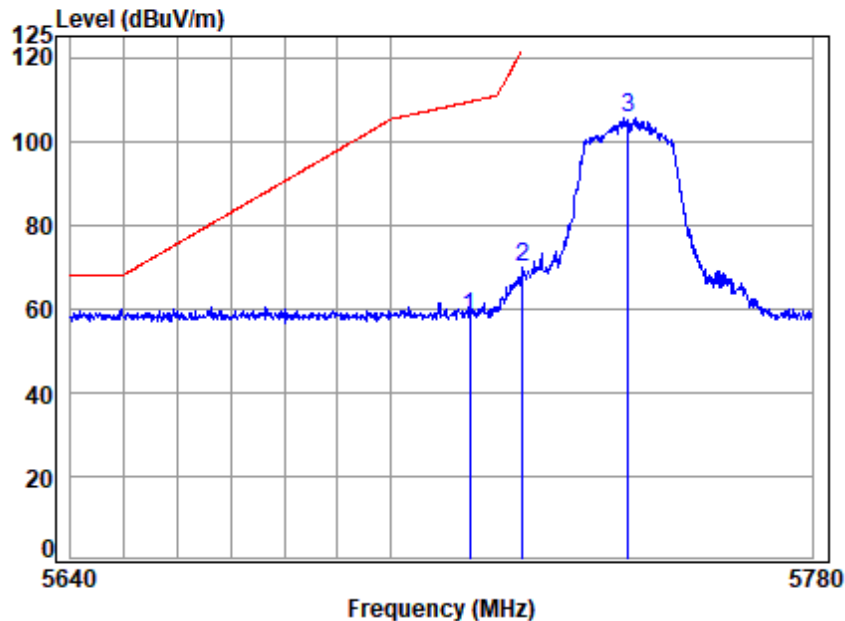


Unless otherwise agreed in writing, this document is issued by the Company subject to its General Conditions of Service printed overleaf, available on request or accessible at <http://www.sgs.com/en/Terms-and-Conditions.aspx> and, for electronic format documents, subject to Terms and Conditions for Electronic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

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

Test Mode: 10; Polarity: Vertical; Modulation:802.11n; Bandwidth:20MHz; Channel:Low

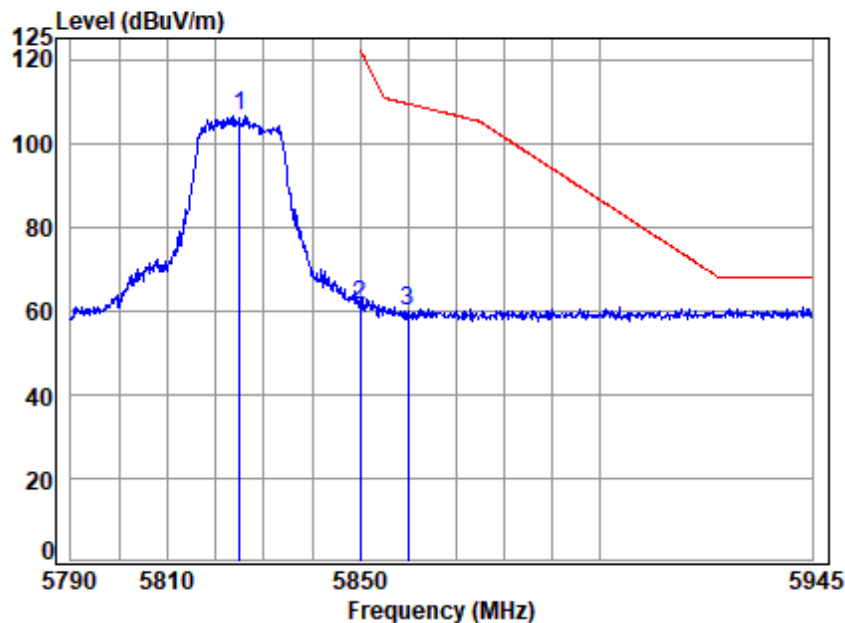


Site : chamber
Condition: 3m VERTICAL
Job No : 12337CR\12340CR
Mode : 5745 Band edge
: 5G WIFI 11N20

		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	5715.000	8.22	34.82	42.37	57.43	58.10	109.40	-51.30 peak
2	5725.000	8.22	34.83	42.37	69.12	69.80	122.20	-52.40 peak
3	5745.000	8.22	34.85	42.38	104.88	105.57	-----	----- peak



Test Mode: 10; Polarity: Horizontal; Modulation:802.11n; Bandwidth:20MHz; Channel:High

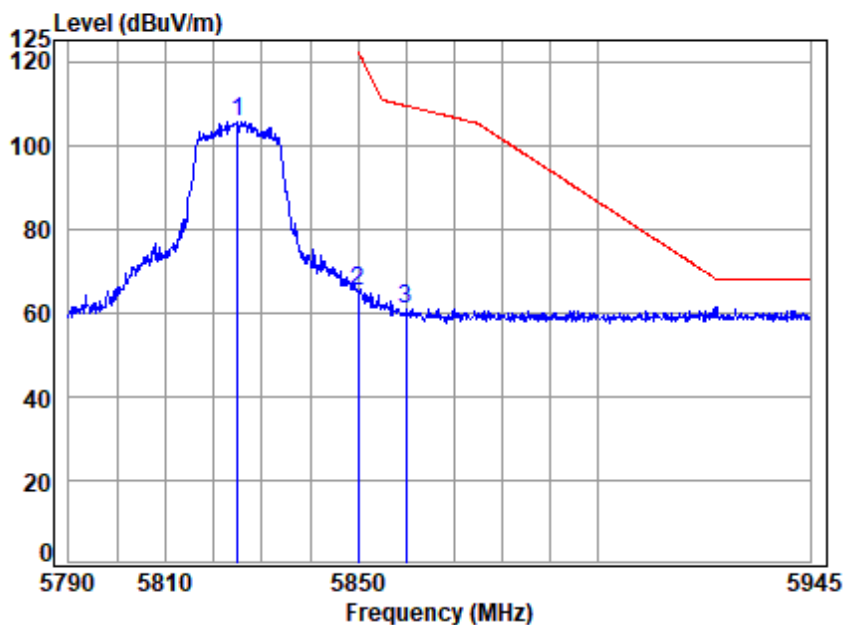


Site : chamber
Condition: 3m HORIZONTAL
Job No : 12337CR\12340CR
Mode : 5825 Band edge
: 5G WIFI 11N20

		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	5825.000	8.23	34.93	42.38	105.60	106.38	-----	-----	peak
2	5850.000	8.24	34.95	42.39	60.36	61.16	122.20	-61.04	peak
3	5860.000	8.24	34.96	42.39	59.28	60.09	109.40	-49.31	peak



Test Mode: 10; Polarity: Vertical; Modulation:802.11n; Bandwidth:20MHz; Channel:High

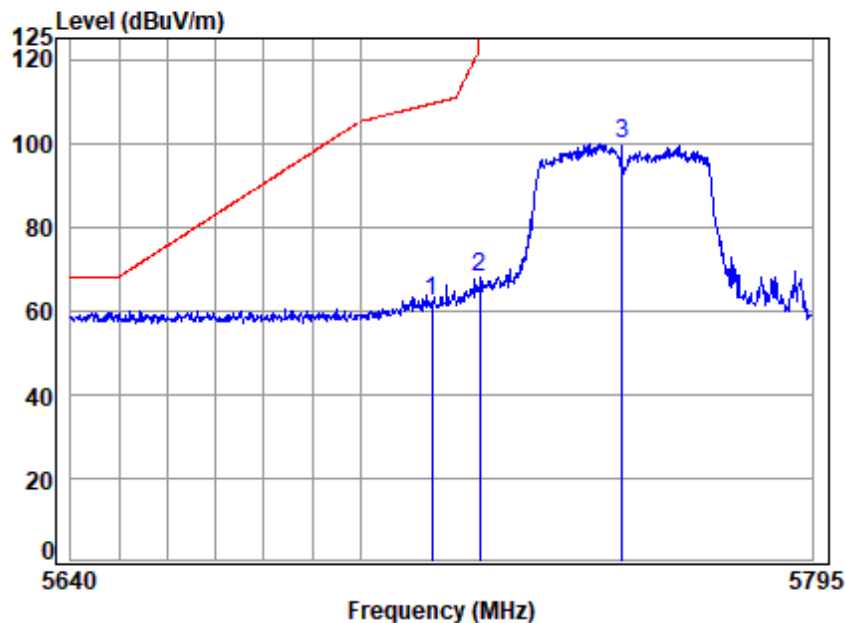


Site : chamber
Condition: 3m VERTICAL
Job No : 12337CR\12340CR
Mode : 5825 Band edge
: 5G WIFI 11N20

		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	5825.000	8.23	34.93	42.38	104.88	105.66	-----	----- peak
2	5850.000	8.24	34.95	42.39	64.30	65.10	122.20	-57.10 peak
3	5860.000	8.24	34.96	42.39	60.02	60.83	109.40	-48.57 peak



