



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

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

Telephone: +86 (0) 755 2601 2053  
Fax: +86 (0) 755 2671 0594  
Email: ee.shenzhen@sgs.com

Report No.: SZEM160700594002  
Page: 1 of 80

## FCC REPORT

**Application No:** SZEM1607005940CR (SGS SZ No.: T51610230088EM)  
**Applicant:** Spin Master Toys Far East Ltd.  
**Manufacturer:** Spin Master Toys Far East Ltd.  
**Product Name:** X-Stream Video Drone  
**Model No.(EUT):** 44565RX  
**FCC ID:** PQN44565RX2G4  
**Standards:** 47 CFR Part 15, Subpart C (2015)  
**Date of Receipt:** 2016-07-21  
**Date of Test:** 2016-07-26 to 2016-07-27  
**Date of Issue:** 2016-08-03

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

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

Authorized Signature:



Jack Zhang  
EMC Laboratory Manager

The manufacturer should ensure that all products in series production are in conformity with the product sample detailed in this report. If the product in this report is used in any configuration other than that detailed in the report, the manufacturer must ensure the new system complies with all relevant standards. Any mention of SGS International Electrical Approvals or testing done by SGS International Electrical Approvals in connection with, distribution or use of the product described in this report must be approved by SGS International Electrical Approvals in writing.

The report must not be used by the client to claim product certification, approval, or endorsement by NVLAP, NIST, or any agency of the federal government. All test results in this report can be traceable to National or International Standards.

"This document is issued by the Company subject to its General Conditions of Service printed overleaf, available on request or accessible at [www.sgs.com/terms\\_and\\_conditions.htm](http://www.sgs.com/terms_and_conditions.htm) and, for electronic format documents, subject to Terms and Conditions for Electronic Documents at [www.sgs.com/terms\\_e-document.htm](http://www.sgs.com/terms_e-document.htm). 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 90 days only."





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

Report No.: SZEM160700594002

Page: 2 of 80

## 2 Version

Revision Record				
Version	Chapter	Date	Modifier	Remark
00		2016-08-03		Original

Authorized for issue by:				
Tested By				2016-07-27
				Date
Checked By				2016-08-03
				Date
		(Gebin Sun) /Project Engineer		
		(Eric Fu) /Reviewer		

"This document is issued by the Company subject to its General Conditions of Service printed overleaf, available on request or accessible at [www.sgs.com/terms\\_and\\_conditions.htm](http://www.sgs.com/terms_and_conditions.htm) and, for electronic format documents, subject to Terms and Conditions for Electronic Documents at [www.sgs.com/terms\\_e-document.htm](http://www.sgs.com/terms_e-document.htm). 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 90 days only."



### 3 Test Summary

Test Item	Test Requirement	Test method	Result
Antenna Requirement	47 CFR Part 15, Subpart C Section 15.203/15.247 (c)	ANSI C63.10 2013	PASS
AC Power Line Conducted Emission	47 CFR Part 15, Subpart C Section 15.207	ANSI C63.10 2013	PASS
Conducted Peak Output Power	47 CFR Part 15, Subpart C Section 15.247 (b)(3)	ANSI C63.10 2013	PASS
6dB Occupied Bandwidth	47 CFR Part 15, Subpart C Section 15.247 (a)(2)	ANSI C63.10 2013	PASS
Power Spectral Density	47 CFR Part 15, Subpart C Section 15.247 (e)	ANSI C63.10 2013	PASS
Band-edge for RF Conducted Emissions	47 CFR Part 15, Subpart C Section 15.247(d)	ANSI C63.10 2013	PASS
RF Conducted Spurious Emissions	47 CFR Part 15, Subpart C Section 15.247(d)	ANSI C63.10 2013	PASS
Radiated Spurious Emissions	47 CFR Part 15, Subpart C Section 15.205/15.209	ANSI C63.10 2013	PASS
Restricted bands around fundamental frequency (Radiated Emission)	47 CFR Part 15, Subpart C Section 15.205/15.209	ANSI C63.10 2013	PASS



## 4 Contents

	Page
1 COVER PAGE.....	1
2 VERSION .....	2
3 TEST SUMMARY .....	3
4 CONTENTS .....	4
5 GENERAL INFORMATION.....	5
5.1 CLIENT INFORMATION .....	5
5.2 GENERAL DESCRIPTION OF EUT .....	5
5.3 TEST ENVIRONMENT AND MODE .....	7
5.4 DESCRIPTION OF SUPPORT UNITS .....	7
5.5 TEST LOCATION .....	7
5.6 TEST FACILITY .....	8
5.7 DEVIATION FROM STANDARDS .....	8
5.8 ABNORMALITIES FROM STANDARD CONDITIONS .....	8
5.9 OTHER INFORMATION REQUESTED BY THE CUSTOMER.....	8
5.10 EQUIPMENT LIST .....	9
6 TEST RESULTS AND MEASUREMENT DATA.....	11
6.1 ANTENNA REQUIREMENT.....	11
6.2 CONDUCTED PEAK OUTPUT POWER .....	12
6.3 6dB OCCUPY BANDWIDTH .....	20
6.4 POWER SPECTRAL DENSITY .....	27
6.5 BAND-EDGE FOR RF CONDUCTED EMISSIONS .....	34
6.6 RF CONDUCTED SPURIOUS EMISSIONS .....	38
6.7 RADIATED SPURIOUS EMISSIONS.....	53
6.7.1 Radiated emission below 1GHz.....	56
6.7.2 Transmitter emission above 1GHz.....	58
6.8 RESTRICTED BANDS AROUND FUNDAMENTAL FREQUENCY .....	65
7 PHOTOGRAPHS - EUT TEST SETUP .....	79
7.1 RADIATED SPURIOUS EMISSION (BELOW 1GHz) .....	79
7.2 RADIATED SPURIOUS EMISSION(ABOVE 1GHz) .....	79
8 PHOTOGRAPHS - EUT CONSTRUCTIONAL DETAILS .....	80



## 5 General Information

### 5.1 Client Information

Applicant:	Spin Master Toys Far East Ltd.
Address of Applicant:	Room 1113, 11/F, Chinachen Golden Plaza, 77 Mody Road, Tsim ShaTsui East, Kowloon, Hong Kong
Manufacturer:	APEX Toys (ShenZhen) Co., Ltd.

### 5.2 General Description of EUT

Product Name:	X-Stream Video Drone
Model No.	44565RX
Family No.:	44565
Phantom No.:	20082688, 20084646
Sales Planning:	6035076, 6036071
Finished Goods No.:	1045674, 1047482
Brand Name:	ARH
Country of Origin:	Made in China
Country of Destination:	US
Date Code:	60715AAX
Operation Frequency:	IEEE 802.11b/g/n(HT20): 2412MHz to 2462MHz
Channel Numbers:	IEEE 802.11b/g, IEEE 802.11n HT20: 11 Channels
Channel Separation:	5MHz
Type of Modulation:	IEEE for 802.11b: DSSS(CCK,DQPSK,DBPSK) IEEE for 802.11g : OFDM(64QAM, 16QAM, QPSK, BPSK) IEEE for 802.11n(HT20) : OFDM (64QAM, 16QAM,QPSK,BPSK)
Antenna Type:	Integral
Antenna Gain:	2dBi
EUT Power Supply:	DC3.7V (1 x 3.7V Rechargeable battery) Battery: Charge by DC 5V



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

Report No.: SZEM160700594002

Page: 6 of 80

Operation Frequency each of channel(802.11b/g/n HT20)							
Channel	Frequency	Channel	Frequency	Channel	Frequency	Channel	Frequency
1	2412MHz	4	2427MHz	7	2442MHz	10	2457MHz
2	2417MHz	5	2432MHz	8	2447MHz	11	2462MHz
3	2422MHz	6	2437MHz	9	2452MHz		

Note:

In section 15.31(m), regards to the operating frequency range over 10 MHz, the Lowest frequency, the middle frequency, and the highest frequency of channel were selected to perform the test, and the selected channel see below:

For 802.11b/g/n (HT20):

Channel	Frequency
The Lowest channel	2412MHz
The Middle channel	2437MHz
The Highest channel	2462MHz



### 5.3 Test Environment and Mode

Operating Environment:	
Temperature:	25.0 °C
Humidity:	55 % RH
Atmospheric Pressure:	1010 mbar
Test mode:	
Transmitting mode:	Keep the EUT in transmitting mode with all kind of modulation and all kind of data rate.

### 5.4 Description of Support Units

The EUT has been tested independent unit.

### 5.5 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.



## **5.6 Test Facility**

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

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

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

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

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

- **VCCI**

The 10m Semi-anechoic chamber and Shielded Room of SGS-CSTC Standards Technical Services Co., Ltd. have been registered in accordance with the Regulations for Voluntary Control Measures with Registration No.: G-823, R-4188, T-1153 and C-2383 respectively.

- **FCC – Registration No.: 556682**

SGS-CSTC Standards Technical Services Co., Ltd., Shenzhen EMC Laboratory has been registered and fully described in a report filed with the (FCC) Federal Communications Commission. The acceptance letter from the FCC is maintained in our files. Registration No.: 556682.

- **Industry Canada (IC)**

Two 3m Semi-anechoic chambers and the 10m Semi-anechoic chamber of SGS-CSTC Standards Technical Services Co., Ltd. Shenzhen Branch EMC Lab have been registered by Certification and Engineering Bureau of Industry Canada for radio equipment testing with Registration No.: 4620C-1, 4620C-2, 4620C-3.

## **5.7 Deviation from Standards**

None.

## **5.8 Abnormalities from Standard Conditions**

None.

## **5.9 Other Information Requested by the Customer**

None.





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

Report No.: SZEM160700594002

Page: 9 of 80

## 5.10 Equipment List

RE in Chamber						
Item	Test Equipment	Manufacturer	Model No.	Inventory No.	Cal. date (yyyy-mm-dd)	Cal.Due date (yyyy-mm-dd)
1	3m Semi-Anechoic Chamber	ETS-LINDGREN	N/A	SEM001-01	2016-05-13	2017-05-13
2	EMI Test Receiver	Agilent Technologies	N9038A	SEM004-05	2015-09-16	2016-09-16
3	BiConiLog Antenna (26-3000MHz)	ETS-LINDGREN	3142C	SEM003-01	2014-11-01	2017-11-01
4	Double-ridged horn (1-18GHz)	ETS-LINDGREN	3117	SEM003-11	2015-10-17	2018-10-17
5	Horn Antenna (18-26GHz)	ETS-LINDGREN	3160	SEM003-12	2014-11-24	2017-11-24
6	Pre-amplifier (0.1-1300MHz)	Agilent Technologies	8447D	SEM005-01	2016-04-25	2017-04-25
7	Band filter	Amindeon	Asi 3314	SEM023-01	N/A	N/A
8	DC Power Supply	Zhao Xin	RXN-305D	SEM011-02	2015-10-09	2016-10-09
9	Loop Antenna	Beijing Daze	ZN30401	SEM003-09	2015-05-13	2018-05-13

RE in Chamber						
Item	Test Equipment	Manufacturer	Model No.	Inventory No.	Cal. date (yyyy-mm-dd)	Cal.Due date (yyyy-mm-dd)
1	3m Semi-Anechoic Chamber	AUDIX	N/A	SEM001-02	2016-05-13	2017-05-13
2	EMI Test Receiver	Rohde & Schwarz	ESIB26	SEM004-04	2016-04-25	2017-04-25
3	BiConiLog Antenna (26-3000MHz)	ETS-Lindgren	3142C	SEM003-02	2014-11-15	2017-11-15
4	Amplifier (0.1-1300MHz)	HP	8447D	SEM005-02	2015-10-09	2016-10-09
5	Horn Antenna (1-18GHz)	Rohde & Schwarz	HF907	SEM003-07	2015-06-14	2018-06-14
6	Low Noise Amplifier	Black Diamond Series	BDLNA-0118-352810	SEM005-05	2015-10-09	2016-10-09
7	Band filter	Amindeon	Asi 3314	SEM023-01	N/A	N/A

"This document is issued by the Company subject to its General Conditions of Service printed overleaf, available on request or accessible at [www.sgs.com/terms\\_and\\_conditions.htm](http://www.sgs.com/terms_and_conditions.htm) and, for electronic format documents, subject to Terms and Conditions for Electronic Documents at [www.sgs.com/terms\\_e-document.htm](http://www.sgs.com/terms_e-document.htm). 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 90 days only."



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

Report No.: SZEM160700594002

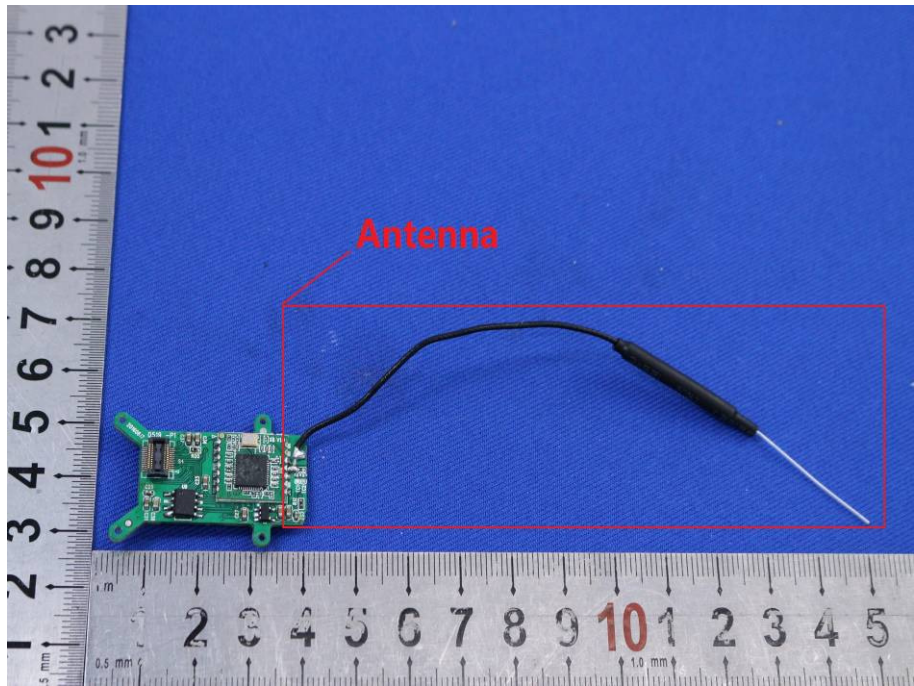
Page: 10 of 80

RF connected test						
Item	Test Equipment	Manufacturer	Model No.	Inventory No.	Cal. date (yyyy-mm-dd)	Cal.Due date (yyyy-mm-dd)
1	DC Power Supply	ZhaoXin	RXN-305D	SEM011-02	2015-10-09	2016-10-09
2	Spectrum Analyzer	Rohde & Schwarz	FSP	SEM004-06	2015-10-17	2016-10-17
3	Signal Generator	Rohde & Schwarz	SML03	SEM006-02	2016-04-25	2017-04-25
4	Power Meter	Rohde & Schwarz	NRVS	SEM014-02	2015-10-09	2016-10-09

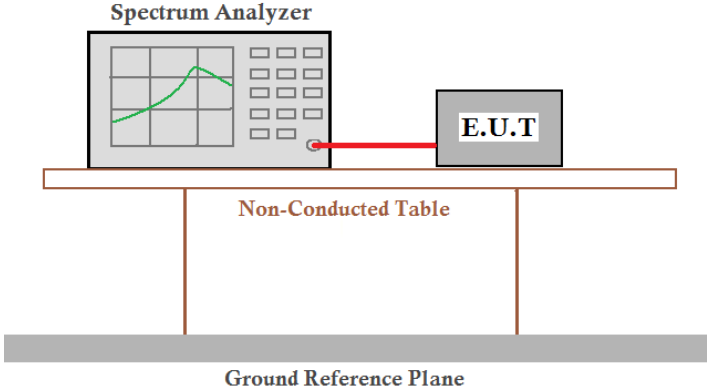
"This document is issued by the Company subject to its General Conditions of Service printed overleaf, available on request or accessible at [www.sgs.com/terms\\_and\\_conditions.htm](http://www.sgs.com/terms_and_conditions.htm) and, for electronic format documents, subject to Terms and Conditions for Electronic Documents at [www.sgs.com/terms\\_e-document.htm](http://www.sgs.com/terms_e-document.htm). 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 90 days only."

## 6 Test results and Measurement Data

### 6.1 Antenna Requirement

<b>Standard requirement:</b>	47 CFR Part 15C Section 15.203 /247(c)
<p>15.203 requirement:</p> <p>An intentional radiator shall be designed to ensure that no antenna other than that furnished by the responsible party shall be used with the device. The use of a permanently attached antenna or of an antenna that uses a unique coupling to the intentional radiator, the manufacturer may design the unit so that a broken antenna can be replaced by the user, but the use of a standard antenna jack or electrical connector is prohibited.</p> <p>15.247(b) (4) requirement:</p> <p>The conducted output power limit specified in paragraph (b) of this section is based on the use of antennas with directional gains that do not exceed 6 dBi. Except as shown in paragraph (c) of this section, if transmitting antennas of directional gain greater than 6 dBi are used, the conducted output power from the intentional radiator shall be reduced below the stated values in paragraphs (b)(1), (b)(2), and (b)(3) of this section, as appropriate, by the amount in dB that the directional gain of the antenna exceeds 6 dBi.</p>	
<b>EUT Antenna:</b>	
<p>The antenna is integrated on the main PCB and no consideration of replacement. The best case gain of the antenna is 2dBi.</p>	

## 6.2 Conducted Peak Output Power

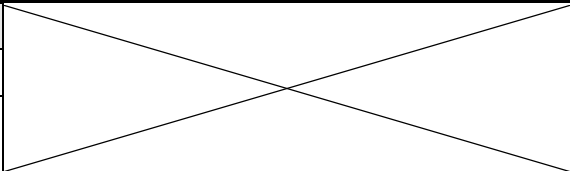
Test Requirement:	47 CFR Part 15C Section 15.247 (b)(3)
Test Method:	ANSI C63.10 :2013 Section 11.9.1
Test Setup:	 <p><i>Remark:</i>  Offset the High-Frequency cable loss 1.5dB in the spectrum analyzer.</p>
Test Instruments:	Refer to section 5.10 for details
Exploratory Test Mode:	Transmitting with all kind of modulations, data rates
Final Test Mode:	Through Pre-scan, find the 1Mbps of rate is the worst case of 802.11b; 6Mbps of rate is the worst case of 802.11g ; 6.5Mbps of rate is the worst case of 802.11n(HT20)
Limit:	30dBm
Test Results:	Pass



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

Report No.: SZEM160700594002

Page: 13 of 80

Pre-scan under all rate at lowest channel 1								
Mode	802.11b							
Data Rate	1Mbps	2Mbps	5.5Mbps	11Mbps				
Power (dBm)	16.80	16.75	16.71	16.68				
Mode	802.11g							
Data Rate	6Mbps	9Mbps	12Mbps	18Mbps	24Mbps	36Mbps	48Mbps	54Mbps
Power (dBm)	15.14	15.04	14.98	14.95	14.97	14.87	14.85	14.90
Mode	802.11n(HT20)							
Data Rate	6.5Mbps	13Mbps	19.5Mbps	26Mbps	39Mbps	52Mbps	58.5Mbps	65Mbps
Power (dBm)	13.34	13.27	13.24	13.28	13.15	13.04	13.11	13.01
Through Pre-scan, 1Mbps of rate is the worst case of 802.11b; 6Mbps of rate is the worst case of 802.11g; 6.5Mbps of rate is the worst case of 802.11n(HT20); 13.5Mbps of rate is the worst case of 802.11n(HT40).								