Test Mode: 10; Polarity: Horizontal; Modulation:802.11n; Bandwidth:40MHz; Channel:Low

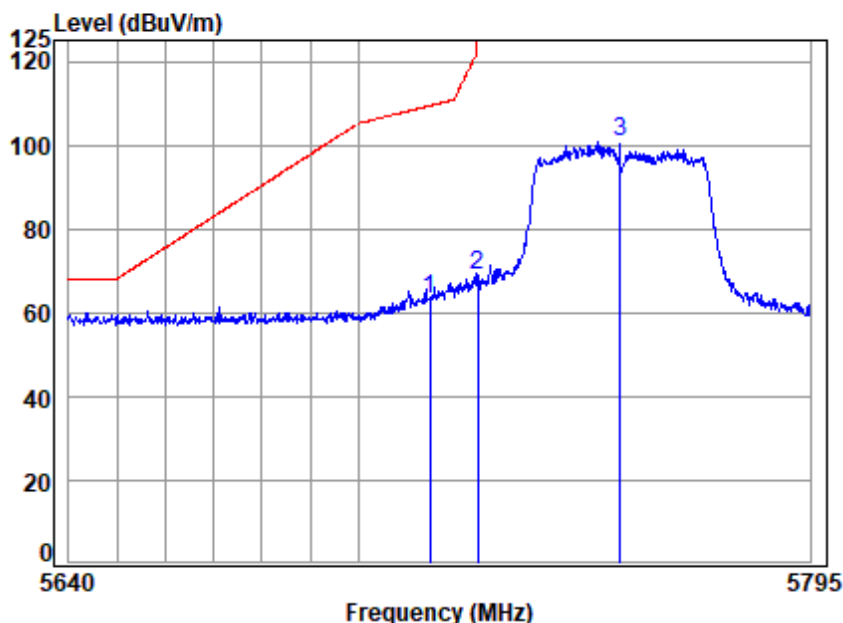


Site : chamber
Condition: 3m HORIZONTAL
Job No : 12337CR\12340CR
Mode : 5755 Band edge
: 5G WIFI 11N40

		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	5715.000	8.22	34.82	42.37	61.42	62.09	109.40	-47.31 peak
2	5725.000	8.22	34.83	42.37	67.23	67.91	122.20	-54.29 peak
3	5755.000	8.22	34.86	42.38	98.91	99.61	-----	----- peak



Test Mode: 10; Polarity: Vertical; Modulation:802.11n; Bandwidth:40MHz; Channel:Low

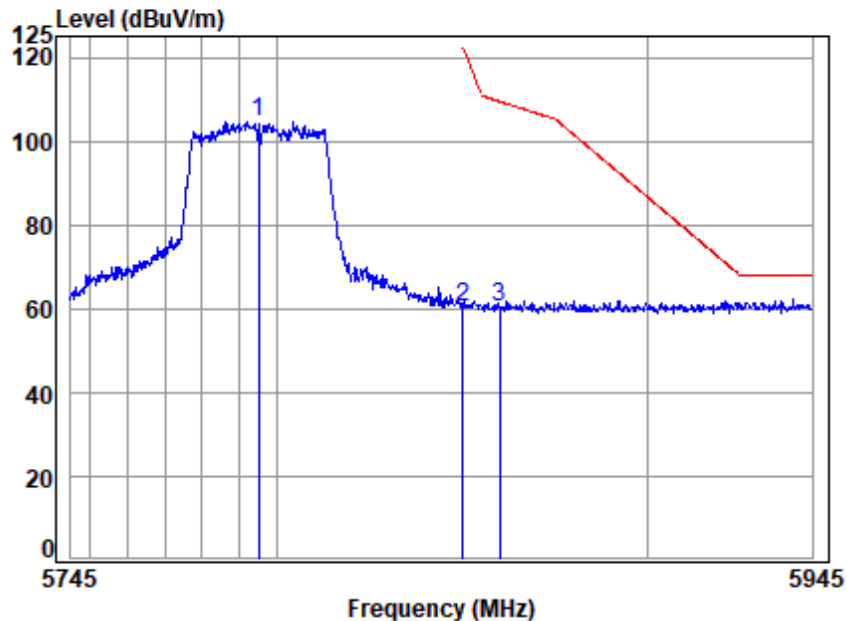


Site : chamber
Condition: 3m VERTICAL
Job No : 12337CR\12340CR
Mode : 5755 Band edge
: 5G WIFI 11N40

		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	5715.000	8.22	34.82	42.37	62.56	63.23	109.40	-46.17 peak
2	5725.000	8.22	34.83	42.37	68.01	68.69	122.20	-53.51 peak
3	5755.000	8.22	34.86	42.38	100.18	100.88	-----	----- peak



Test Mode: 10; Polarity: Horizontal; Modulation:802.11n; Bandwidth:40MHz; Channel:High

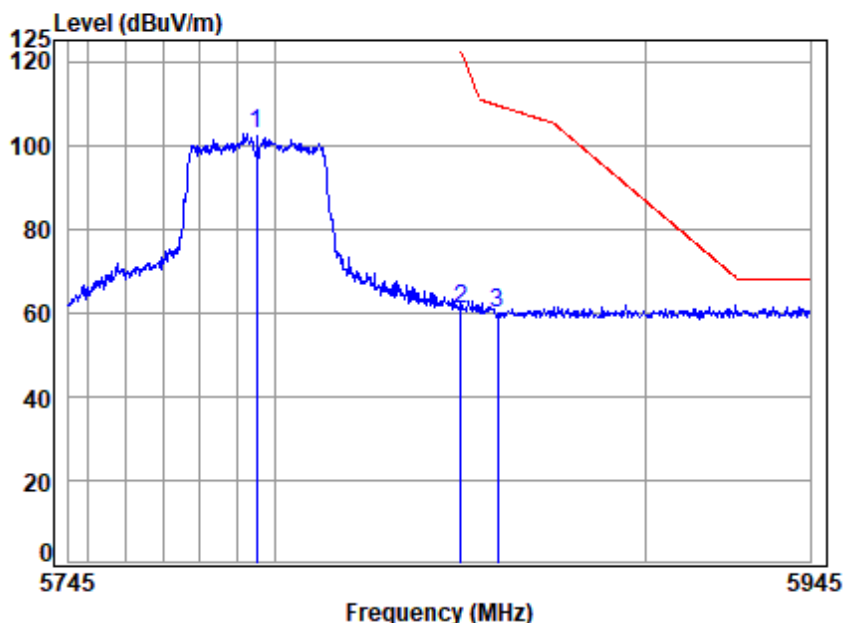


Site : chamber
Condition: 3m HORIZONTAL
Job No : 12337CR\12340CR
Mode : 5795 Band edge
: 5G WIFI 11N40

		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	5795.000	8.23	34.90	42.38	103.81	104.56	-----	----- peak
2	5850.000	8.24	34.95	42.39	59.48	60.28	122.20	-61.92 peak
3	5860.000	8.24	34.96	42.39	59.61	60.42	109.40	-48.98 peak



Test Mode: 10; Polarity: Vertical; Modulation:802.11n; Bandwidth:40MHz; Channel:High

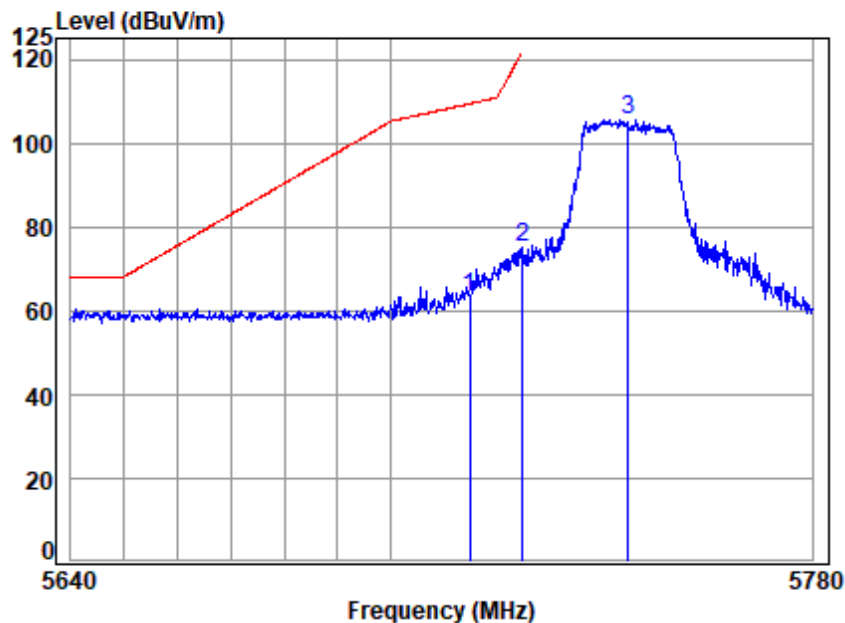


Site : chamber
Condition: 3m VERTICAL
Job No : 12337CR\12340CR
Mode : 5795 Band edge
: 5G WIFI 11N40