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

Report No.: SZEM160700594002

Page: 14 of 80

**Measurement Data**

802.11b mode			
Test channel	Peak Output Power (dBm)	Limit (dBm)	Result
Lowest	16.80	30.00	Pass
Middle	15.92	30.00	Pass
Highest	15.13	30.00	Pass
802.11g mode			
Test channel	Peak Output Power (dBm)	Limit (dBm)	Result
Lowest	15.14	30.00	Pass
Middle	14.33	30.00	Pass
Highest	13.74	30.00	Pass
802.11n(HT20)mode			
Test channel	Peak Output Power (dBm)	Limit (dBm)	Result
Lowest	13.34	30.00	Pass
Middle	12.88	30.00	Pass
Highest	12.19	30.00	Pass

"This document is issued by the Company subject to its General Conditions of Service printed overleaf, available on request or accessible at [www.sgs.com/terms\\_and\\_conditions.htm](http://www.sgs.com/terms_and_conditions.htm) and, for electronic format documents, subject to Terms and Conditions for Electronic Documents at [www.sgs.com/terms\\_e-document.htm](http://www.sgs.com/terms_e-document.htm). 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 90 days only."



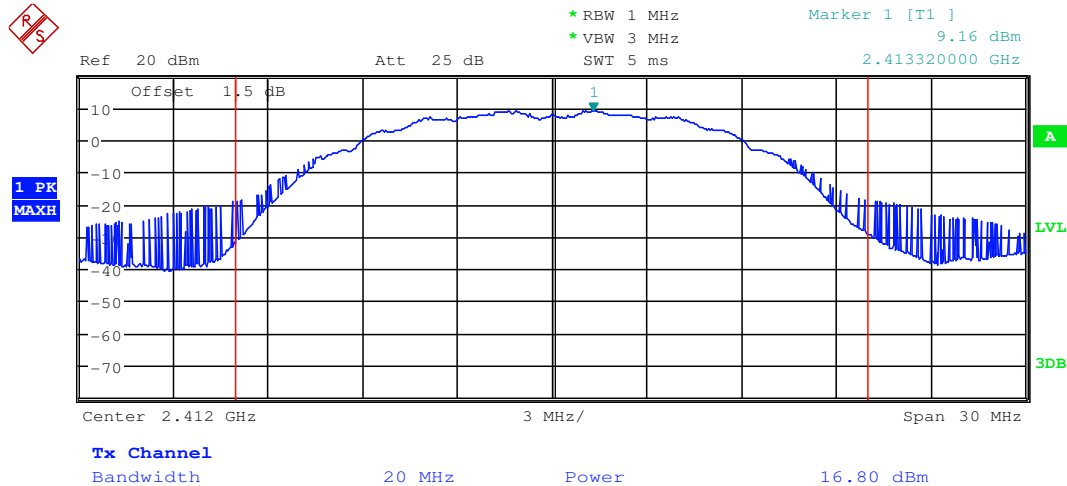
# SGS-CSTC Standards Technical Services Co., Ltd. Shenzhen Branch

Report No.: SZEM160700594002

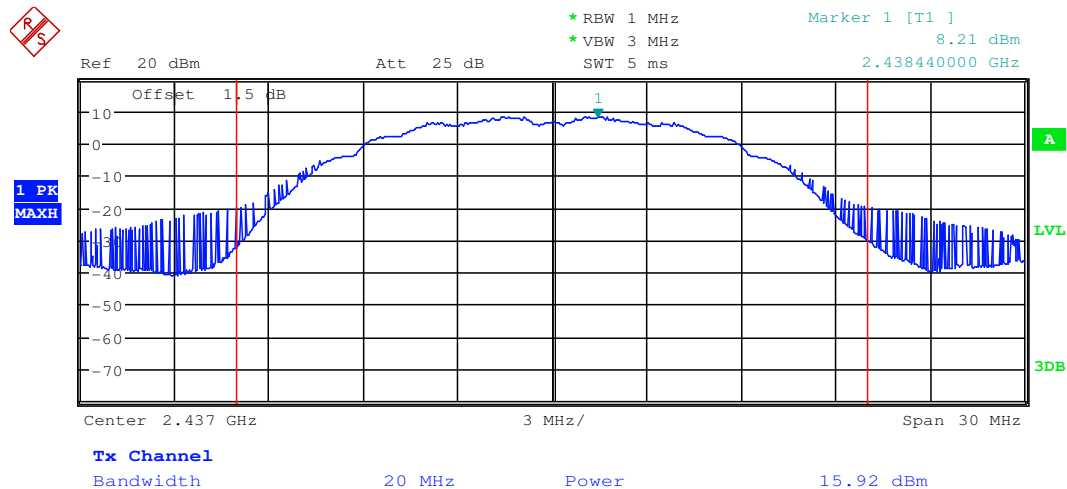
Page: 15 of 80

Test plot as follows:

Test mode:	802.11b	Test channel:	Lowest
------------	---------	---------------	--------



Test mode:	802.11b	Test channel:	Middle
------------	---------	---------------	--------



"This document is issued by the Company subject to its General Conditions of Service printed overleaf, available on request or accessible at [www.sgs.com/terms\\_and\\_conditions.htm](http://www.sgs.com/terms_and_conditions.htm) and, for electronic format documents, subject to Terms and Conditions for Electronic Documents at [www.sgs.com/terms\\_e-document.htm](http://www.sgs.com/terms_e-document.htm). 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 90 days only."

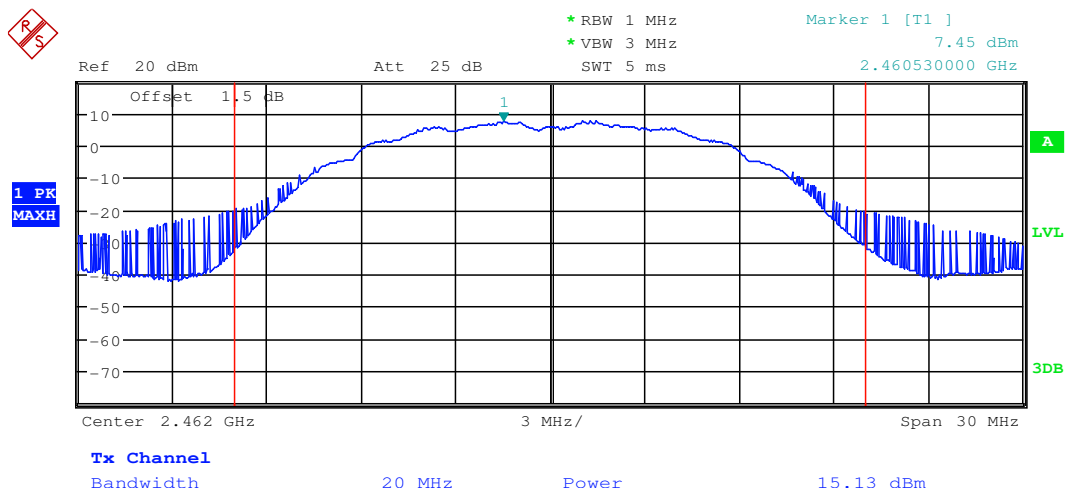


# SGS-CSTC Standards Technical Services Co., Ltd. Shenzhen Branch

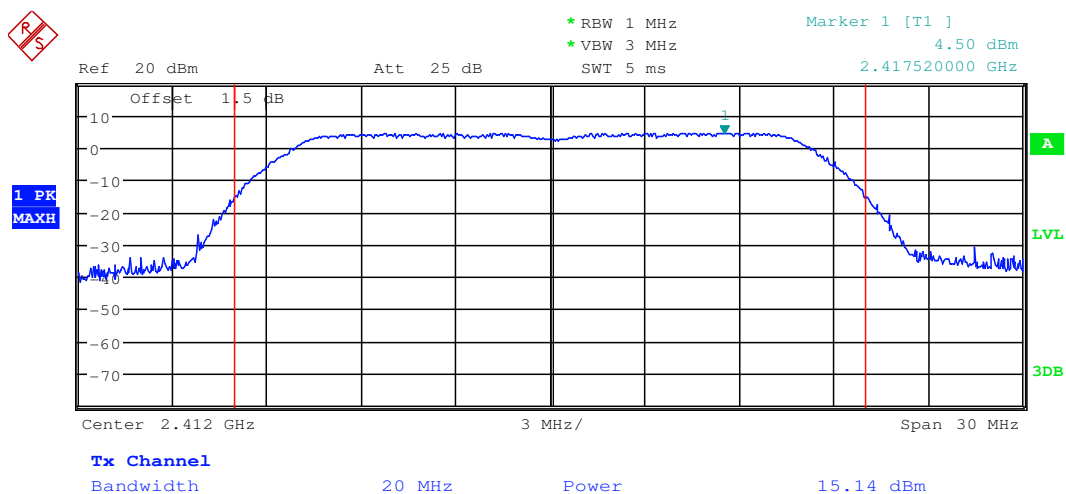
Report No.: SZEM160700594002

Page: 16 of 80

Test mode:	802.11b	Test channel:	Highest
------------	---------	---------------	---------



Test mode:	802.11g	Test channel:	Lowest
------------	---------	---------------	--------



"This document is issued by the Company subject to its General Conditions of Service printed overleaf, available on request or accessible at [www.sgs.com/terms\\_and\\_conditions.htm](http://www.sgs.com/terms_and_conditions.htm) and, for electronic format documents, subject to Terms and Conditions for Electronic Documents at [www.sgs.com/terms\\_e-document.htm](http://www.sgs.com/terms_e-document.htm). 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 90 days only."



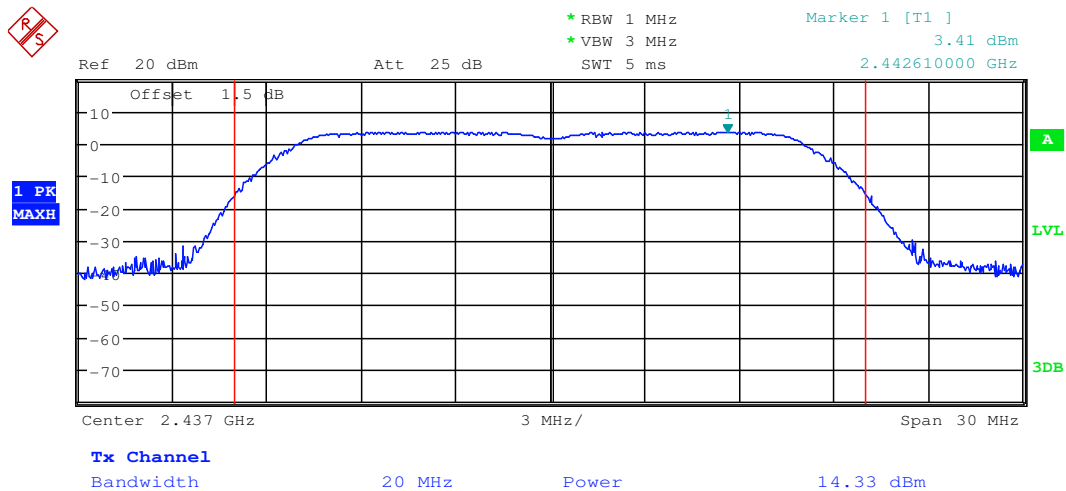


# SGS-CSTC Standards Technical Services Co., Ltd. Shenzhen Branch

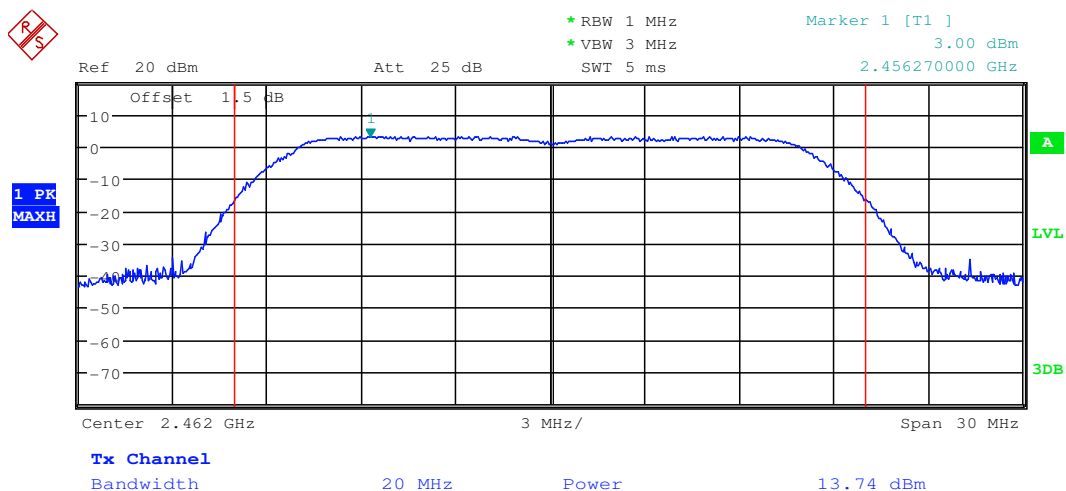
Report No.: SZEM160700594002

Page: 17 of 80

Test mode:	802.11g	Test channel:	Middle
------------	---------	---------------	--------



Test mode:	802.11g	Test channel:	Highest
------------	---------	---------------	---------



"This document is issued by the Company subject to its General Conditions of Service printed overleaf, available on request or accessible at [www.sgs.com/terms\\_and\\_conditions.htm](http://www.sgs.com/terms_and_conditions.htm) and, for electronic format documents, subject to Terms and Conditions for Electronic Documents at [www.sgs.com/terms\\_e-document.htm](http://www.sgs.com/terms_e-document.htm). 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 90 days only."

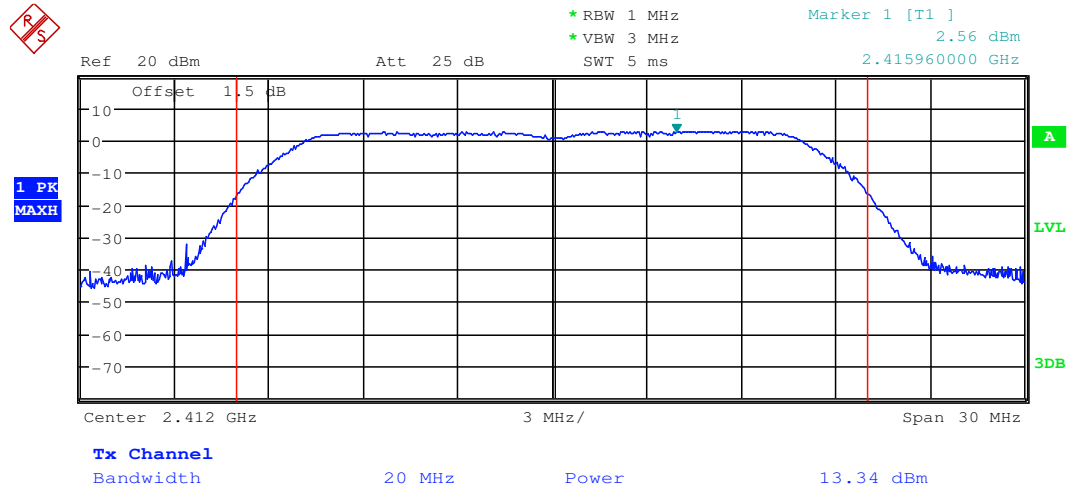


# SGS-CSTC Standards Technical Services Co., Ltd. Shenzhen Branch

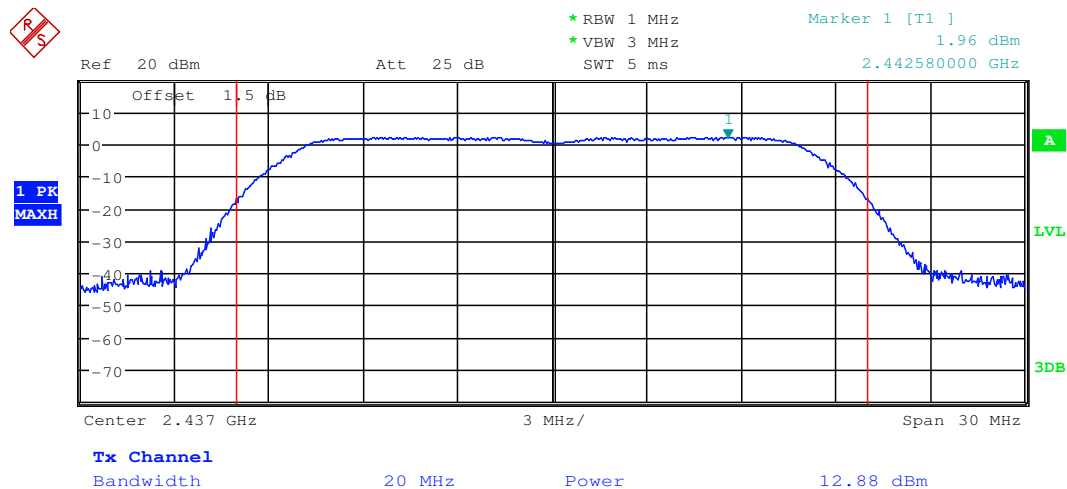
Report No.: SZEM160700594002

Page: 18 of 80

Test mode:	802.11n(HT20)	Test channel:	Lowest
------------	---------------	---------------	--------



Test mode:	802.11n(HT20)	Test channel:	Middle
------------	---------------	---------------	--------



"This document is issued by the Company subject to its General Conditions of Service printed overleaf, available on request or accessible at [www.sgs.com/terms\\_and\\_conditions.htm](http://www.sgs.com/terms_and_conditions.htm) and, for electronic format documents, subject to Terms and Conditions for Electronic Documents at [www.sgs.com/terms\\_e-document.htm](http://www.sgs.com/terms_e-document.htm). 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 90 days only."