		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	5795.000	8.23	34.90	42.38	101.98	102.73	-----	----- peak
2	5850.000	8.24	34.95	42.39	59.98	60.78	122.20	-61.42 peak
3	5860.000	8.24	34.96	42.39	58.86	59.67	109.40	-49.73 peak



Test Mode: 10; Polarity: Horizontal; Modulation:802.11ac; Bandwidth:20MHz; Channel:Low

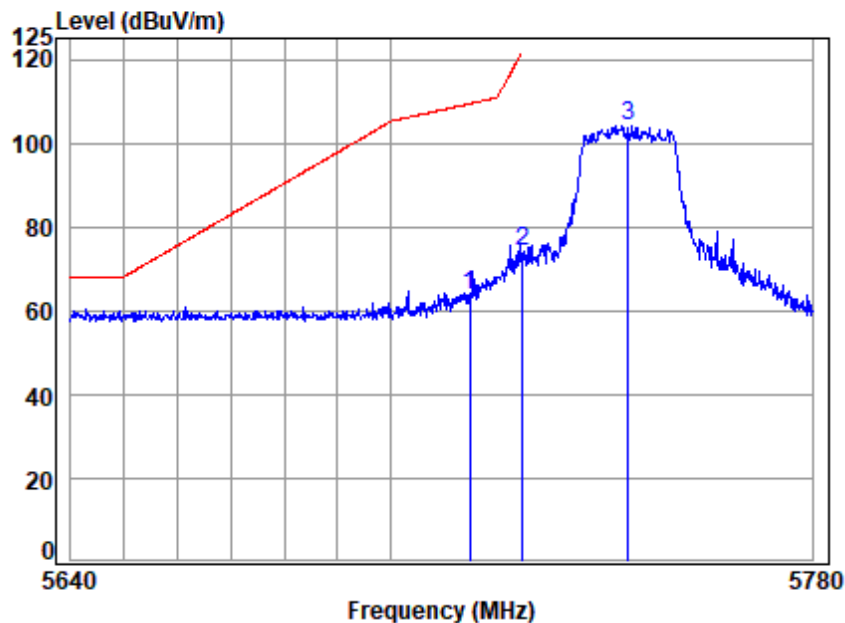


Site : chamber
Condition: 3m HORIZONTAL
Job No : 12337CR\12340CR
Mode : 5745 Band edge
: 5G WIFI 11AC20

		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	5715.000	8.22	34.82	42.37	62.74	63.41	109.40	-45.99 peak
2	5725.000	8.22	34.83	42.37	74.57	75.25	122.20	-46.95 peak
3	5745.000	8.22	34.85	42.38	105.02	105.71	-----	----- peak



Test Mode: 10; Polarity: Vertical; Modulation:802.11ac; Bandwidth:20MHz; Channel:Low

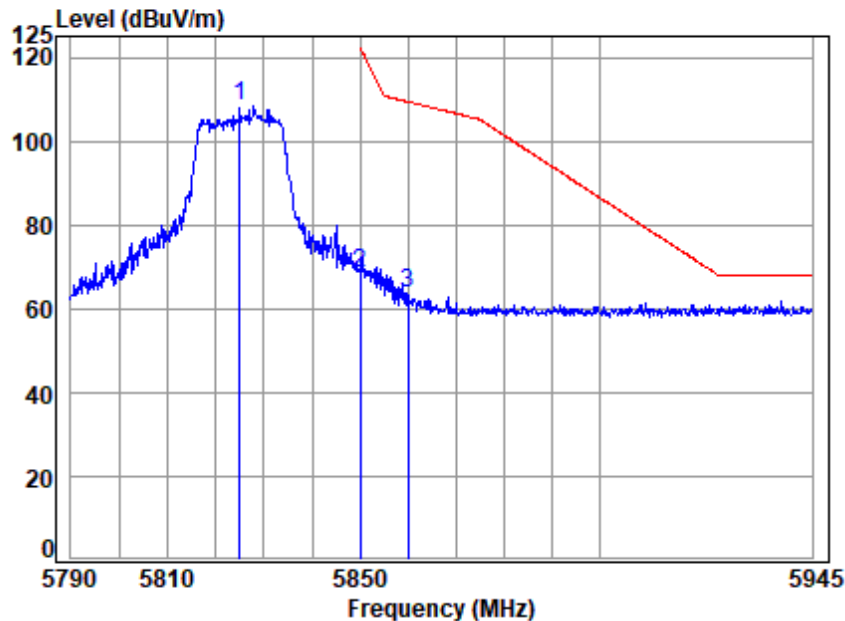


Site : chamber
Condition: 3m VERTICAL
Job No : 12337CR\12340CR
Mode : 5745 Band edge
: 5G WIFI 11AC20

		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	5715.000	8.22	34.82	42.37	63.23	63.90	109.40	-45.50 peak
2	5725.000	8.22	34.83	42.37	73.27	73.95	122.20	-48.25 peak
3	5745.000	8.22	34.85	42.38	103.55	104.24	-----	----- peak



Test Mode: 10; Polarity: Horizontal; Modulation:802.11ac; Bandwidth:20MHz; Channel:High

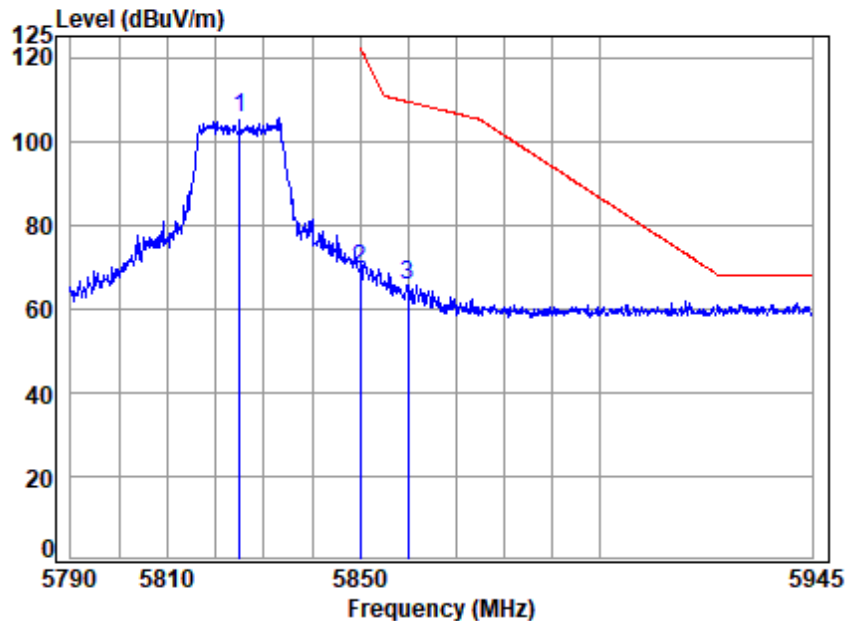


Site : chamber
Condition: 3m HORIZONTAL
Job No : 12337CR\12340CR
Mode : 5825 Band edge
: 5G WIFI 11AC20

		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	5825.000	8.23	34.93	42.38	107.46	108.24	-----	----- peak
2	5850.000	8.24	34.95	42.39	67.48	68.28	122.20	-53.92 peak
3	5860.000	8.24	34.96	42.39	62.76	63.57	109.40	-45.83 peak



Test Mode: 10; Polarity: Vertical; Modulation:802.11ac; Bandwidth:20MHz; Channel:High

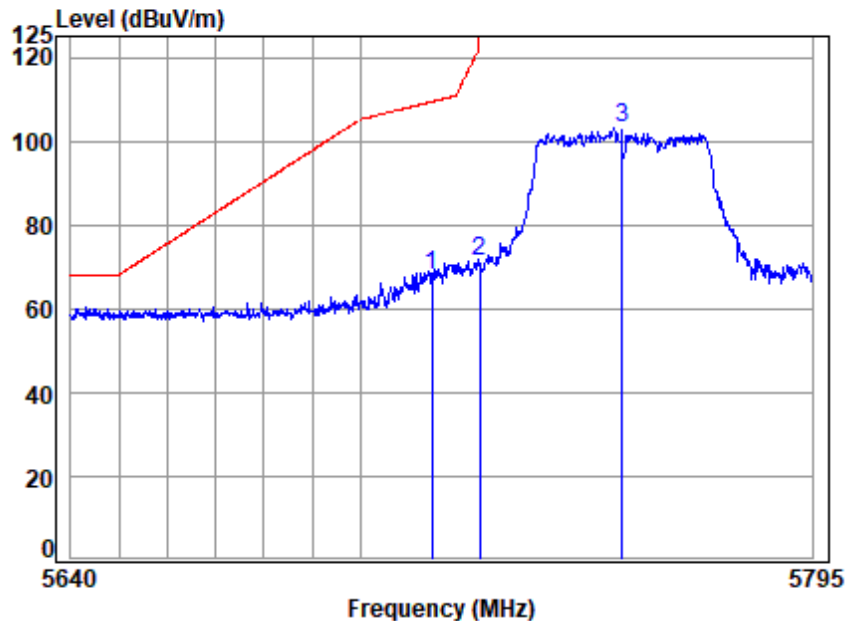


Site : chamber
Condition: 3m VERTICAL
Job No : 12337CR\12340CR
Mode : 5825 Band edge
: 5G WIFI 11AC20