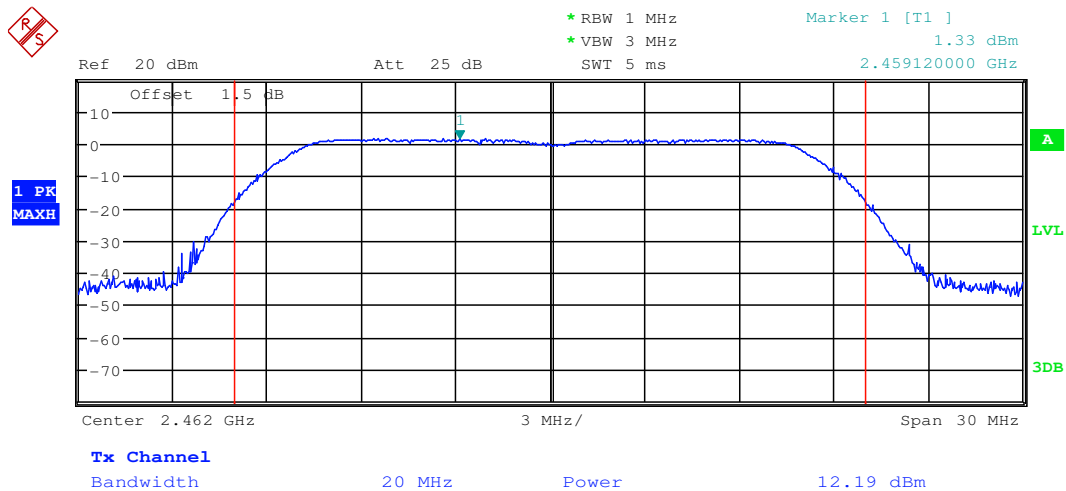


# SGS-CSTC Standards Technical Services Co., Ltd. Shenzhen Branch

Report No.: SZEM160700594002

Page: 19 of 80

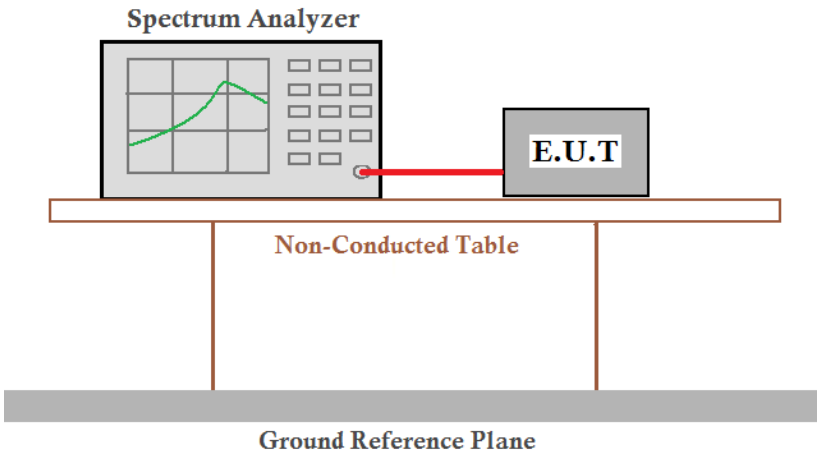
Test mode:	802.11n(HT20)	Test channel:	Highest
------------	---------------	---------------	---------



"This document is issued by the Company subject to its General Conditions of Service printed overleaf, available on request or accessible at [www.sgs.com/terms\\_and\\_conditions.htm](http://www.sgs.com/terms_and_conditions.htm) and, for electronic format documents, subject to Terms and Conditions for Electronic Documents at [www.sgs.com/terms\\_e-document.htm](http://www.sgs.com/terms_e-document.htm). 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 90 days only."



### 6.3 6dB Occupy Bandwidth

Test Requirement:	47 CFR Part 15C Section 15.247 (a)(2)
Test Method:	ANSI C63.10: 2013 Section 11.8
Test Setup:	 <p>The diagram illustrates the test setup. A Spectrum Analyzer is connected to an E.U.T (Equipment Under Test) via a red cable. Both the Spectrum Analyzer and the E.U.T are placed on a Non-Conducted Table. Below the table is a Ground Reference Plane.</p>
Instruments Used:	Refer to section 5.10 for details
Exploratory Test Mode:	Transmitting with all kind of modulations, data rates
Final Test Mode:	Through Pre-scan, find the 1Mbps of rate is the worst case of 802.11b; 6Mbps of rate is the worst case of 802.11g ; 6.5Mbps of rate is the worst case of 802.11n(HT20)
Limit:	≥ 500 kHz
Test Results:	Pass



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

Report No.: SZEM160700594002

Page: 21 of 80

**Measurement Data**

802.11b mode			
Test channel	6dB Occupy Bandwidth (MHz)	Limit (kHz)	Result
Lowest	10.110	≥500	Pass
Middle	10.110	≥500	Pass
Highest	10.110	≥500	Pass
802.11g mode			
Test channel	6dB Occupy Bandwidth (MHz)	Limit (kHz)	Result
Lowest	16.410	≥500	Pass
Middle	16.410	≥500	Pass
Highest	16.410	≥500	Pass
802.11n(HT20) mode			
Test channel	6dB Occupy Bandwidth (MHz)	Limit (kHz)	Result
Lowest	16.440	≥500	Pass
Middle	16.410	≥500	Pass
Highest	16.410	≥500	Pass

"This document is issued by the Company subject to its General Conditions of Service printed overleaf, available on request or accessible at [www.sgs.com/terms\\_and\\_conditions.htm](http://www.sgs.com/terms_and_conditions.htm) and, for electronic format documents, subject to Terms and Conditions for Electronic Documents at [www.sgs.com/terms\\_e-document.htm](http://www.sgs.com/terms_e-document.htm). 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 90 days only."



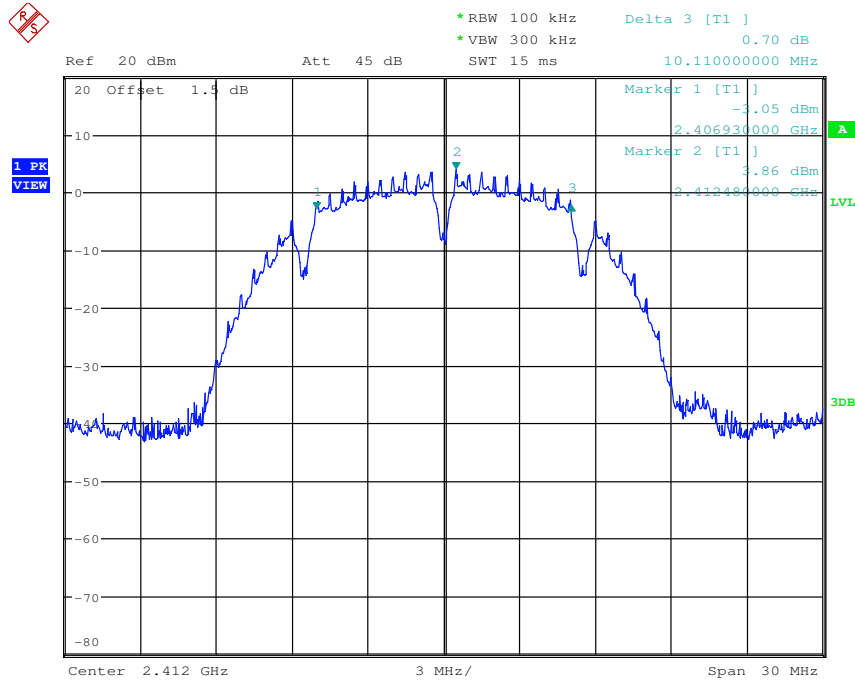
# SGS-CSTC Standards Technical Services Co., Ltd. Shenzhen Branch

Report No.: SZEM160700594002

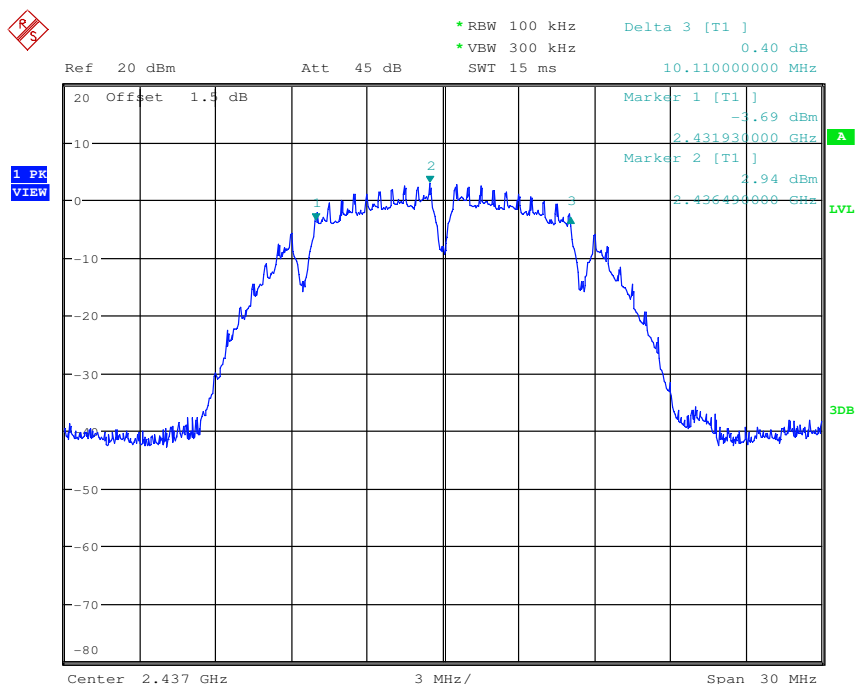
Page: 22 of 80

Test plot as follows:

Test mode:	802.11b	Test channel:	Lowest
------------	---------	---------------	--------



Test mode:	802.11b	Test channel:	Middle
------------	---------	---------------	--------



"This document is issued by the Company subject to its General Conditions of Service printed overleaf, available on request or accessible at [www.sgs.com/terms\\_and\\_conditions.htm](http://www.sgs.com/terms_and_conditions.htm) and, for electronic format documents, subject to Terms and Conditions for Electronic Documents at [www.sgs.com/terms\\_e-document.htm](http://www.sgs.com/terms_e-document.htm). 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 90 days only."

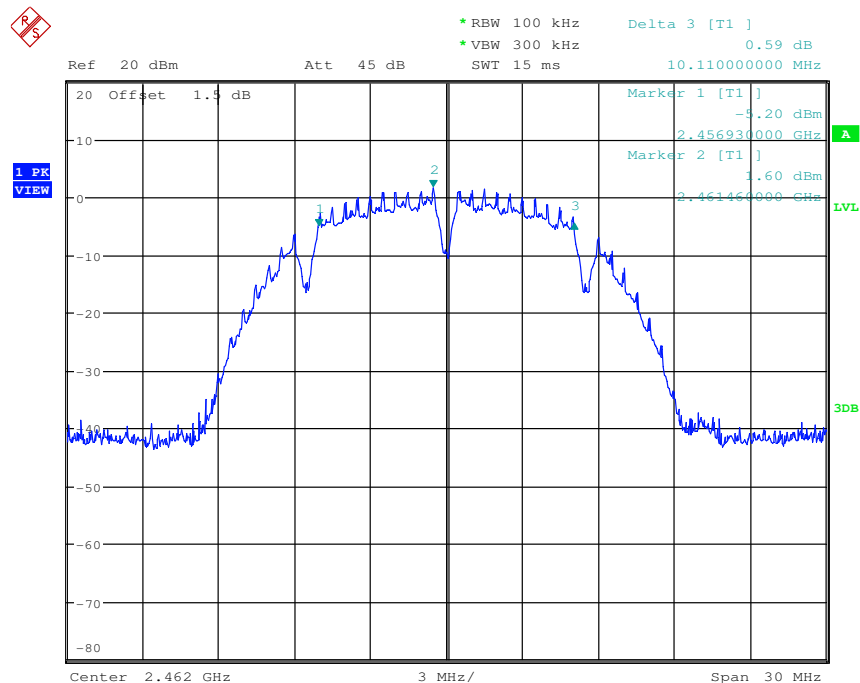


# SGS-CSTC Standards Technical Services Co., Ltd. Shenzhen Branch

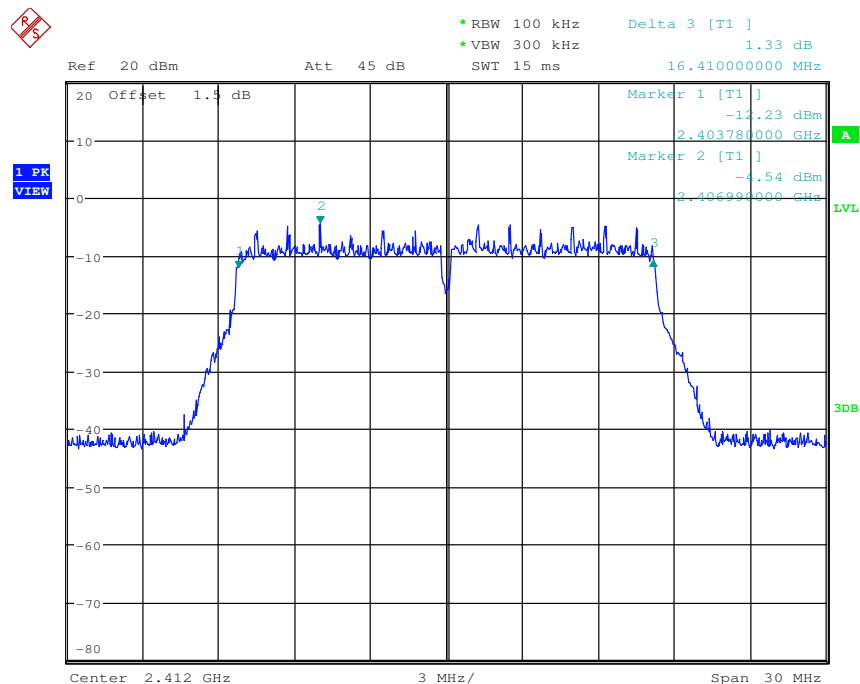
Report No.: SZEM160700594002

Page: 23 of 80

Test mode:	802.11b	Test channel:	Highest
------------	---------	---------------	---------



Test mode:	802.11g	Test channel:	Lowest
------------	---------	---------------	--------



"This document is issued by the Company subject to its General Conditions of Service printed overleaf, available on request or accessible at [www.sgs.com/terms\\_and\\_conditions.htm](http://www.sgs.com/terms_and_conditions.htm) and, for electronic format documents, subject to Terms and Conditions for Electronic Documents at [www.sgs.com/terms\\_e-document.htm](http://www.sgs.com/terms_e-document.htm). 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 90 days only."

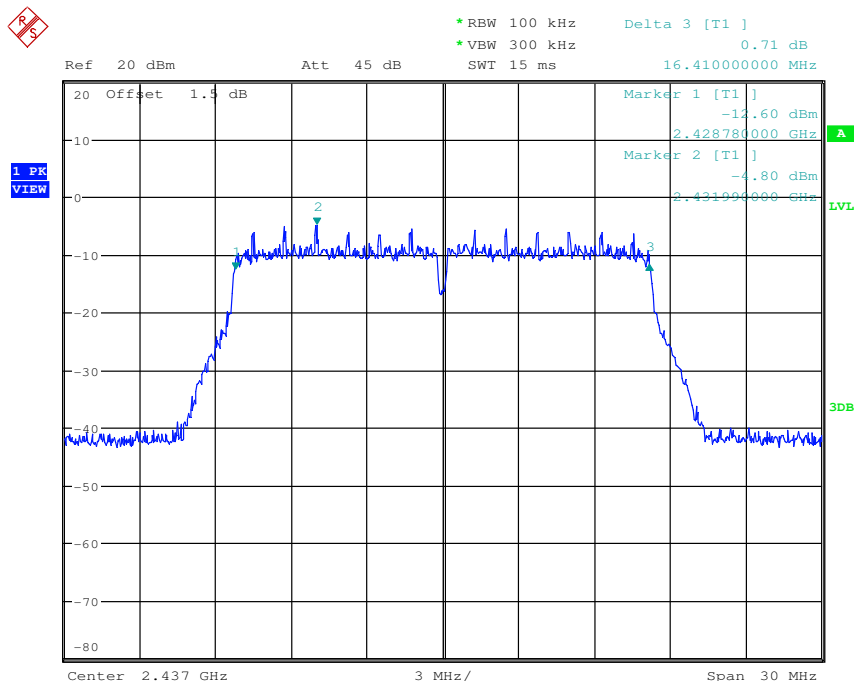


# SGS-CSTC Standards Technical Services Co., Ltd. Shenzhen Branch

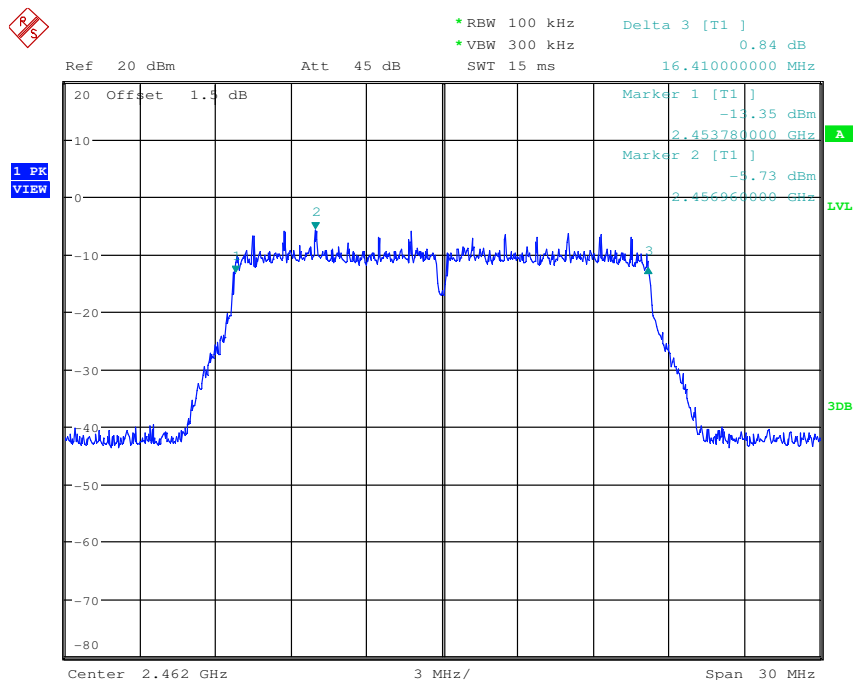
Report No.: SZEM160700594002

Page: 24 of 80

Test mode:	802.11g	Test channel:	Middle
------------	---------	---------------	--------



Test mode:	802.11g	Test channel:	Highest
------------	---------	---------------	---------



"This document is issued by the Company subject to its General Conditions of Service printed overleaf, available on request or accessible at [www.sgs.com/terms\\_and\\_conditions.htm](http://www.sgs.com/terms_and_conditions.htm) and, for electronic format documents, subject to Terms and Conditions for Electronic Documents at [www.sgs.com/terms\\_e-document.htm](http://www.sgs.com/terms_e-document.htm). 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 90 days only."