		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	5825.000	8.23	34.93	42.38	104.79	105.57	-----	-----	peak
2	5850.000	8.24	34.95	42.39	68.74	69.54	122.20	-52.66	peak
3	5860.000	8.24	34.96	42.39	64.78	65.59	109.40	-43.81	peak



Test Mode: 10; Polarity: Horizontal; Modulation:802.11ac; Bandwidth:40MHz; Channel:Low

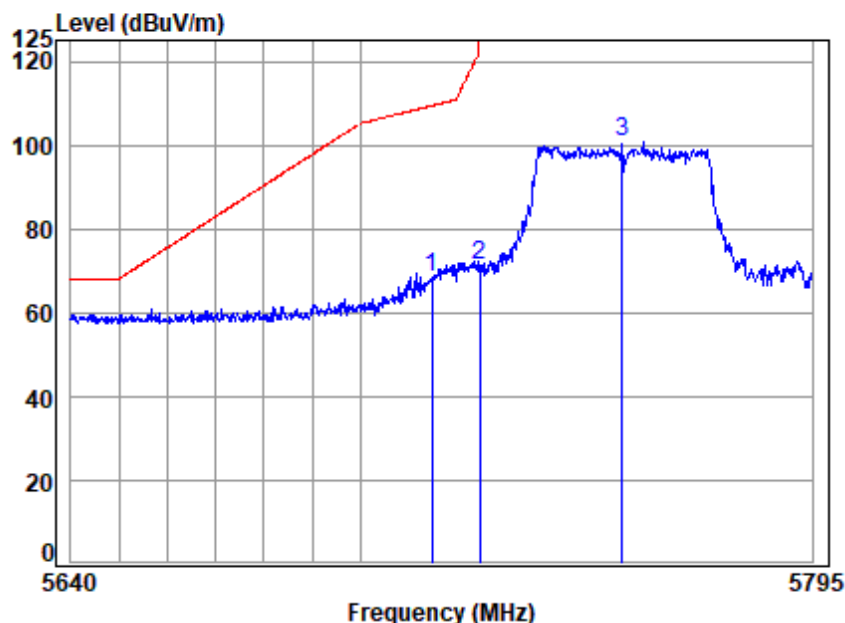


Site : chamber
Condition: 3m HORIZONTAL
Job No : 12337CR\12340CR
Mode : 5755 Band edge
: 5G WIFI 11AC40

		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	5715.000	8.22	34.82	42.37	67.15	67.82	109.40	-41.58 peak
2	5725.000	8.22	34.83	42.37	70.48	71.16	122.20	-51.04 peak
3	5755.000	8.22	34.86	42.38	102.62	103.32	-----	----- peak



Test Mode: 10; Polarity: Vertical; Modulation:802.11ac; Bandwidth:40MHz; Channel:Low

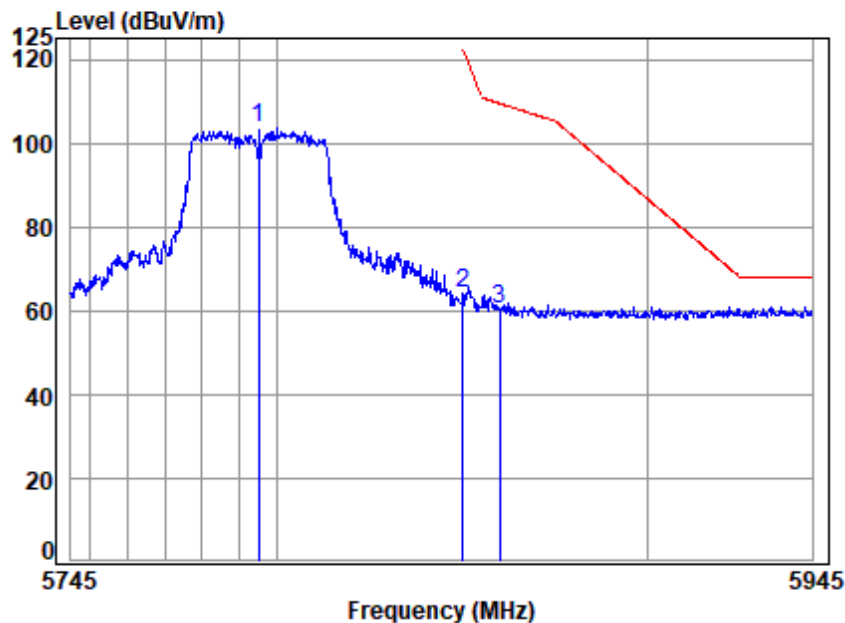


Site : chamber
Condition: 3m VERTICAL
Job No : 12337CR\12340CR
Mode : 5755 Band edge
: 5G WIFI 11AC40

		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	5715.000	8.22	34.82	42.37	67.75	68.42	109.40	-40.98 peak
2	5725.000	8.22	34.83	42.37	70.79	71.47	122.20	-50.73 peak
3	5755.000	8.22	34.86	42.38	100.03	100.73	-----	----- peak



Test Mode: 10; Polarity: Horizontal; Modulation:802.11ac; Bandwidth:40MHz; Channel:High

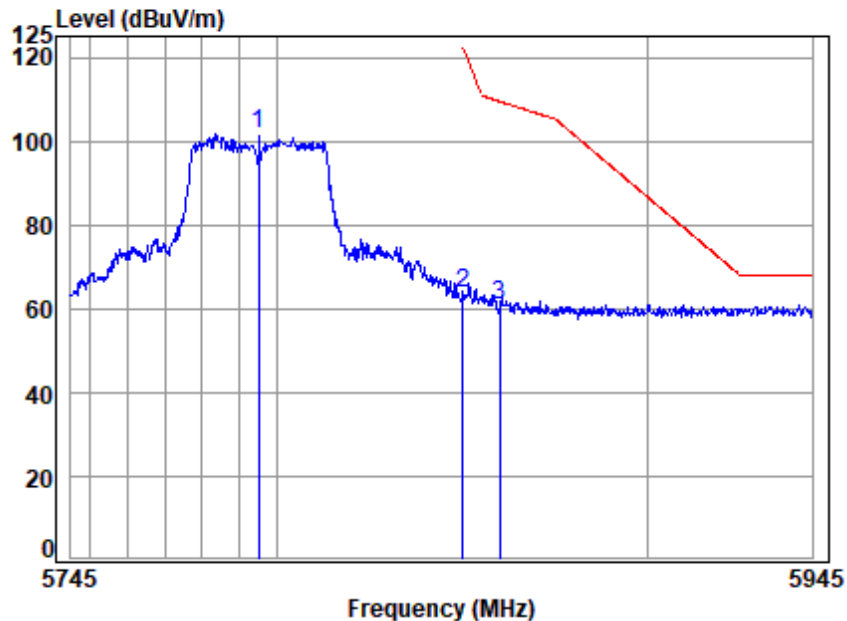


Site : chamber
Condition: 3m HORIZONTAL
Job No : 12337CR\12340CR
Mode : 5795 Band edge
: 5G WIFI 11AC40

		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	5795.000	8.23	34.90	42.38	102.76	103.51	-----	----- peak
2	5850.000	8.24	34.95	42.39	63.33	64.13	122.20	-58.07 peak
3	5860.000	8.24	34.96	42.39	59.72	60.53	109.40	-48.87 peak



Test Mode: 10; Polarity: Vertical; Modulation:802.11ac; Bandwidth:40MHz; Channel:High

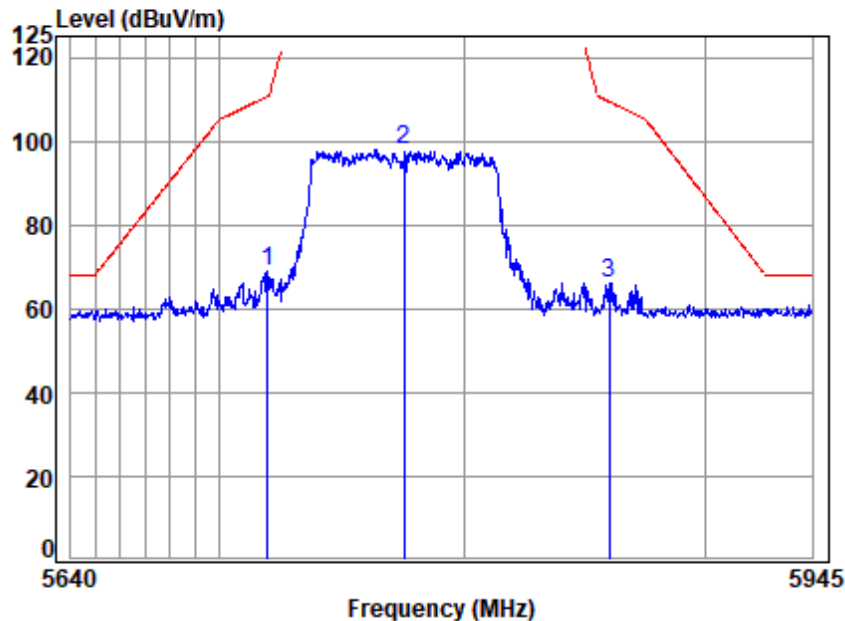


Site : chamber
Condition: 3m VERTICAL
Job No : 12337CR\12340CR
Mode : 5795 Band edge
: 5G WIFI 11AC40

		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	5795.000	8.23	34.90	42.38	100.76	101.51	-----	----- peak
2	5850.000	8.24	34.95	42.39	62.99	63.79	122.20	-58.41 peak
3	5860.000	8.24	34.96	42.39	60.10	60.91	109.40	-48.49 peak



Test Mode: 10; Polarity: Horizontal; Modulation:802.11ac; Bandwidth:80MHz; Channel:middle

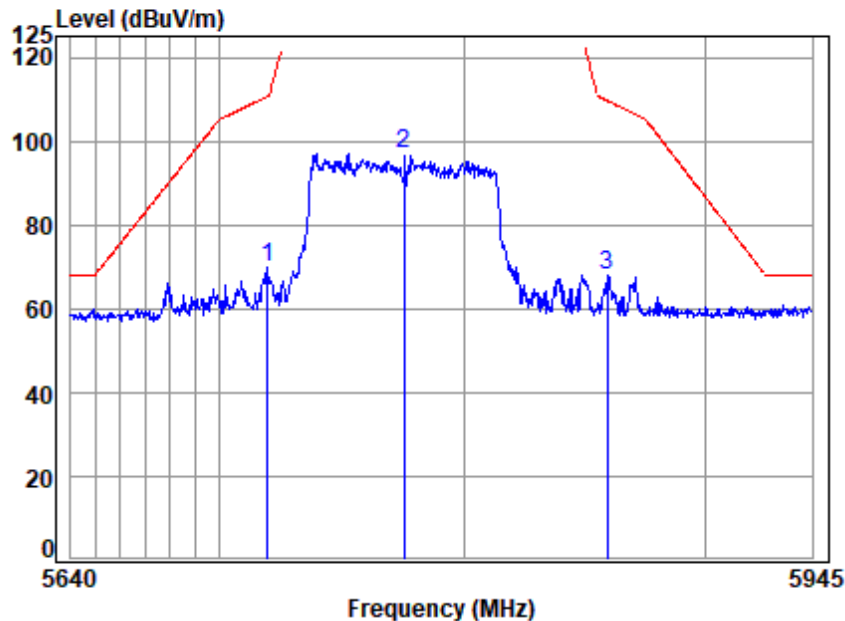


Site : chamber
Condition: 3m HORIZONTAL
Job No : 12337CR\12340CR
Mode : 5775 Band edge
: 5G WIFI 11AC80

		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	5719.568	8.22	34.82	42.37	68.25	68.92	110.68	-41.76 peak
2	5775.000	8.22	34.88	42.38	97.23	97.95	-----	----- peak
3	5859.826	8.24	34.96	42.39	65.34	66.15	109.45	-43.30 peak



Test Mode: 10; Polarity: Vertical; Modulation:802.11ac; Bandwidth:80MHz; Channel:middle



Site : chamber
Condition: 3m VERTICAL
Job No : 12337CR\12340CR
Mode : 5775 Band edge
: 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	5719.267	8.22	34.82	42.37	69.27	69.94	110.60	-40.66 peak
2	5775.000	8.22	34.88	42.38	96.14	96.86	-----	----- peak
3	5859.209	8.24	34.96	42.39	67.08	67.89	109.62	-41.73 peak



7.10 Frequency Stability

Test Requirement 47 CFR Part 15, Subpart C 15.407 (g)
Test Method: ANSI C63.10 (2013) Section 6.8

7.10.1 E.U.T. Operation

Operating Environment:
Temperature: 26.8 °C Humidity: 37.1 % RH Atmospheric Pressure: 1010 mbar

7.10.2 Test Mode Description

Pre-scan / Final test	Mode Code	Description
Final test	09	TX mode (U-NII-2C)_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.
Final test	10	TX mode (U-NII-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.

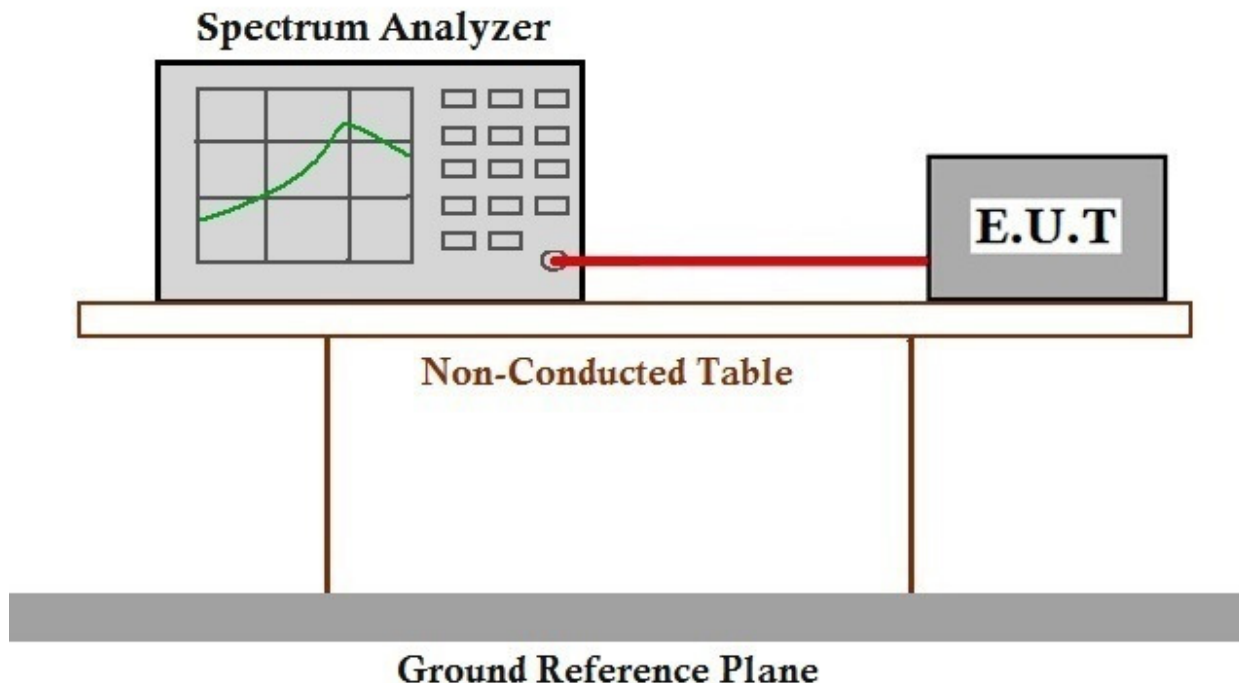


Unless otherwise agreed in writing, this document is issued by the Company subject to its General Conditions of Service printed overleaf, available on request or accessible at <http://www.sgs.com/en/Terms-and-Conditions.aspx> and, for electronic format documents, subject to Terms and Conditions for Electronic 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) 83071443, or email: 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.ssgroup.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

7.10.3 Test Setup Diagram



7.10.4 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.



7.11 Non-occupancy period

Test Requirement KDB 905462 D02 Section 5.1
Test Method: KDB 905462 D02 Section 7.8.3

Limit:

Test item	Limit	Applicability	
		Master Device or client with Radar Detection	Client without Radar Detection
Non-occupancy period	Minimum 30 minutes	Yes	Not required
Channel Availability Check Time	60 seconds	Yes	Not required
Channel Move Time	10 seconds See Note 1.	Yes	Yes
Channel Closing Transmission Time	200 milliseconds + an aggregate of 60 milliseconds over remaining 10 second period. See Notes 1 and 2.	Yes	Yes
U-NII Detection Bandwidth	Minimum 100% of the U-NII 99% transmission power bandwidth. See Note 3.	Yes	Not required

Note 1: Channel Move Time and the Channel Closing Transmission Time should be performed with Radar Type 0. The measurement timing begins at the end of the Radar Type 0 burst.

Note 2: The Channel Closing Transmission Time is comprised of 200 milliseconds starting at the beginning of the Channel Move Time plus any additional intermittent control signals required to facilitate a Channel move (an aggregate of 60 milliseconds) during the remainder of the 10 second period. The aggregate duration of control signals will not count quiet periods in between transmissions.

Note 3: During the U-NII Detection Bandwidth detection test, radar type 0 should be used. For each frequency step the minimum percentage of detection is 90 percent. Measurements are performed with no data traffic.