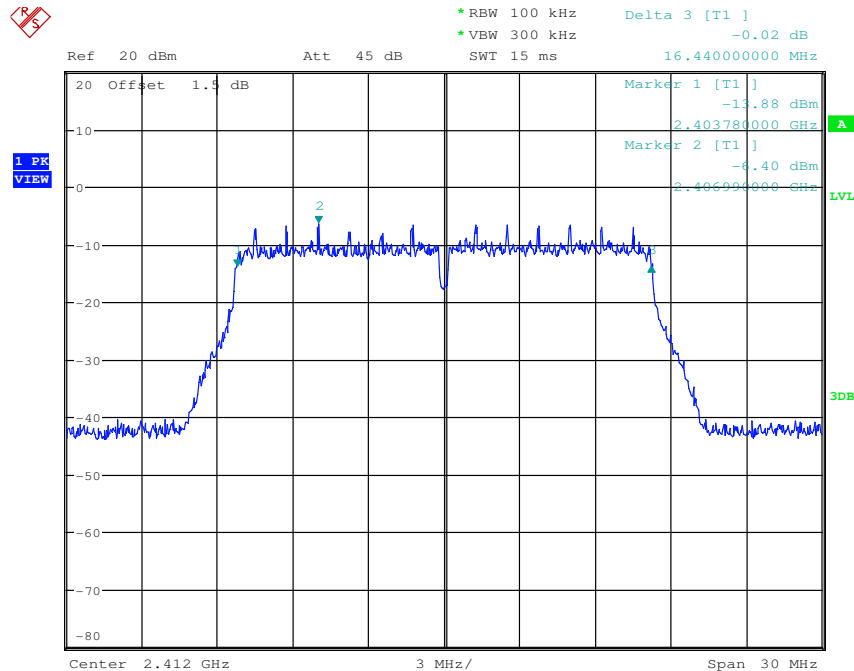


# SGS-CSTC Standards Technical Services Co., Ltd. Shenzhen Branch

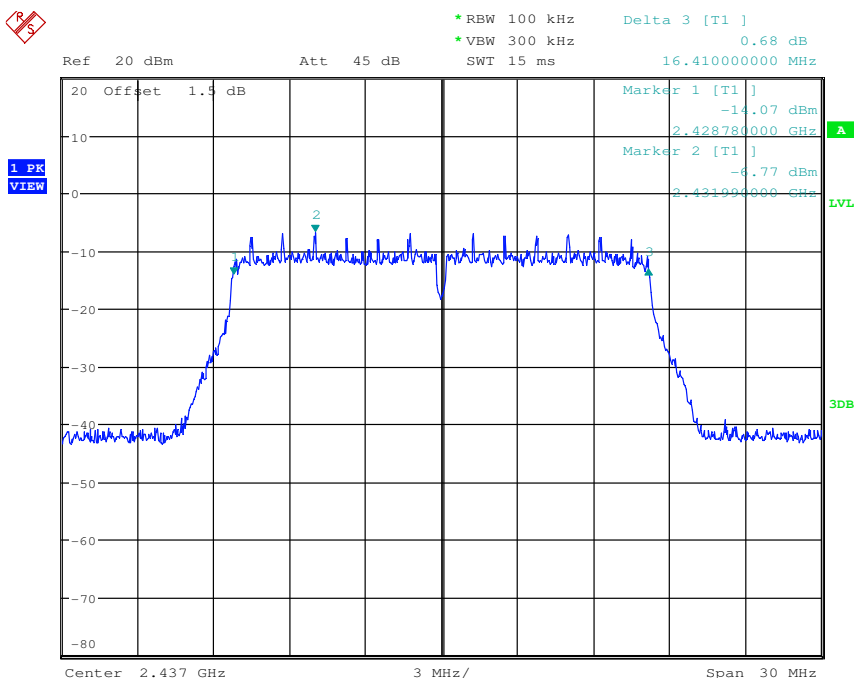
Report No.: SZEM160700594002

Page: 25 of 80

Test mode:	802.11n(HT20)	Test channel:	Lowest
------------	---------------	---------------	--------



Test mode:	802.11n(HT20)	Test channel:	Middle
------------	---------------	---------------	--------



"This document is issued by the Company subject to its General Conditions of Service printed overleaf, available on request or accessible at [www.sgs.com/terms\\_and\\_conditions.htm](http://www.sgs.com/terms_and_conditions.htm) and, for electronic format documents, subject to Terms and Conditions for Electronic Documents at [www.sgs.com/terms\\_e-document.htm](http://www.sgs.com/terms_e-document.htm). 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 90 days only."

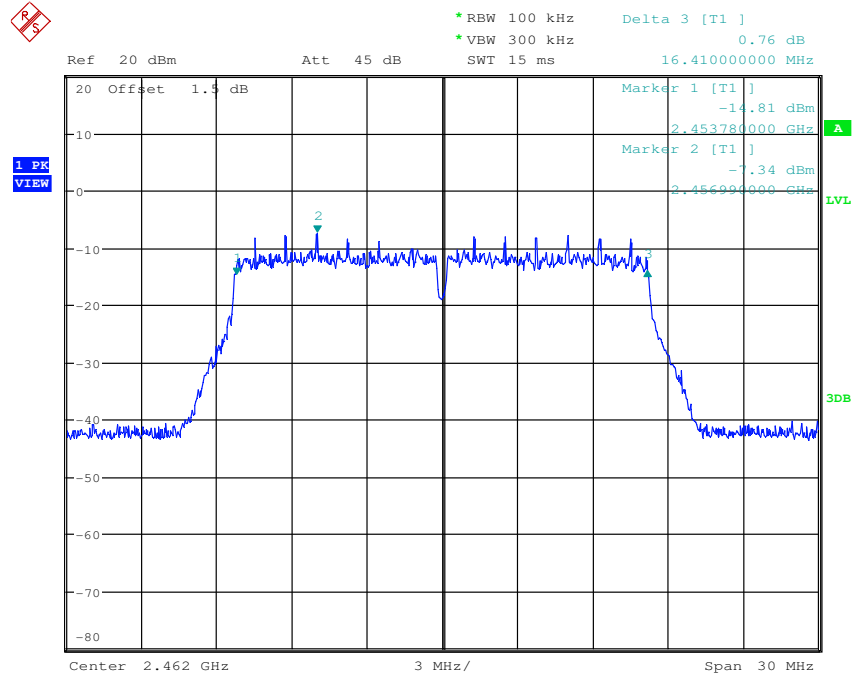


# SGS-CSTC Standards Technical Services Co., Ltd. Shenzhen Branch

Report No.: SZEM160700594002

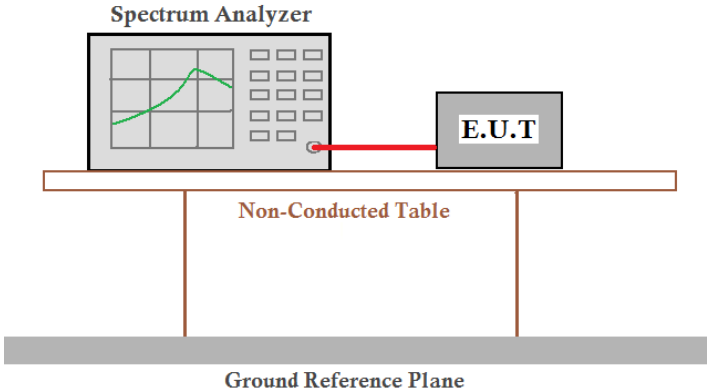
Page: 26 of 80

Test mode:	802.11n(HT20)	Test channel:	Highest
------------	---------------	---------------	---------



"This document is issued by the Company subject to its General Conditions of Service printed overleaf, available on request or accessible at [www.sgs.com/terms\\_and\\_conditions.htm](http://www.sgs.com/terms_and_conditions.htm) and, for electronic format documents, subject to Terms and Conditions for Electronic Documents at [www.sgs.com/terms\\_e-document.htm](http://www.sgs.com/terms_e-document.htm). 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 90 days only."

## 6.4 Power Spectral Density

Test Requirement:	47 CFR Part 15C Section 15.247 (e)
Test Method:	ANSI C63.10 :2013 Section 11.10.2
Test Setup:	 <p><i>Remark:</i>  Offset the High-Frequency cable loss 1.5dB in the spectrum analyzer.</p>
Test Instruments:	Refer to section 5.10 for details
Exploratory Test Mode:	Transmitting with all kind of modulations, data rates
Final Test Mode:	Through Pre-scan, find the 1Mbps of rate is the worst case of 802.11b; 6Mbps of rate is the worst case of 802.11g ; 6.5Mbps of rate is the worst case of 802.11n(HT20)
Limit:	≤8.00dBm/3kHz
Test Results:	Pass



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

Report No.: SZEM160700594002

Page: 28 of 80

**Measurement Data**

802.11b mode			
Test channel	Power Spectral Density (dBm/3kHz)	Limit (dBm/3kHz)	Result
Lowest	-10.82	≤8.00	Pass
Middle	-11.90	≤8.00	Pass
Highest	-12.61	≤8.00	Pass
802.11g mode			
Test channel	Power Spectral Density (dBm/3kHz)	Limit (dBm/3kHz)	Result
Lowest	-19.67	≤8.00	Pass
Middle	-20.92	≤8.00	Pass
Highest	-21.30	≤8.00	Pass
802.11n(HT20) mode			
Test channel	Power Spectral Density (dBm/3kHz)	Limit (dBm/3kHz)	Result
Lowest	-21.65	≤8.00	Pass
Middle	-22.23	≤8.00	Pass
Highest	-23.40	≤8.00	Pass

"This document is issued by the Company subject to its General Conditions of Service printed overleaf, available on request or accessible at [www.sgs.com/terms\\_and\\_conditions.htm](http://www.sgs.com/terms_and_conditions.htm) and, for electronic format documents, subject to Terms and Conditions for Electronic Documents at [www.sgs.com/terms\\_e-document.htm](http://www.sgs.com/terms_e-document.htm). 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 90 days only."



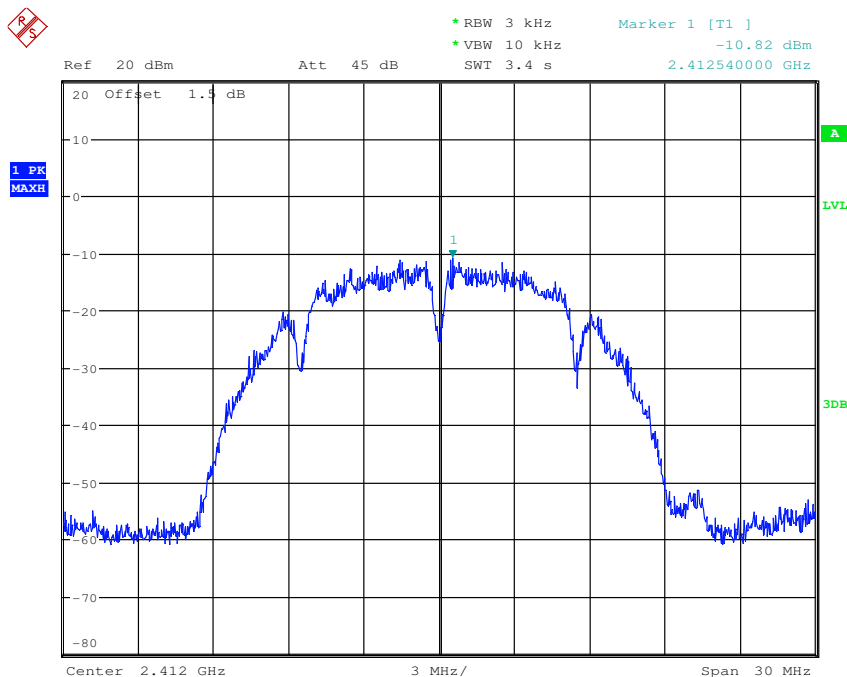
# SGS-CSTC Standards Technical Services Co., Ltd. Shenzhen Branch

Report No.: SZEM160700594002

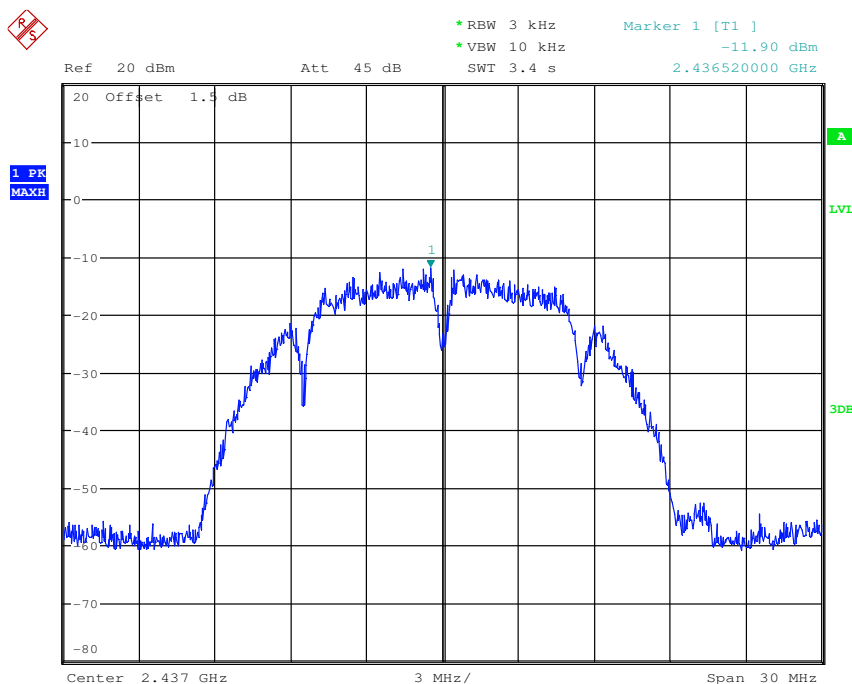
Page: 29 of 80

Test plot as follows:

Test mode:	802.11b	Test channel:	Lowest
------------	---------	---------------	--------



Test mode:	802.11b	Test channel:	Middle
------------	---------	---------------	--------



"This document is issued by the Company subject to its General Conditions of Service printed overleaf, available on request or accessible at [www.sgs.com/terms\\_and\\_conditions.htm](http://www.sgs.com/terms_and_conditions.htm) and, for electronic format documents, subject to Terms and Conditions for Electronic Documents at [www.sgs.com/terms\\_e-document.htm](http://www.sgs.com/terms_e-document.htm). 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 90 days only."

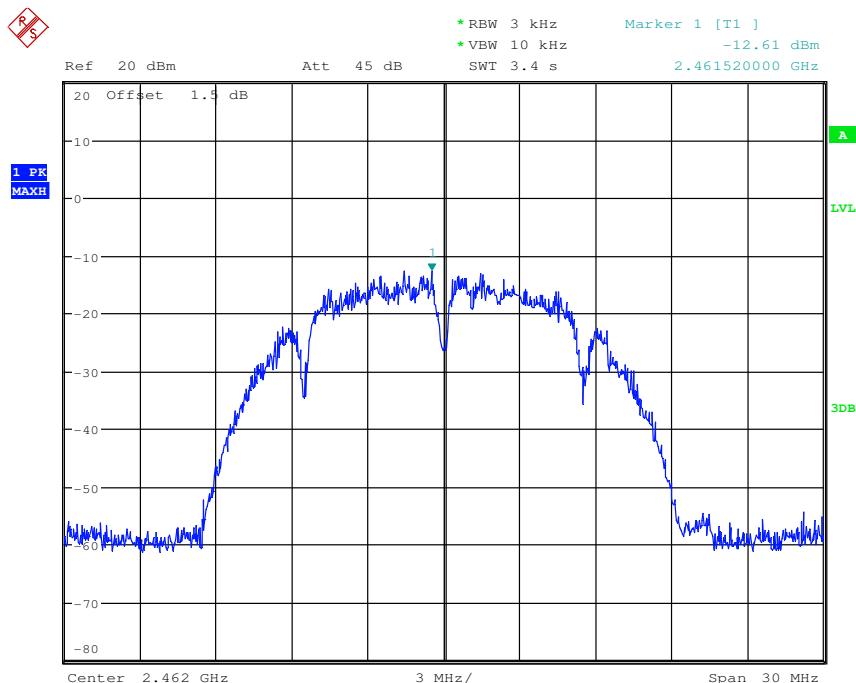


# SGS-CSTC Standards Technical Services Co., Ltd. Shenzhen Branch

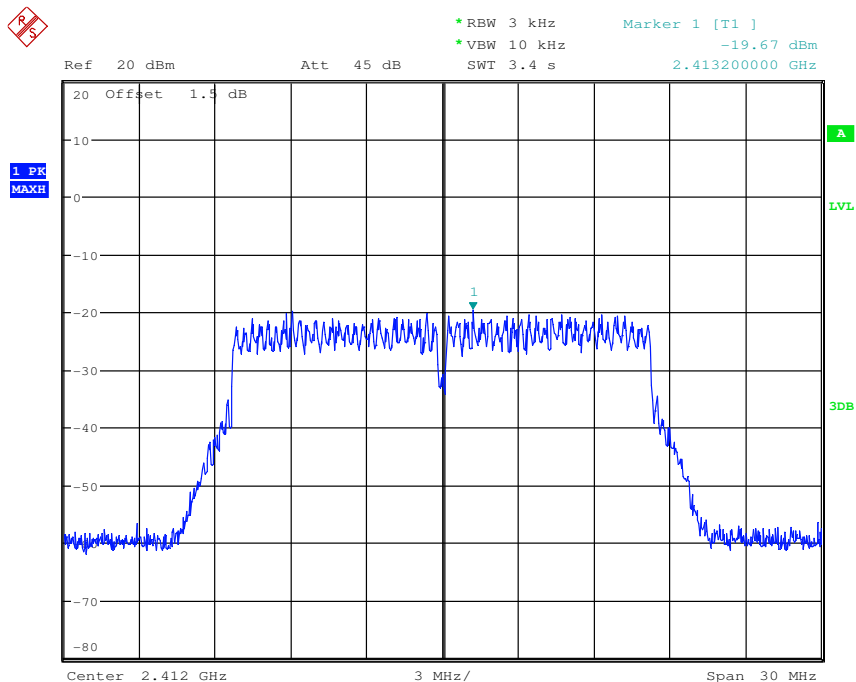
Report No.: SZEM160700594002

Page: 30 of 80

Test mode:	802.11b	Test channel:	Highest
------------	---------	---------------	---------



Test mode:	802.11g	Test channel:	Lowest
------------	---------	---------------	--------



"This document is issued by the Company subject to its General Conditions of Service printed overleaf, available on request or accessible at [www.sgs.com/terms\\_and\\_conditions.htm](http://www.sgs.com/terms_and_conditions.htm) and, for electronic format documents, subject to Terms and Conditions for Electronic Documents at [www.sgs.com/terms\\_e-document.htm](http://www.sgs.com/terms_e-document.htm). 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 90 days only."