7.11.1 E.U.T. Operation

Operating Environment:

Temperature: 19.5 °C Humidity: 47.3 % RH Atmospheric Pressure: 1010 mbar

7.11.2 Test Mode Description

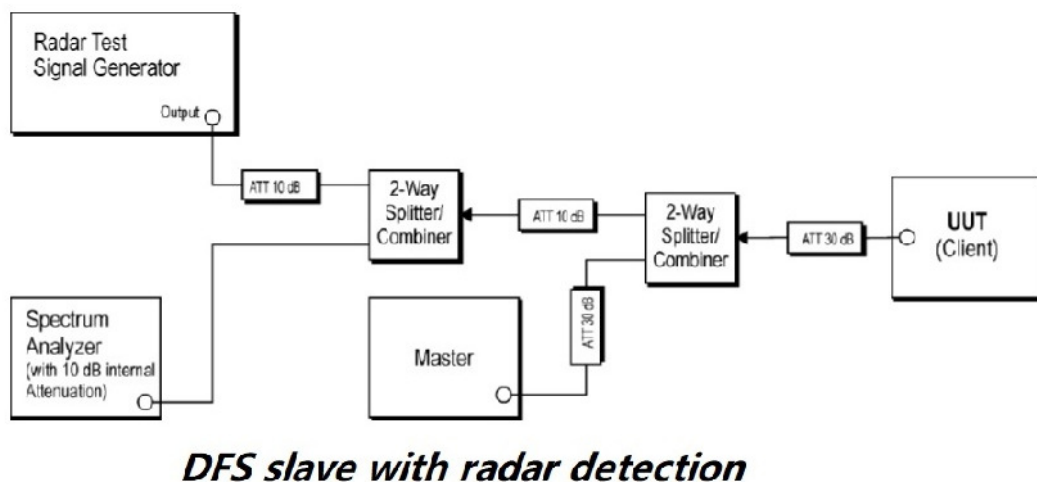
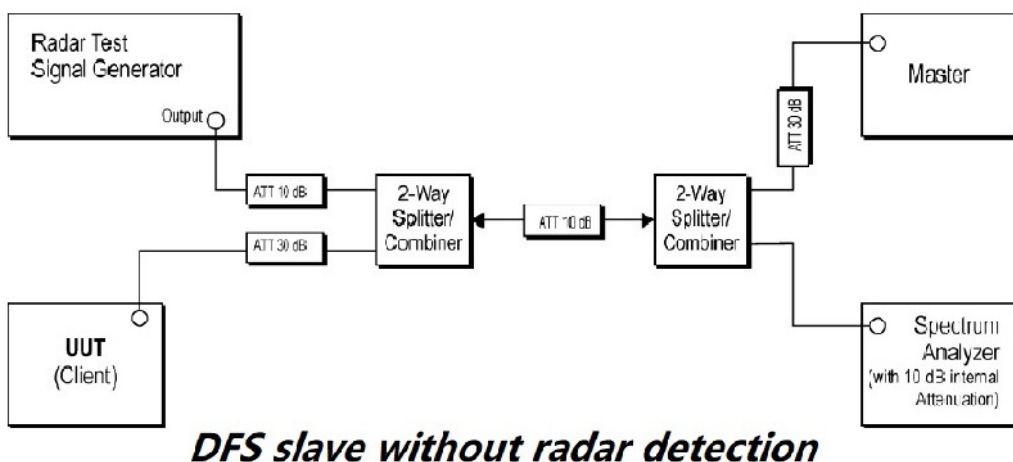
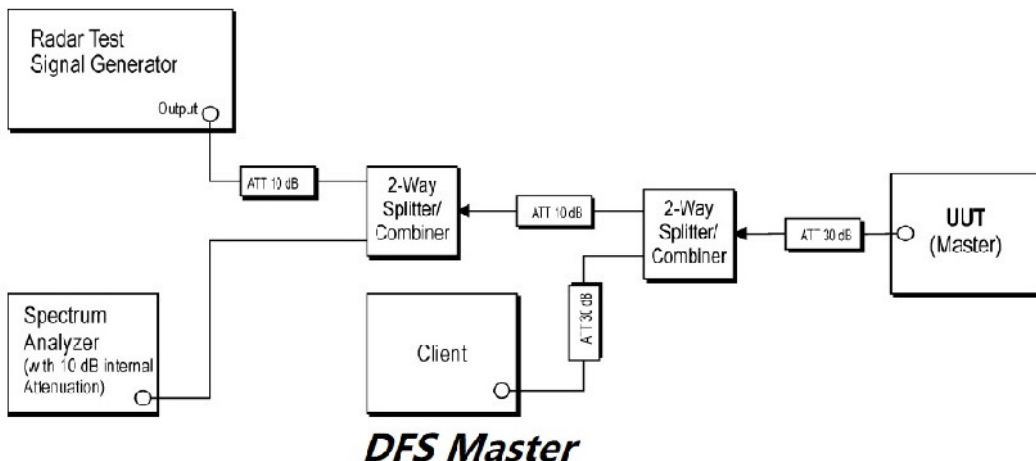
Pre-scan / Final test	Mode Code	Description
Final test	11	Normal operating_Keep the EUT communication with the companion device.



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

7.11.3 Test Setup Diagram



7.11.4 Measurement Procedure and Data

- 1) The radar pulse generator is setup to provide a pulse at frequency that the master and client are operating. A type 0 radar pulse with a 1us pulse width and a 1428us PRI is used for the testing.
- 2) The vector signal generator is adjusted to provide the radar burst (18 pulses) at the level of approximately -61dBm at the antenna port of the master device.
- 3) A trigger is provided from the pulse generator to the DFS monitoring system in order to capture the traffic and the occurrence of the radar pulse.
- 4) EUT will associate with the master at channel. The file "iperf.exe" specified by the FCC is streamed from the PC 2 through the master and the client device to the PC 1 and played in full motion video using Media Player Classic Ver. 6.4.8.6 in order to properly load the network for the entire period of the test.
- 5) When radar burst with a level equal to the DFS Detection Threshold +1dB is generated on the operating channel of the U-NII device. At time T0 the radar waveform generator sends a burst of pulse of the radar waveform at Detection Threshold +1dB.
- 6) Observe the transmissions of the EUT at the end of the radar Burst on the Operating Channel. Measure and record the transmissions from the UUT during the observation time (Channel Move Time). One 15 seconds plot is reported for the Short Pulse Radar Type 0. The plot for the Short Pulse Radar Types start at the end of the radar burst. The Channel Move Time will be calculated based on the zoom in 600ms plot of the Short Pulse Radar Type.
- 7) Measurement of the aggregate duration of the Channel Closed Transmission Time method. With the spectrum analyzer set to zero span tuned to the center frequency of the EUT operating channel at the radar simulated frequency, peak detection, and max hold, the dwell time per bin is given by: $Dwell (0.3ms) = S (12000ms) / B (4000)$; where Dwell is the dwell time per spectrum analyzer sampling bin, S is sweep time and B is the number of spectrum analyzer sampling bins. An upper bound of the aggregate duration of the intermittent control signals of Channel Closing Transmission Time is calculated by: $C (ms) = N \times Dwell (0.3ms)$; where C is the Closing Time, N is the number of spectrum analyzer sampling bins (intermittent control signals) showing a U-NII transmission and Dwell is the dwell time per bin.
- 8) Measurement the EUT for more than 30 minutes following the channel move time to verify that no transmission or beacons occur on this channel.

Please Refer To Appendix For Details



Unless otherwise agreed in writing, this document is issued by the Company subject to its General Conditions of Service printed overleaf, available on request or accessible at <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) 83071443, or email: 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

7.12 Channel Move Time

Test Requirement KDB 905462 D02 Section 5.1
Test Method: KDB 905462 D02 Section 7.8.3

Limit:

Test item	Limit	Applicability	
		Master Device or client with Radar Detection	Client without Radar Detection
Non-occupancy period	Minimum 30 minutes	Yes	Not required
Channel Availability Check Time	60 seconds	Yes	Not required
Channel Move Time	10 seconds See Note 1.	Yes	Yes
Channel Closing Transmission Time	200 milliseconds + an aggregate of 60 milliseconds over remaining 10 second period. See Notes 1 and 2.	Yes	Yes
U-NII Detection Bandwidth	Minimum 100% of the U-NII 99% transmission power bandwidth. See Note 3.	Yes	Not required

Note 1: Channel Move Time and the Channel Closing Transmission Time should be performed with Radar Type 0. The measurement timing begins at the end of the Radar Type 0 burst.

Note 2: The Channel Closing Transmission Time is comprised of 200 milliseconds starting at the beginning of the Channel Move Time plus any additional intermittent control signals required to facilitate a Channel move (an aggregate of 60 milliseconds) during the remainder of the 10 second period. The aggregate duration of control signals will not count quiet periods in between transmissions.

Note 3: During the U-NII Detection Bandwidth detection test, radar type 0 should be used. For each frequency step the minimum percentage of detection is 90 percent. Measurements are performed with no data traffic.