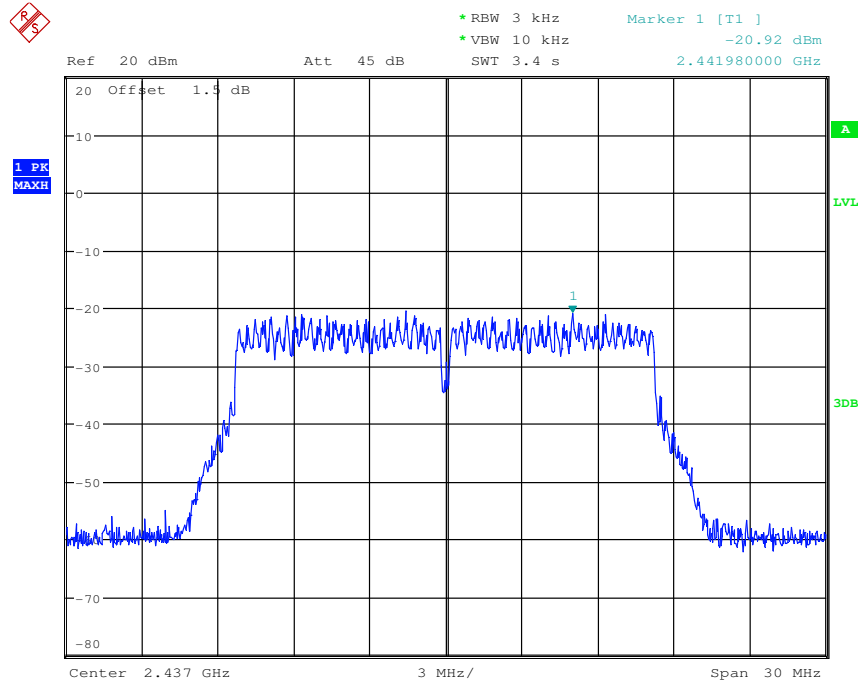


# SGS-CSTC Standards Technical Services Co., Ltd. Shenzhen Branch

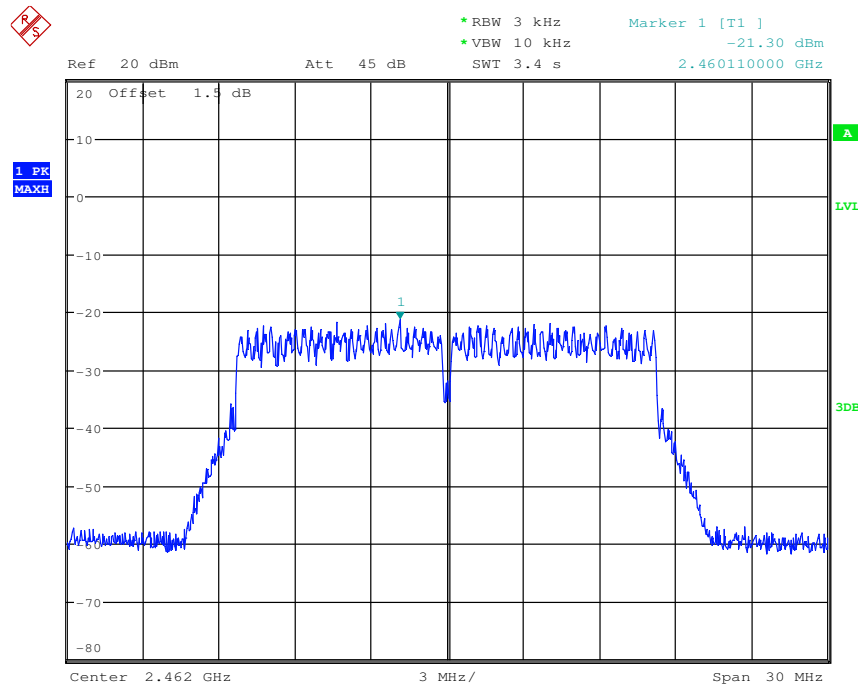
Report No.: SZEM160700594002

Page: 31 of 80

Test mode:	802.11g	Test channel:	Middle
------------	---------	---------------	--------



Test mode:	802.11g	Test channel:	Highest
------------	---------	---------------	---------



"This document is issued by the Company subject to its General Conditions of Service printed overleaf, available on request or accessible at [www.sgs.com/terms\\_and\\_conditions.htm](http://www.sgs.com/terms_and_conditions.htm) and, for electronic format documents, subject to Terms and Conditions for Electronic Documents at [www.sgs.com/terms\\_e-document.htm](http://www.sgs.com/terms_e-document.htm). 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 90 days only."

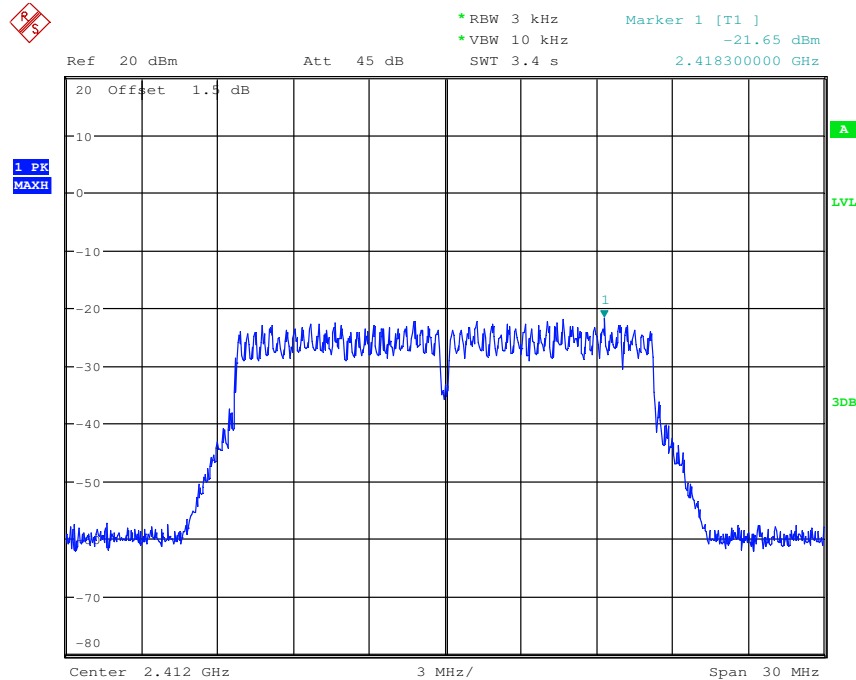


# SGS-CSTC Standards Technical Services Co., Ltd. Shenzhen Branch

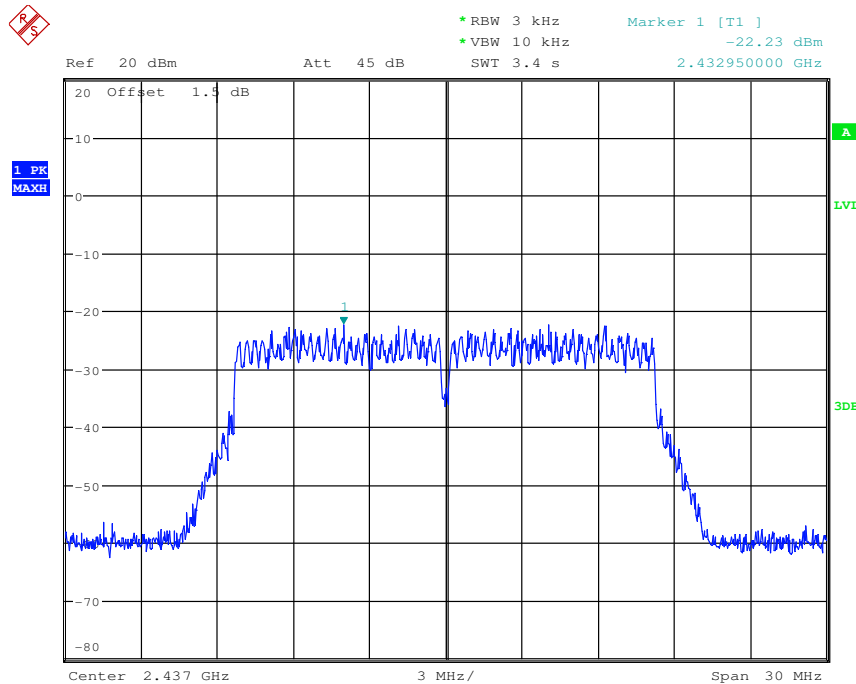
Report No.: SZEM160700594002

Page: 32 of 80

Test mode:	802.11n(HT20)	Test channel:	Lowest
------------	---------------	---------------	--------



Test mode:	802.11n(HT20)	Test channel:	Middle
------------	---------------	---------------	--------



"This document is issued by the Company subject to its General Conditions of Service printed overleaf, available on request or accessible at [www.sgs.com/terms\\_and\\_conditions.htm](http://www.sgs.com/terms_and_conditions.htm) and, for electronic format documents, subject to Terms and Conditions for Electronic Documents at [www.sgs.com/terms\\_e-document.htm](http://www.sgs.com/terms_e-document.htm). 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 90 days only."



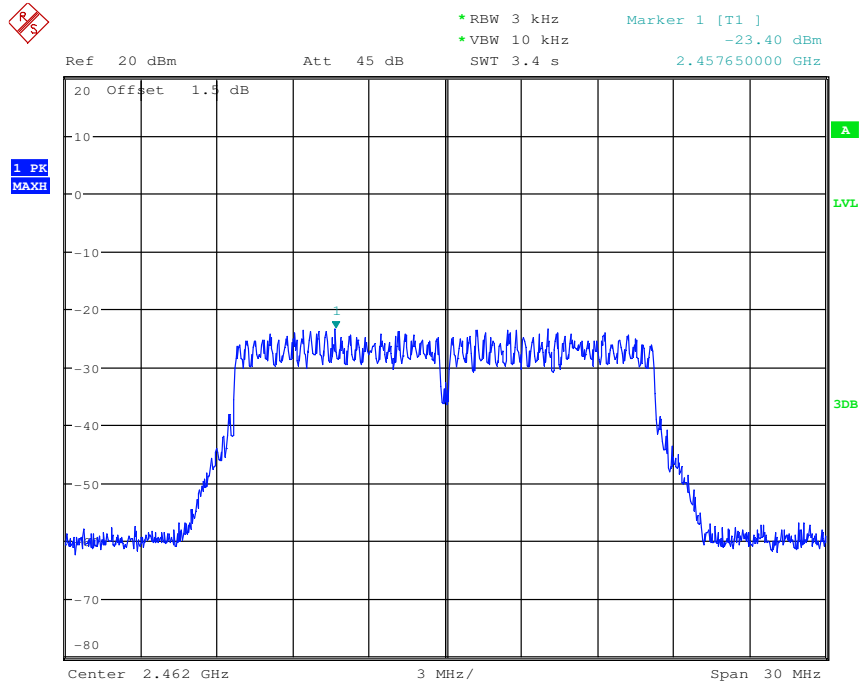


SGS-CSTC Standards Technical Services Co., Ltd.  
Shenzhen Branch

Report No.: SZEM160700594002

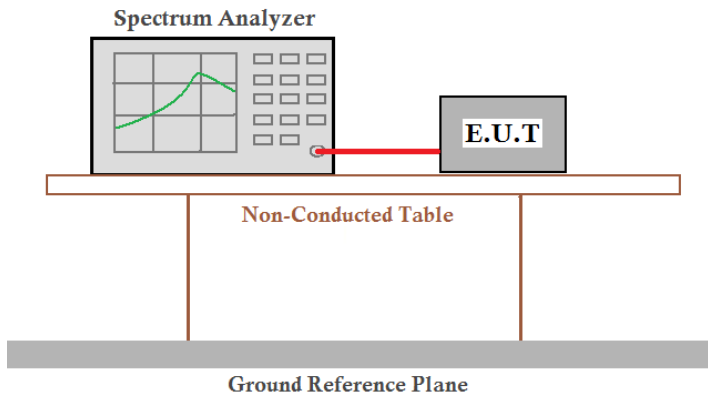
Page: 33 of 80

Test mode:	802.11n(HT20)	Test channel:	Highest
------------	---------------	---------------	---------



"This document is issued by the Company subject to its General Conditions of Service printed overleaf, available on request or accessible at [www.sgs.com/terms\\_and\\_conditions.htm](http://www.sgs.com/terms_and_conditions.htm) and, for electronic format documents, subject to Terms and Conditions for Electronic Documents at [www.sgs.com/terms\\_e-document.htm](http://www.sgs.com/terms_e-document.htm). 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 90 days only."

## 6.5 Band-edge for RF Conducted Emissions

Test Requirement:	47 CFR Part 15C Section 15.247 (d)
Test Method:	ANSI C63.10: 2013 Section 11.13
Test Setup:	 <p><i>Remark:</i>  Offset the High-Frequency cable loss 1.5dB in the spectrum analyzer.</p>
Exploratory Test Mode:	Transmitting with all kind of modulations, data rates
Final Test Mode:	Through Pre-scan, find the 1Mbps of rate is the worst case of 802.11b; 6Mbps of rate is the worst case of 802.11g ; 6.5Mbps of rate is the worst case of 802.11n(HT20)
Limit:	In any 100 kHz bandwidth outside the frequency band in which the spread spectrum intentional radiator is operating, the radio frequency power that is produced by the intentional radiator shall be at least 20 dB below that in the 100 kHz bandwidth within the band that contains the highest level of the desired power, based on either an RF conducted or a radiated measurement.
Instruments Used:	Refer to section 5.10 for details
Test Results:	Pass



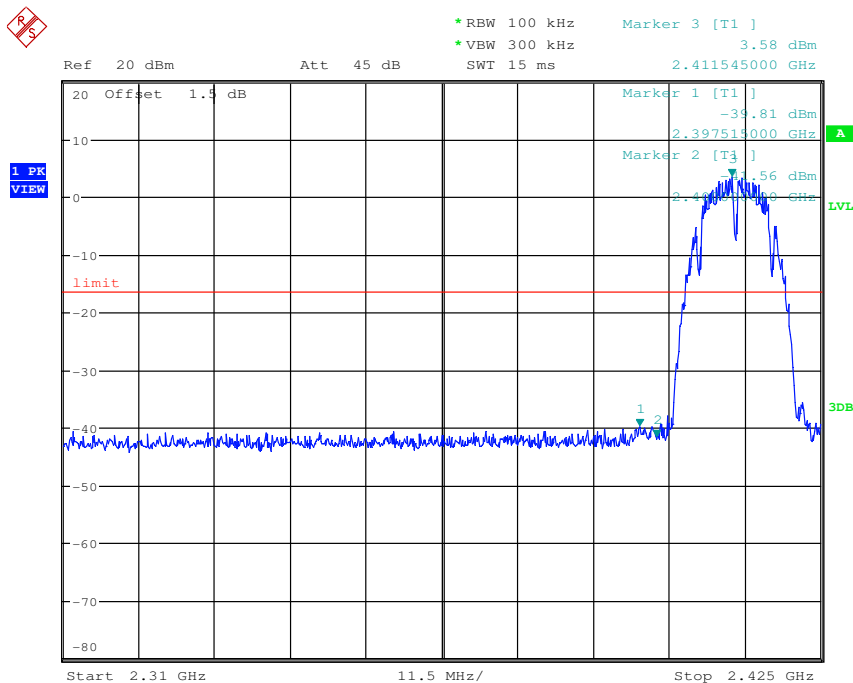
# SGS-CSTC Standards Technical Services Co., Ltd. Shenzhen Branch

Report No.: SZEM160700594002

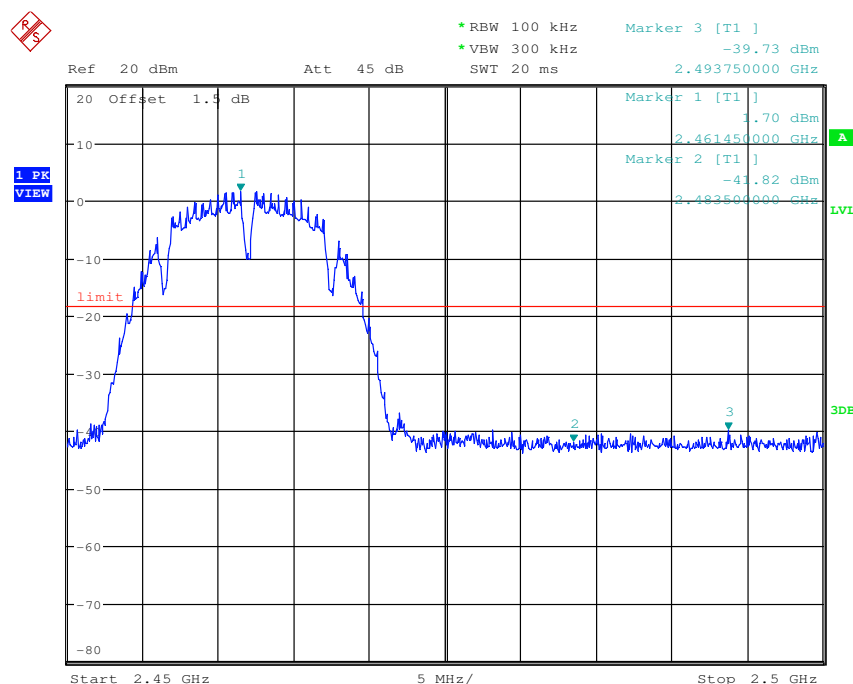
Page: 35 of 80

Test plot as follows:

Test mode:	802.11b	Test channel:	Lowest
------------	---------	---------------	--------



Test mode:	802.11b	Test channel:	Highest
------------	---------	---------------	---------



"This document is issued by the Company subject to its General Conditions of Service printed overleaf, available on request or accessible at [www.sgs.com/terms\\_and\\_conditions.htm](http://www.sgs.com/terms_and_conditions.htm) and, for electronic format documents, subject to Terms and Conditions for Electronic Documents at [www.sgs.com/terms\\_e-document.htm](http://www.sgs.com/terms_e-document.htm). 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 90 days only."