7.12.1 E.U.T. Operation

Operating Environment:

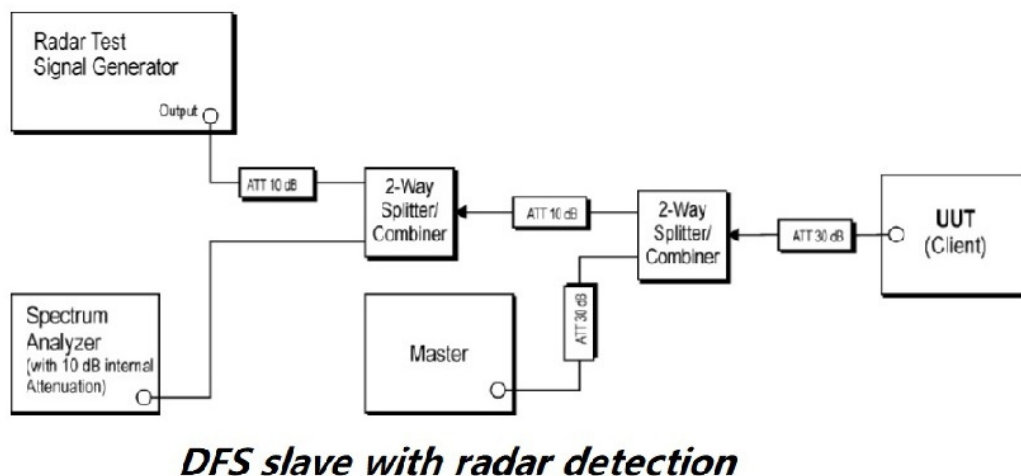
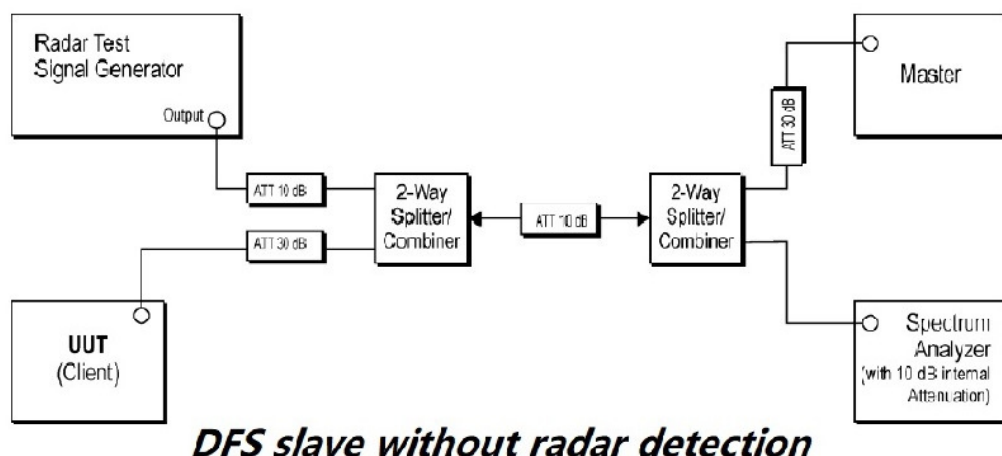
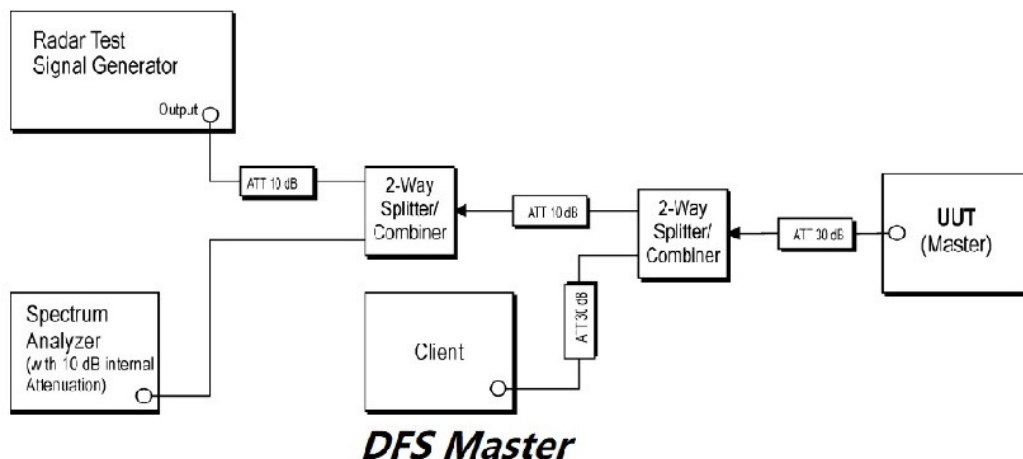
Temperature: 19.5 °C Humidity: 47.3 % RH Atmospheric Pressure: 1010 mbar

7.12.2 Test Mode Description

Pre-scan / Final test	Mode Code	Description
Final test	11	Normal operating_Keep the EUT communication with the companion device.



7.12.3 Test Setup Diagram



7.12.4 Measurement Procedure and Data

- 1) The radar pulse generator is setup to provide a pulse at frequency that the master and client are operating. A type 0 radar pulse with a 1us pulse width and a 1428us PRI is used for the testing.
- 2) The vector signal generator is adjusted to provide the radar burst (18 pulses) at the level of approximately -61dBm at the antenna port of the master device.
- 3) A trigger is provided from the pulse generator to the DFS monitoring system in order to capture the traffic and the occurrence of the radar pulse.
- 4) EUT will associate with the master at channel. The file "iperf.exe" specified by the FCC is streamed from the PC 2 through the master and the client device to the PC 1 and played in full motion video using Media Player Classic Ver. 6.4.8.6 in order to properly load the network for the entire period of the test.
- 5) When radar burst with a level equal to the DFS Detection Threshold +1dB is generated on the operating channel of the U-NII device. At time T0 the radar waveform generator sends a burst of pulse of the radar waveform at Detection Threshold +1dB.
- 6) Observe the transmissions of the EUT at the end of the radar Burst on the Operating Channel. Measure and record the transmissions from the UUT during the observation time (Channel Move Time). One 15 seconds plot is reported for the Short Pulse Radar Type 0. The plot for the Short Pulse Radar Types start at the end of the radar burst. The Channel Move Time will be calculated based on the zoom in 600ms plot of the Short Pulse Radar Type.
- 7) Measurement of the aggregate duration of the Channel Closed Transmission Time method. With the spectrum analyzer set to zero span tuned to the center frequency of the EUT operating channel at the radar simulated frequency, peak detection, and max hold, the dwell time per bin is given by: $Dwell (0.3ms) = S (12000ms) / B (4000)$; where Dwell is the dwell time per spectrum analyzer sampling bin, S is sweep time and B is the number of spectrum analyzer sampling bins. An upper bound of the aggregate duration of the intermittent control signals of Channel Closing Transmission Time is calculated by: $C (ms) = N \times Dwell (0.3ms)$; where C is the Closing Time, N is the number of spectrum analyzer sampling bins (intermittent control signals) showing a U-NII transmission and Dwell is the dwell time per bin.
- 8) Measurement the EUT for more than 30 minutes following the channel move time to verify that no transmission or beacons occur on this channel.

Please Refer To Appendix For Details



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

SGS-CSTC Standards Technical Services 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.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

7.13 Channel Closing Transmission Time

Test Requirement KDB 905462 D02 Section 5.1
Test Method: KDB 905462 D02 Section 7.8.3

Limit:

Test item	Limit	Applicability	
		Master Device or client with Radar Detection	Client without Radar Detection
Non-occupancy period	Minimum 30 minutes	Yes	Not required
Channel Availability Check Time	60 seconds	Yes	Not required
Channel Move Time	10 seconds See Note 1.	Yes	Yes
Channel Closing Transmission Time	200 milliseconds + an aggregate of 60 milliseconds over remaining 10 second period. See Notes 1 and 2.	Yes	Yes
U-NII Detection Bandwidth	Minimum 100% of the U-NII 99% transmission power bandwidth. See Note 3.	Yes	Not required

Note 1: Channel Move Time and the Channel Closing Transmission Time should be performed with Radar Type 0. The measurement timing begins at the end of the Radar Type 0 burst.

Note 2: The Channel Closing Transmission Time is comprised of 200 milliseconds starting at the beginning of the Channel Move Time plus any additional intermittent control signals required to facilitate a Channel move (an aggregate of 60 milliseconds) during the remainder of the 10 second period. The aggregate duration of control signals will not count quiet periods in between transmissions.

Note 3: During the U-NII Detection Bandwidth detection test, radar type 0 should be used. For each frequency step the minimum percentage of detection is 90 percent. Measurements are performed with no data traffic.