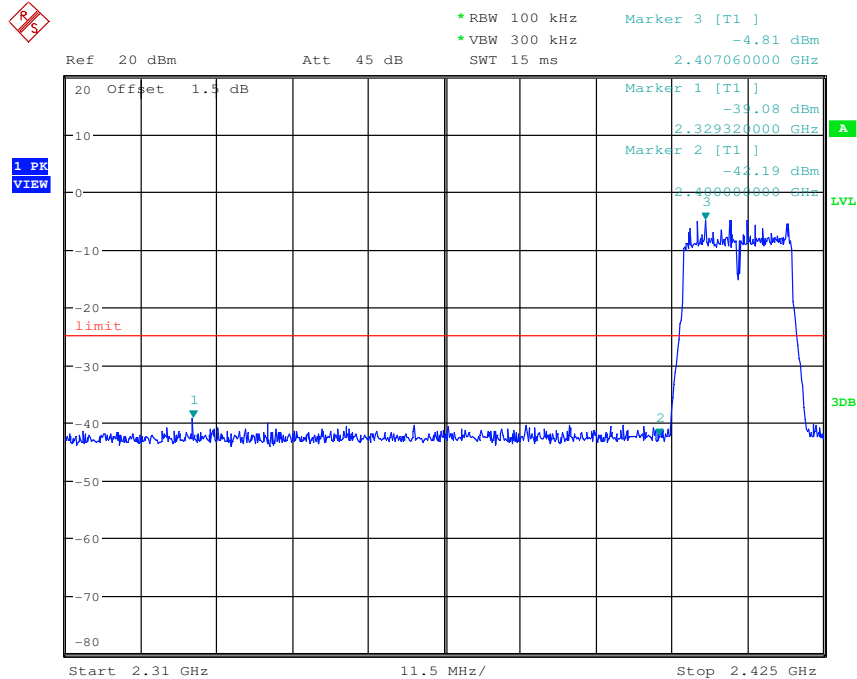


# SGS-CSTC Standards Technical Services Co., Ltd. Shenzhen Branch

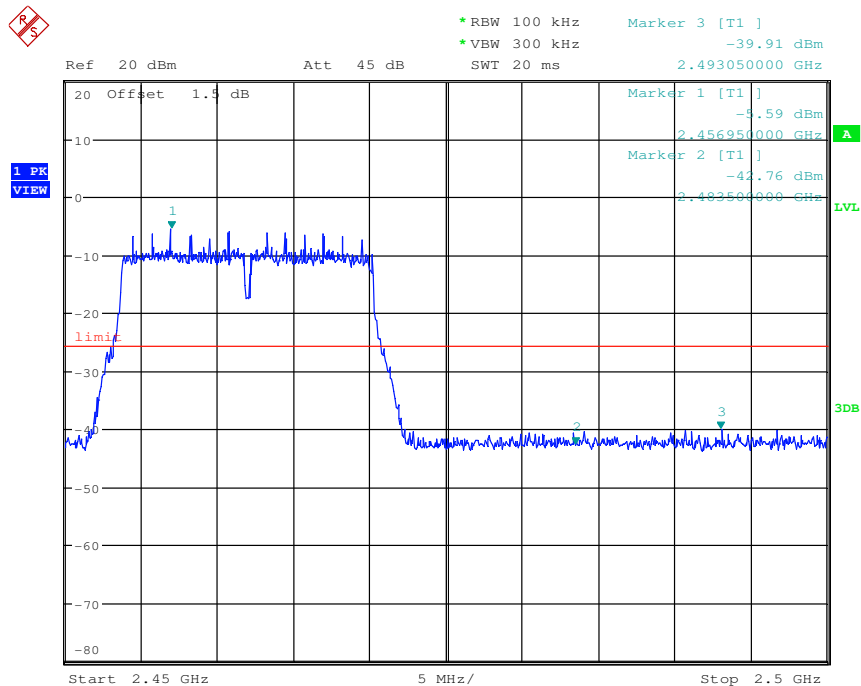
Report No.: SZEM160700594002

Page: 36 of 80

Test mode:	802.11g	Test channel:	Lowest
------------	---------	---------------	--------



Test mode:	802.11g	Test channel:	Highest
------------	---------	---------------	---------



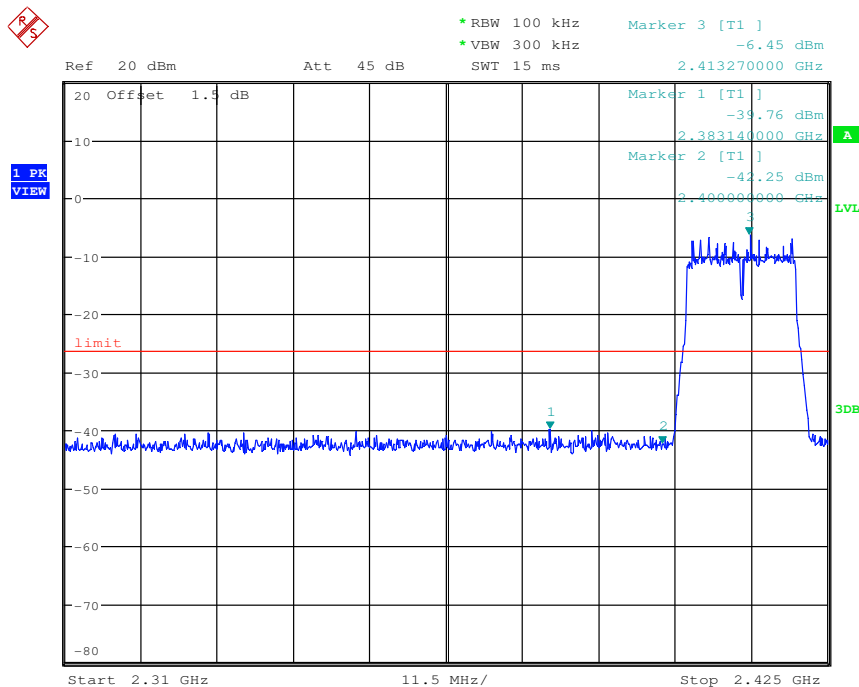
"This document is issued by the Company subject to its General Conditions of Service printed overleaf, available on request or accessible at [www.sgs.com/terms\\_and\\_conditions.htm](http://www.sgs.com/terms_and_conditions.htm) and, for electronic format documents, subject to Terms and Conditions for Electronic Documents at [www.sgs.com/terms\\_e-document.htm](http://www.sgs.com/terms_e-document.htm). 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 90 days only."



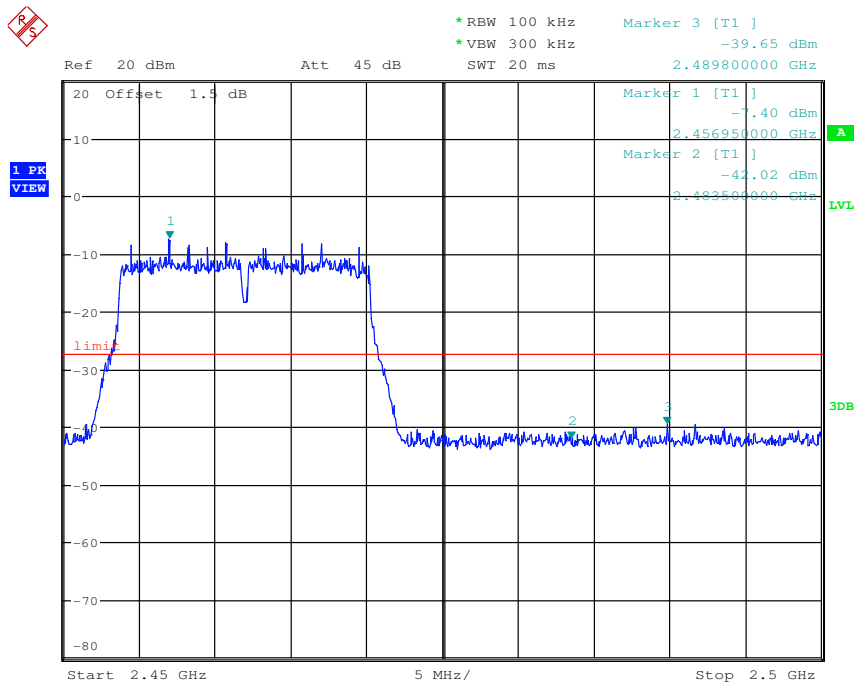
# SGS-CSTC Standards Technical Services Co., Ltd. Shenzhen Branch

Report No.: SZEM160700594002  
Page: 37 of 80

Test mode:	802.11n(HT20)	Test channel:	Lowest
------------	---------------	---------------	--------

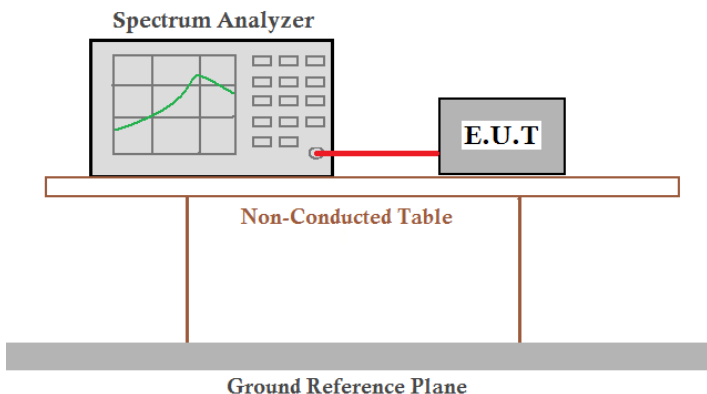


Test mode:	802.11n(HT20)	Test channel:	Highest
------------	---------------	---------------	---------



"This document is issued by the Company subject to its General Conditions of Service printed overleaf, available on request or accessible at [www.sgs.com/terms\\_and\\_conditions.htm](http://www.sgs.com/terms_and_conditions.htm) and, for electronic format documents, subject to Terms and Conditions for Electronic Documents at [www.sgs.com/terms\\_e-document.htm](http://www.sgs.com/terms_e-document.htm). 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 90 days only."

## 6.6 RF Conducted Spurious Emissions

Test Requirement:	47 CFR Part 15C Section 15.247 (d)
Test Method:	ANSI C63.10: 2013 Section 11.11
Test Setup:	 <p><i>Remark:</i>  Offset the High-Frequency cable loss 1.5dB in the spectrum analyzer.</p>
Exploratory Test Mode:	Transmitting with all kind of modulations, data rates
Final Test Mode:	Through Pre-scan, find the 1Mbps of rate is the worst case of 802.11b; 6Mbps of rate is the worst case of 802.11g ; 6.5Mbps of rate is the worst case of 802.11n(HT20)
Limit:	In any 100 kHz bandwidth outside the frequency band in which the spread spectrum intentional radiator is operating, the radio frequency power that is produced by the intentional radiator shall be at least 20 dB below that in the 100 kHz bandwidth within the band that contains the highest level of the desired power, based on either an RF conducted or a radiated measurement.
Instruments Used:	Refer to section 5.10 for details
Test Results:	Pass



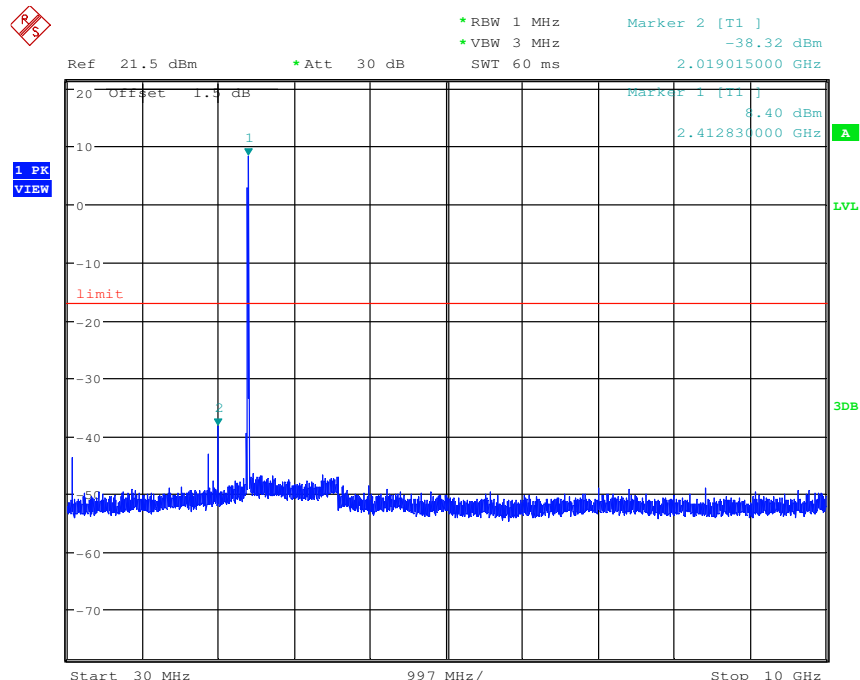
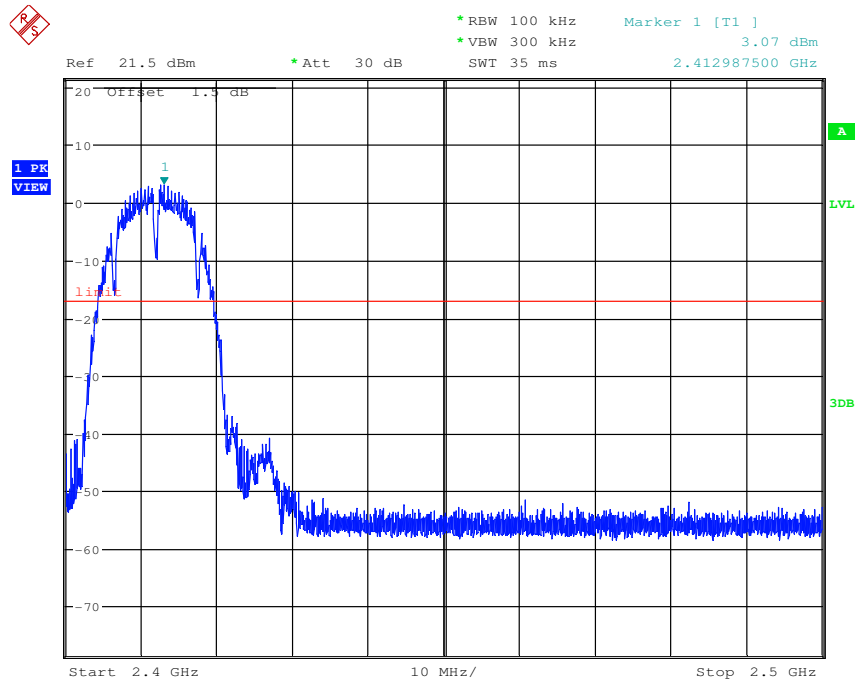
# SGS-CSTC Standards Technical Services Co., Ltd. Shenzhen Branch

Report No.: SZEM160700594002

Page: 39 of 80

Test plot as follows:

Test mode:	802.11b	Test channel:	Lowest
------------	---------	---------------	--------



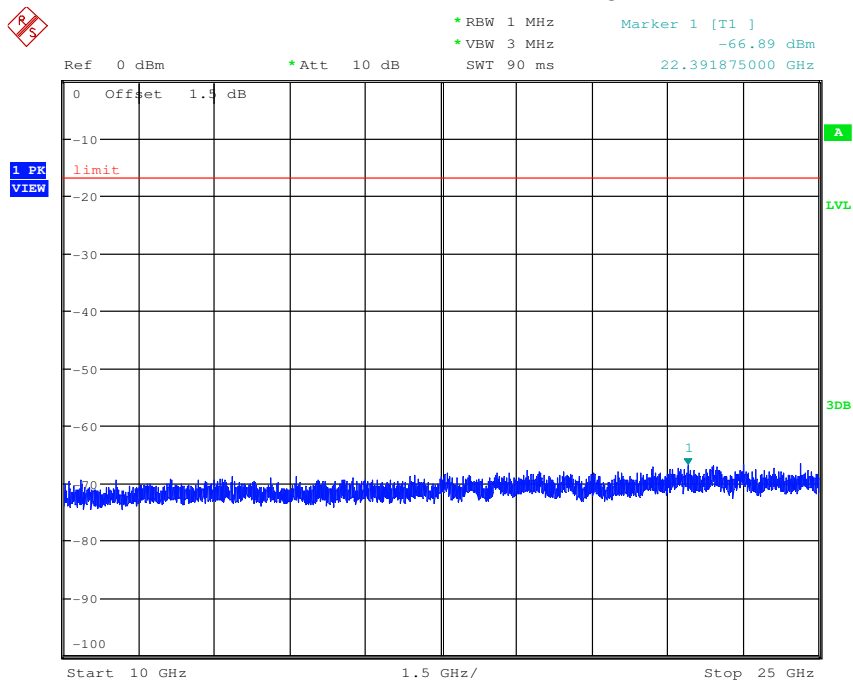
"This document is issued by the Company subject to its General Conditions of Service printed overleaf, available on request or accessible at [www.sgs.com/terms\\_and\\_conditions.htm](http://www.sgs.com/terms_and_conditions.htm) and, for electronic format documents, subject to Terms and Conditions for Electronic Documents at [www.sgs.com/terms\\_e-document.htm](http://www.sgs.com/terms_e-document.htm). 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 90 days only."



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

Report No.: SZEM160700594002

Page: 40 of 80

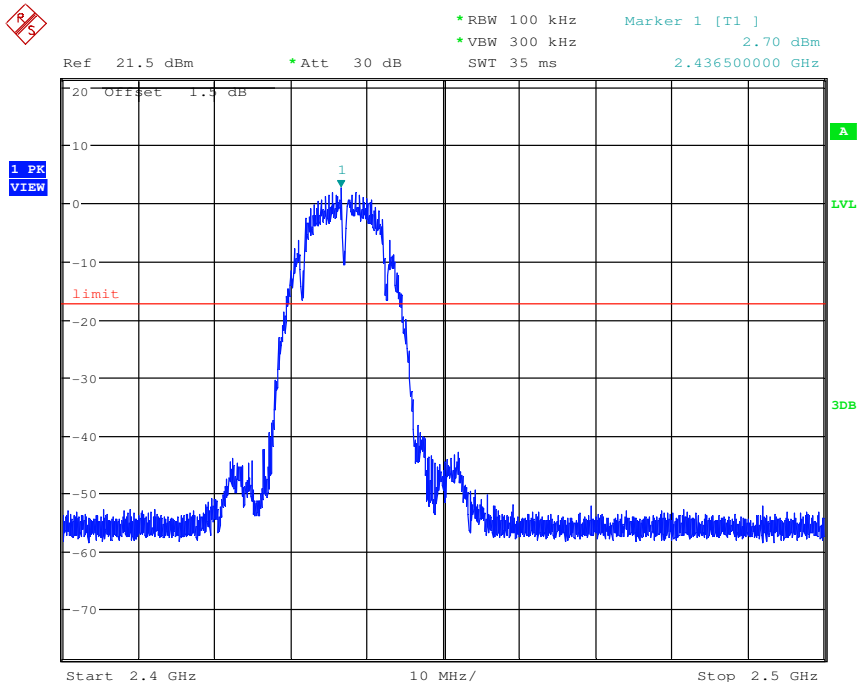


Test mode:

802.11b

Test channel:

Middle



"This document is issued by the Company subject to its General Conditions of Service printed overleaf, available on request or accessible at [www.sgs.com/terms\\_and\\_conditions.htm](http://www.sgs.com/terms_and_conditions.htm) and, for electronic format documents, subject to Terms and Conditions for Electronic Documents at [www.sgs.com/terms\\_e-document.htm](http://www.sgs.com/terms_e-document.htm). 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 90 days only."

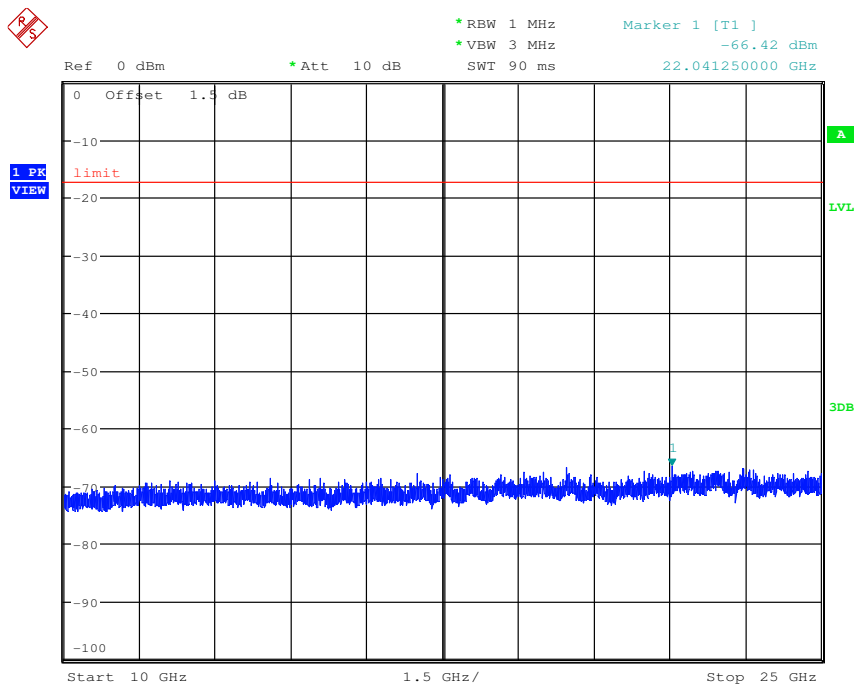
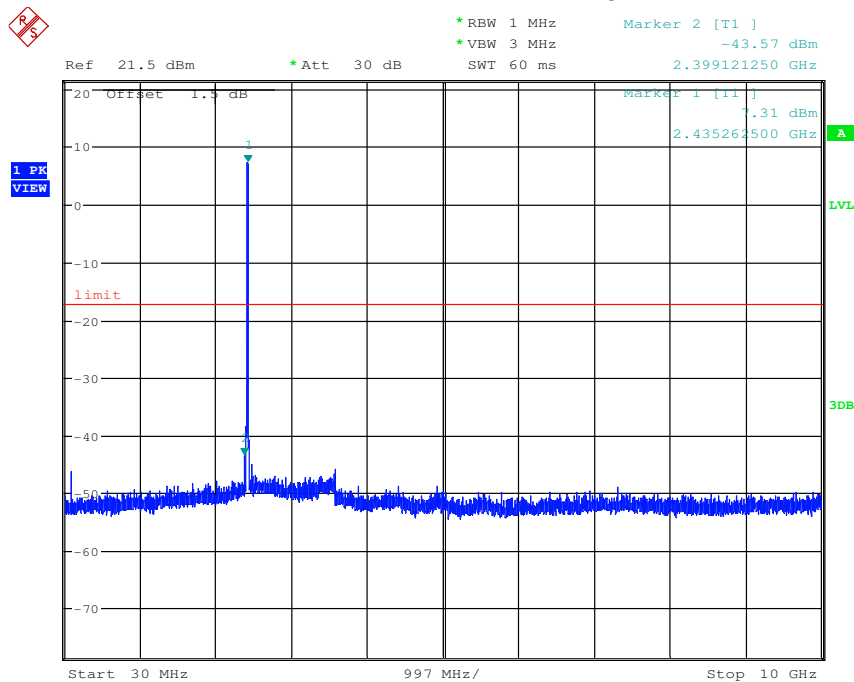




# SGS-CSTC Standards Technical Services Co., Ltd. Shenzhen Branch

Report No.: SZEM160700594002

Page: 41 of 80



"This document is issued by the Company subject to its General Conditions of Service printed overleaf, available on request or accessible at [www.sgs.com/terms\\_and\\_conditions.htm](http://www.sgs.com/terms_and_conditions.htm) and, for electronic format documents, subject to Terms and Conditions for Electronic Documents at [www.sgs.com/terms\\_e-document.htm](http://www.sgs.com/terms_e-document.htm). 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 90 days only."

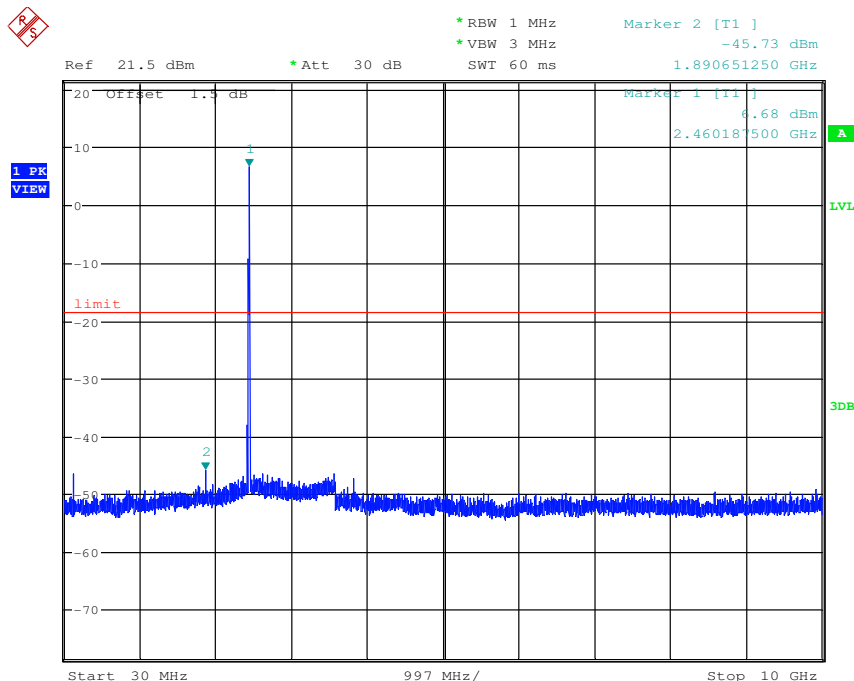
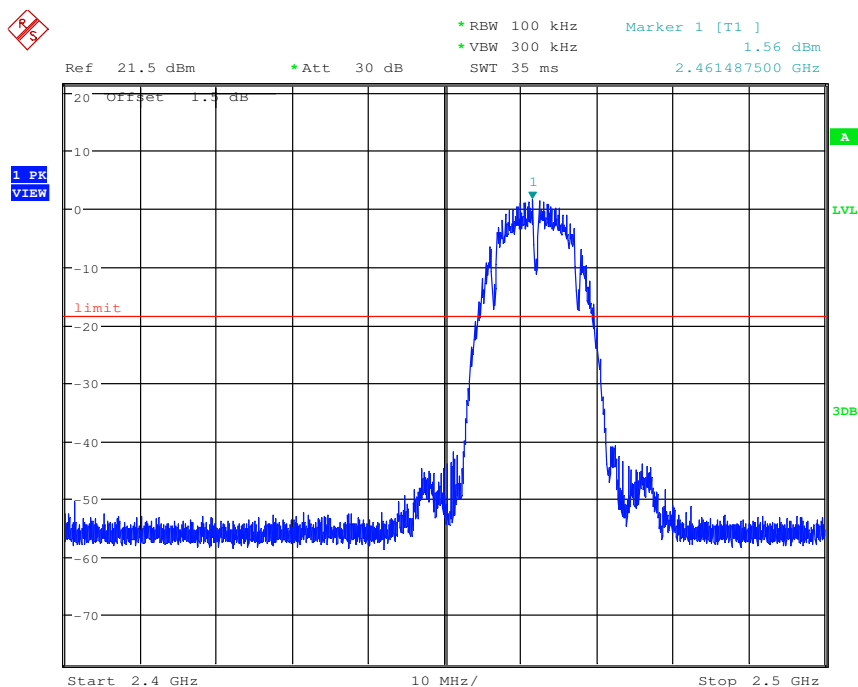


# SGS-CSTC Standards Technical Services Co., Ltd. Shenzhen Branch

Report No.: SZEM160700594002

Page: 42 of 80

Test mode:	802.11b	Test channel:	Highest
------------	---------	---------------	---------



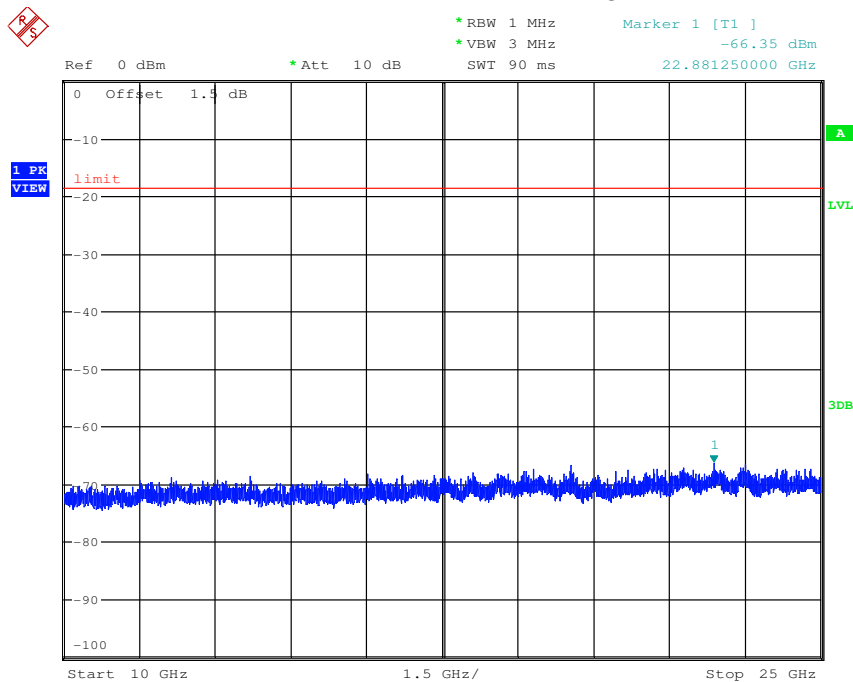
"This document is issued by the Company subject to its General Conditions of Service printed overleaf, available on request or accessible at [www.sgs.com/terms\\_and\\_conditions.htm](http://www.sgs.com/terms_and_conditions.htm) and, for electronic format documents, subject to Terms and Conditions for Electronic Documents at [www.sgs.com/terms\\_e-document.htm](http://www.sgs.com/terms_e-document.htm). 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 90 days only."



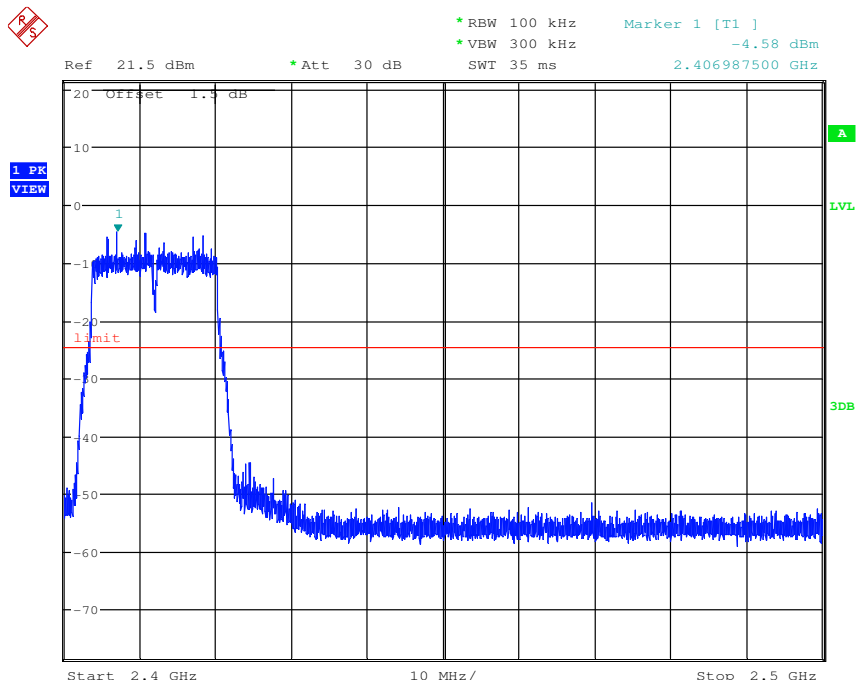
# SGS-CSTC Standards Technical Services Co., Ltd. Shenzhen Branch

Report No.: SZEM160700594002

Page: 43 of 80



Test mode:	802.11g	Test channel:	Lowest
------------	---------	---------------	--------



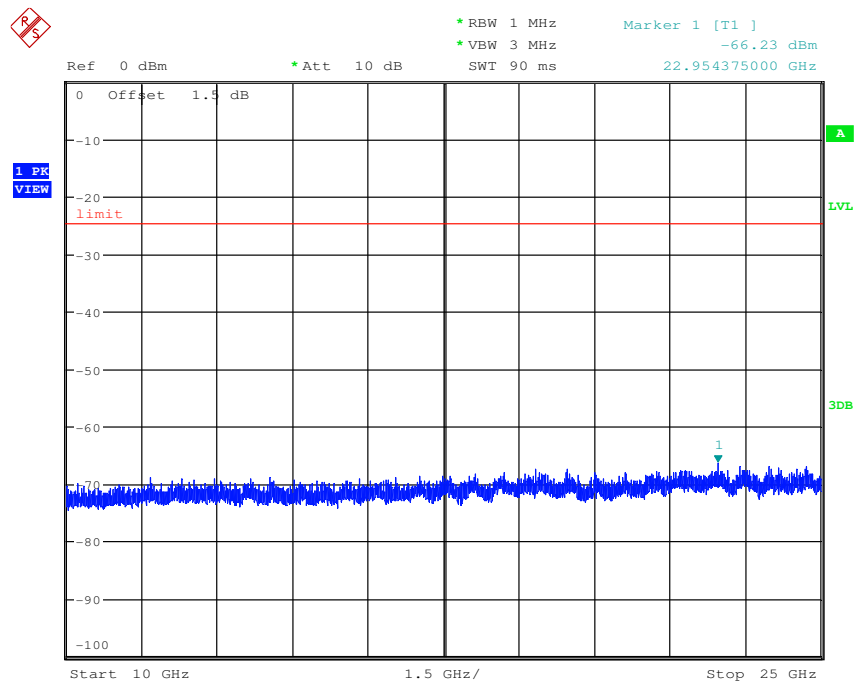
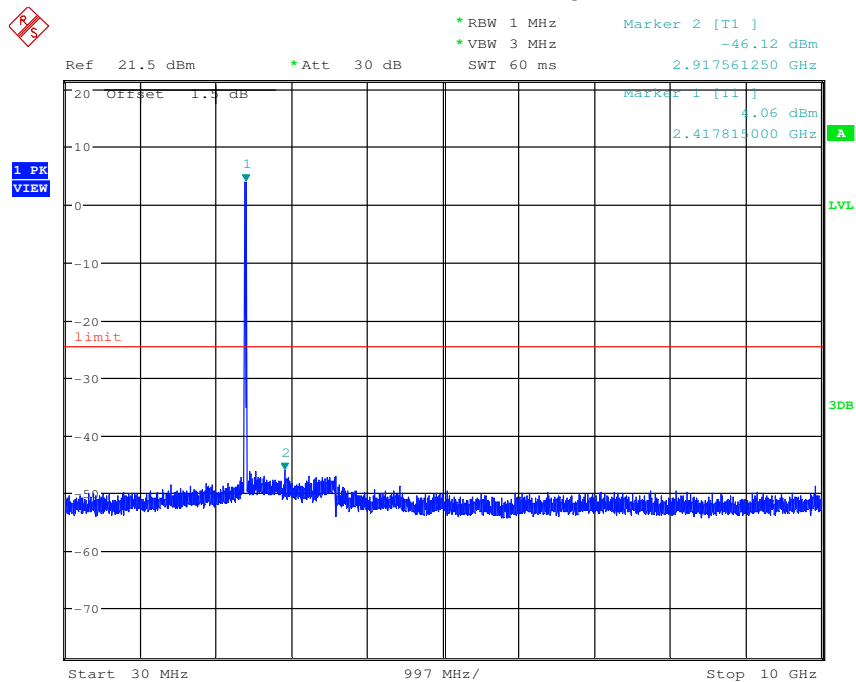
"This document is issued by the Company subject to its General Conditions of Service printed overleaf, available on request or accessible at [www.sgs.com/terms\\_and\\_conditions.htm](http://www.sgs.com/terms_and_conditions.htm) and, for electronic format documents, subject to Terms and Conditions for Electronic Documents at [www.sgs.com/terms\\_e-document.htm](http://www.sgs.com/terms_e-document.htm). 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 90 days only."



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

Report No.: SZEM160700594002

Page: 44 of 80



"This document is issued by the Company subject to its General Conditions of Service printed overleaf, available on request or accessible at [www.sgs.com/terms\\_and\\_conditions.htm](http://www.sgs.com/terms_and_conditions.htm) and, for electronic format documents, subject to Terms and Conditions for Electronic Documents at [www.sgs.com/terms\\_e-document.htm](http://www.sgs.com/terms_e-document.htm). 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 90 days only."