7.13.1 E.U.T. Operation

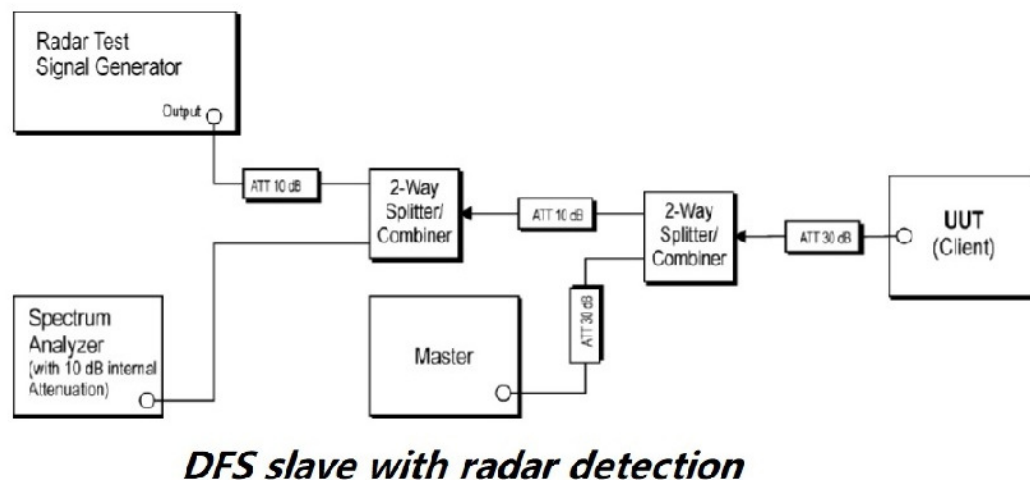
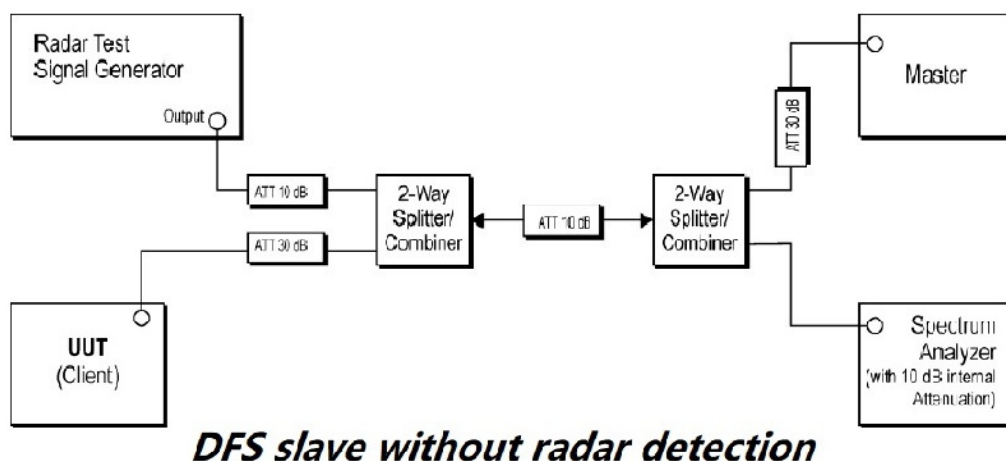
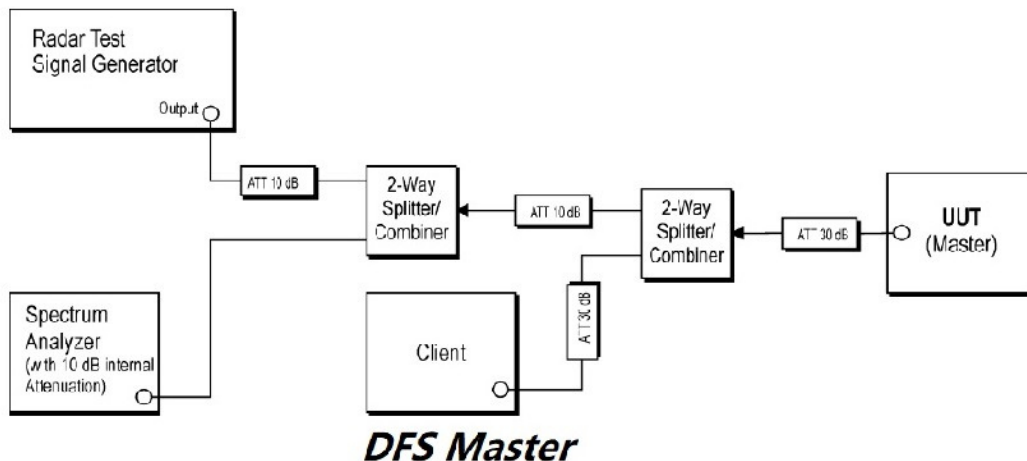
Operating Environment:

Temperature: 22.4 °C Humidity: 51.6 % RH Atmospheric Pressure: 1010 mbar



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

7.13.2 Test Setup Diagram



7.13.3 Measurement Procedure and Data

- 1) The radar pulse generator is setup to provide a pulse at frequency that the master and client are operating. A type 0 radar pulse with a 1us pulse width and a 1428us PRI is used for the testing.
- 2) The vector signal generator is adjusted to provide the radar burst (18 pulses) at the level of approximately -61dBm at the antenna port of the master device.
- 3) A trigger is provided from the pulse generator to the DFS monitoring system in order to capture the traffic and the occurrence of the radar pulse.
- 4) EUT will associate with the master at channel. The file "iperf.exe" specified by the FCC is streamed from the PC 2 through the master and the client device to the PC 1 and played in full motion video using Media Player Classic Ver. 6.4.8.6 in order to properly load the network for the entire period of the test.
- 5) When radar burst with a level equal to the DFS Detection Threshold +1dB is generated on the operating channel of the U-NII device. At time T0 the radar waveform generator sends a burst of pulse of the radar waveform at Detection Threshold +1dB.
- 6) Observe the transmissions of the EUT at the end of the radar Burst on the Operating Channel. Measure and record the transmissions from the UUT during the observation time (Channel Move Time). One 15 seconds plot is reported for the Short Pulse Radar Type 0. The plot for the Short Pulse Radar Types start at the end of the radar burst. The Channel Move Time will be calculated based on the zoom in 600ms plot of the Short Pulse Radar Type.
- 7) Measurement of the aggregate duration of the Channel Closed Transmission Time method. With the spectrum analyzer set to zero span tuned to the center frequency of the EUT operating channel at the radar simulated frequency, peak detection, and max hold, the dwell time per bin is given by: $Dwell (0.3ms) = S (12000ms) / B (4000)$; where Dwell is the dwell time per spectrum analyzer sampling bin, S is sweep time and B is the number of spectrum analyzer sampling bins. An upper bound of the aggregate duration of the intermittent control signals of Channel Closing Transmission Time is calculated by: $C (ms) = N \times Dwell (0.3ms)$; where C is the Closing Time, N is the number of spectrum analyzer sampling bins (intermittent control signals) showing a U-NII transmission and Dwell is the dwell time per bin.
- 8) Measurement the EUT for more than 30 minutes following the channel move time to verify that no transmission or beacons occur on this channel.

Please Refer To Appendix For Details

8 Test Setup Photo

Refer to Setup Photos

9 EUT Constructional Details (EUT Photos)

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

SGS-CSTC Standards Technical Services 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

10 Appendix

Appendix for 15.407

1. Duty Cycle

1.1 Test Result

Test Mode	Channel Frequency (MHz)	TX Type	ANT No.	T_on (ms)	Period (ms)	Duty Cycle (%)	Duty Cycle Correction Factor (dB)
802.11a	5500	SISO	1	1.995	2.033	98.13	0.08
	5580	SISO	1	1.997	2.033	98.23	0.08
	5700	SISO	1	1.995	2.032	98.18	0.08
	5745	SISO	1	2.026	2.064	98.16	0.08
	5785	SISO	1	1.997	2.033	98.23	0.08
	5825	SISO	1	2.026	2.063	98.21	0.08
802.11n(HT20)	5500	MIMO	1	1.886	1.924	98.02	0.09
	5580	MIMO	1	1.886	1.924	98.02	0.09
	5700	MIMO	1	1.888	1.926	98.03	0.09
	5745	MIMO	1	1.886	1.924	98.02	0.09
	5785	MIMO	1	1.886	1.924	98.02	0.09
	5825	MIMO	1	1.888	1.926	98.03	0.09
802.11n(HT40)	5510	MIMO	1	0.928	0.964	96.27	0.17
	5550	MIMO	1	0.928	0.964	96.27	0.17
	5670	MIMO	1	0.927	0.964	96.16	0.17
	5755	MIMO	1	0.927	0.964	96.16	0.17
	5795	MIMO	1	0.927	0.964	96.16	0.17
802.11ac(VHT20)	5500	MIMO	1	1.896	1.934	98.04	0.09
	5580	MIMO	1	1.896	1.934	98.04	0.09
	5700	MIMO	1	1.894	1.932	98.03	0.09
	5745	MIMO	1	1.894	1.932	98.03	0.09
	5785	MIMO	1	1.894	1.932	98.03	0.09
	5825	MIMO	1	1.896	1.934	98.04	0.09
802.11ac(VHT40)	5510	MIMO	1	0.936	0.972	96.30	0.16
	5550	MIMO	1	0.935	0.972	96.19	0.17
	5670	MIMO	1	0.935	0.972	96.19	0.17
	5755	MIMO	1	0.935	0.972	96.19	0.17
	5795	MIMO	1	0.935	0.972	96.19	0.17
802.11ac(VHT80)	5530	MIMO	1	0.455	0.492	92.48	0.34
	5610	MIMO	1	0.456	0.492	92.68	0.33
	5775	MIMO	1	0.455	0.492	92.48	0.34