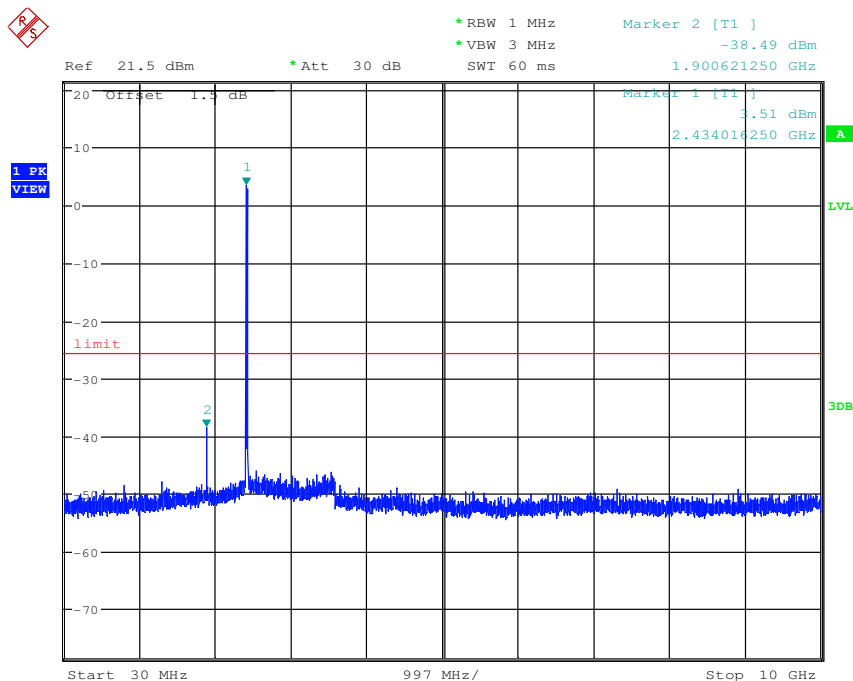
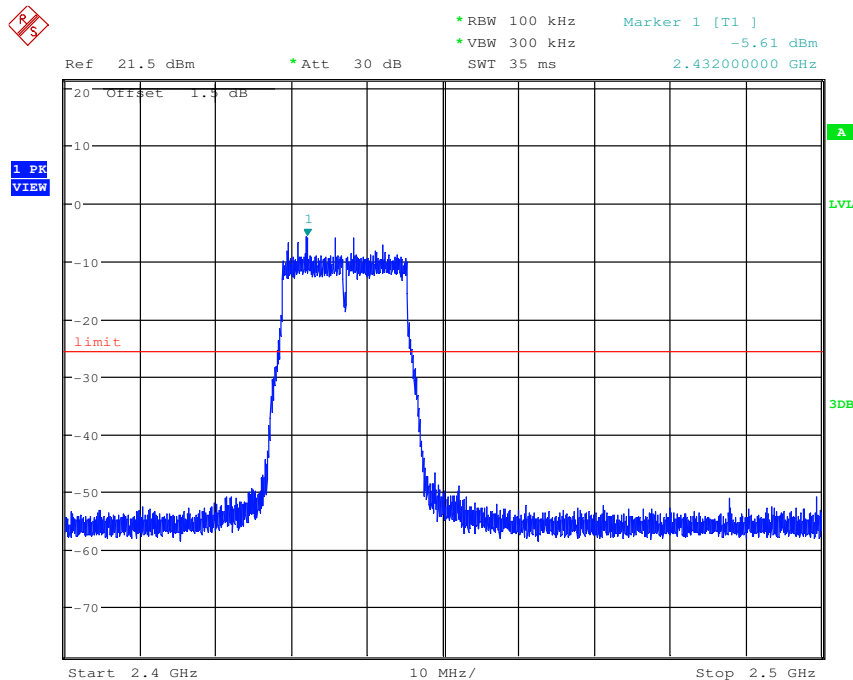


# SGS-CSTC Standards Technical Services Co., Ltd. Shenzhen Branch

Report No.: SZEM160700594002

Page: 45 of 80

Test mode:	802.11g	Test channel:	Middle
------------	---------	---------------	--------



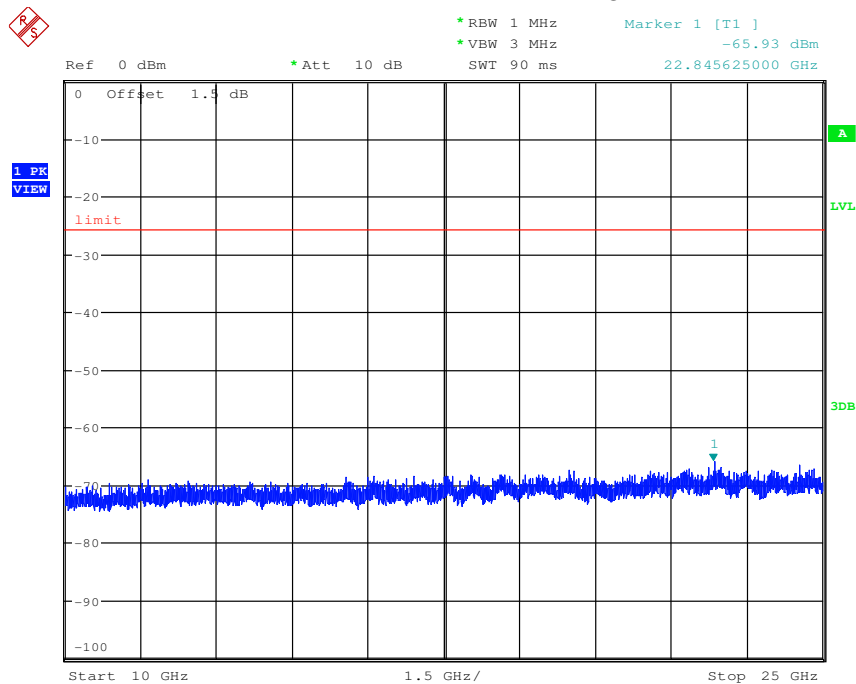
"This document is issued by the Company subject to its General Conditions of Service printed overleaf, available on request or accessible at [www.sgs.com/terms\\_and\\_conditions.htm](http://www.sgs.com/terms_and_conditions.htm) and, for electronic format documents, subject to Terms and Conditions for Electronic Documents at [www.sgs.com/terms\\_e-document.htm](http://www.sgs.com/terms_e-document.htm). 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 90 days only."



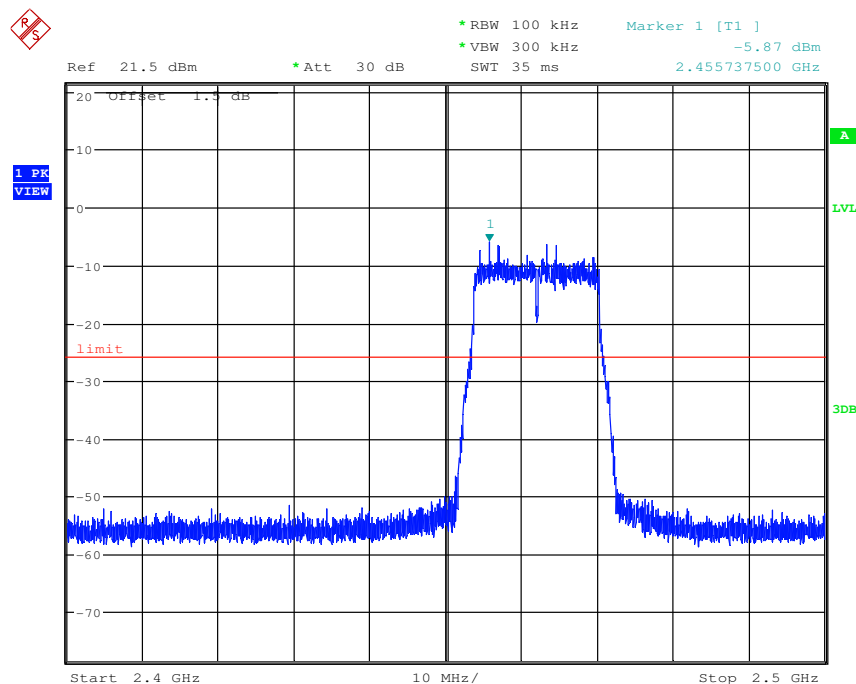
# SGS-CSTC Standards Technical Services Co., Ltd. Shenzhen Branch

Report No.: SZEM160700594002

Page: 46 of 80



Test mode:	802.11g	Test channel:	Highest
------------	---------	---------------	---------



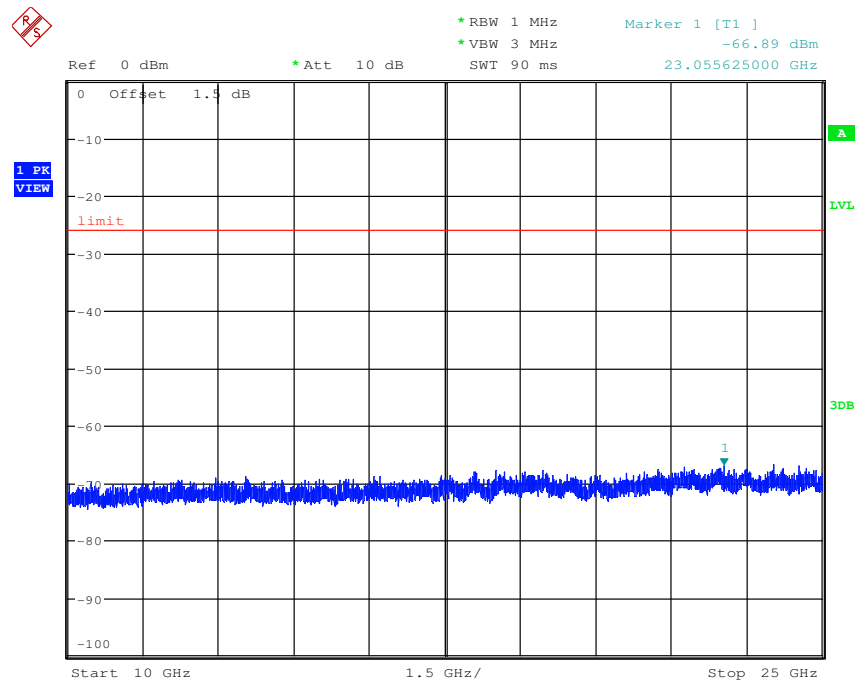
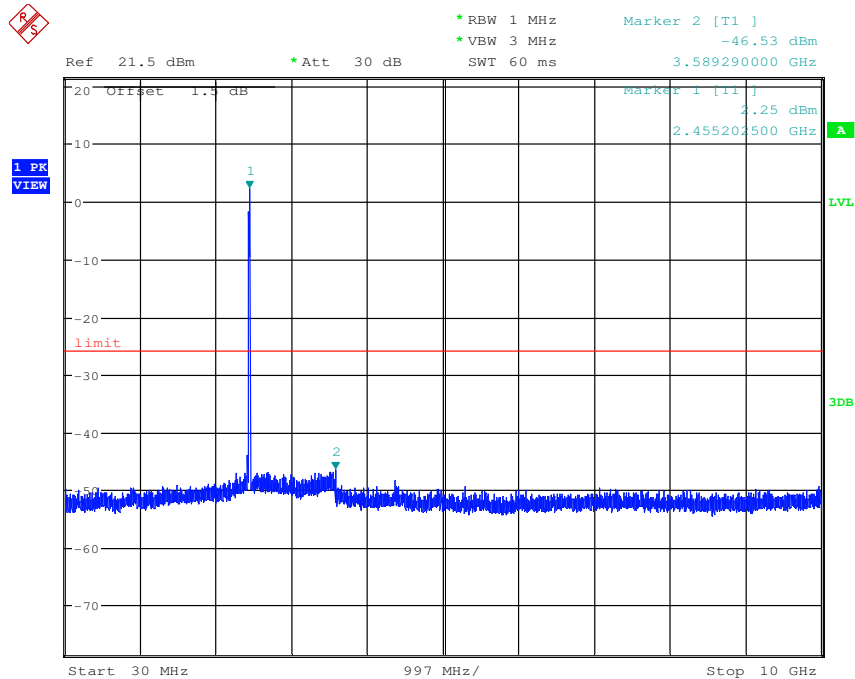
"This document is issued by the Company subject to its General Conditions of Service printed overleaf, available on request or accessible at [www.sgs.com/terms\\_and\\_conditions.htm](http://www.sgs.com/terms_and_conditions.htm) and, for electronic format documents, subject to Terms and Conditions for Electronic Documents at [www.sgs.com/terms\\_e-document.htm](http://www.sgs.com/terms_e-document.htm). 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 90 days only."



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

Report No.: SZEM160700594002

Page: 47 of 80



"This document is issued by the Company subject to its General Conditions of Service printed overleaf, available on request or accessible at [www.sgs.com/terms\\_and\\_conditions.htm](http://www.sgs.com/terms_and_conditions.htm) and, for electronic format documents, subject to Terms and Conditions for Electronic Documents at [www.sgs.com/terms\\_e-document.htm](http://www.sgs.com/terms_e-document.htm). 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 90 days only."

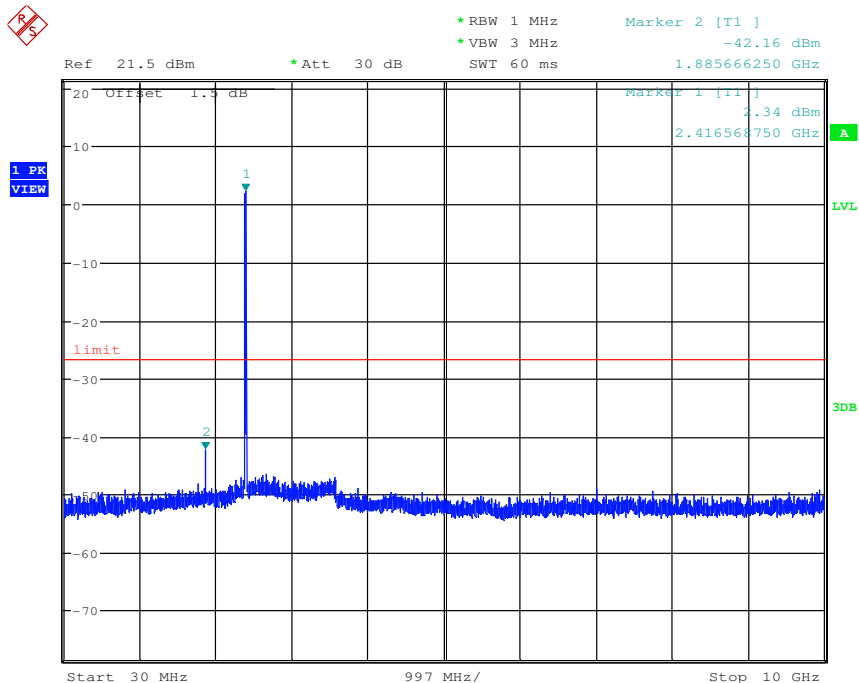
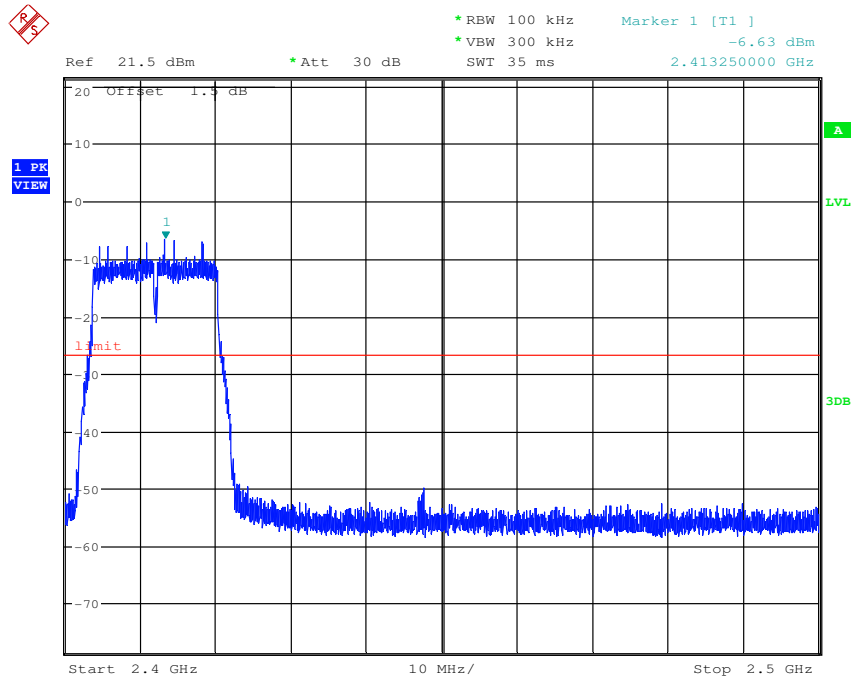


# SGS-CSTC Standards Technical Services Co., Ltd. Shenzhen Branch

Report No.: SZEM160700594002

Page: 48 of 80

Test mode:	802.11n(HT20)	Test channel:	Lowest
------------	---------------	---------------	--------



"This document is issued by the Company subject to its General Conditions of Service printed overleaf, available on request or accessible at [www.sgs.com/terms\\_and\\_conditions.htm](http://www.sgs.com/terms_and_conditions.htm) and, for electronic format documents, subject to Terms and Conditions for Electronic Documents at [www.sgs.com/terms\\_e-document.htm](http://www.sgs.com/terms_e-document.htm). 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 90 days only."

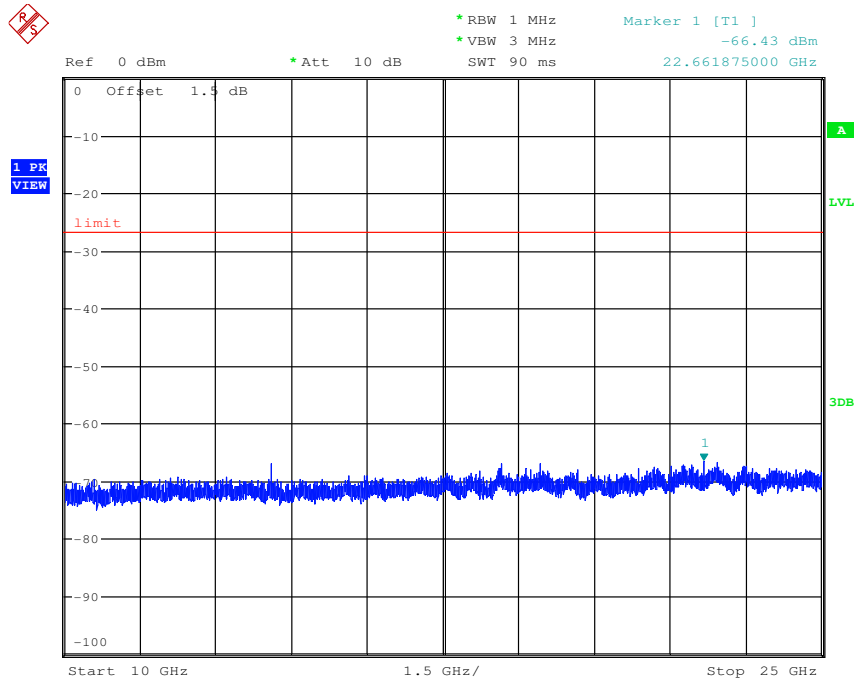




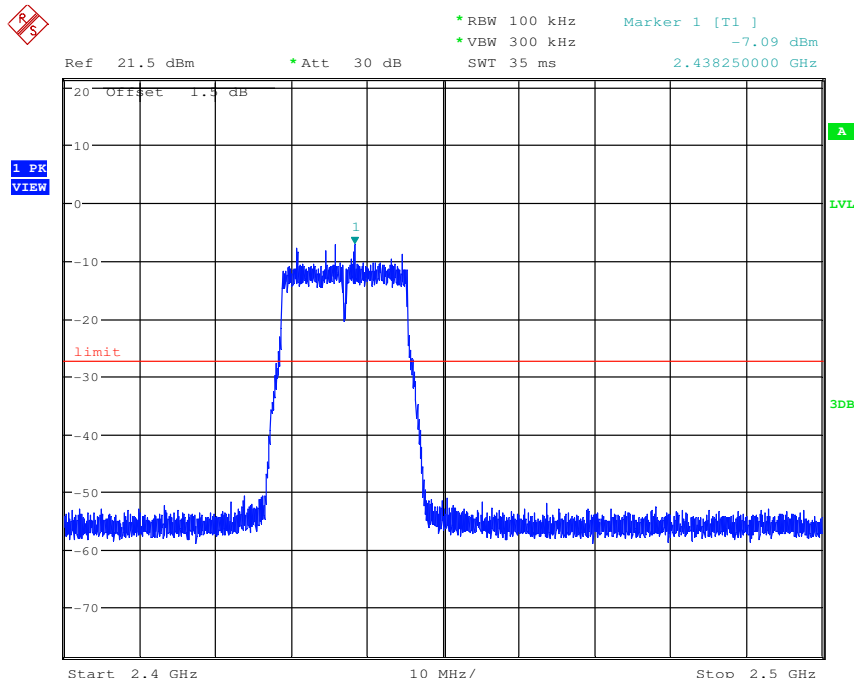
# SGS-CSTC Standards Technical Services Co., Ltd. Shenzhen Branch

Report No.: SZEM160700594002

Page: 49 of 80



Test mode:	802.11n(HT20)	Test channel:	Middle
------------	---------------	---------------	--------



"This document is issued by the Company subject to its General Conditions of Service printed overleaf, available on request or accessible at [www.sgs.com/terms\\_and\\_conditions.htm](http://www.sgs.com/terms_and_conditions.htm) and, for electronic format documents, subject to Terms and Conditions for Electronic Documents at [www.sgs.com/terms\\_e-document.htm](http://www.sgs.com/terms_e-document.htm). 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 90 days only."



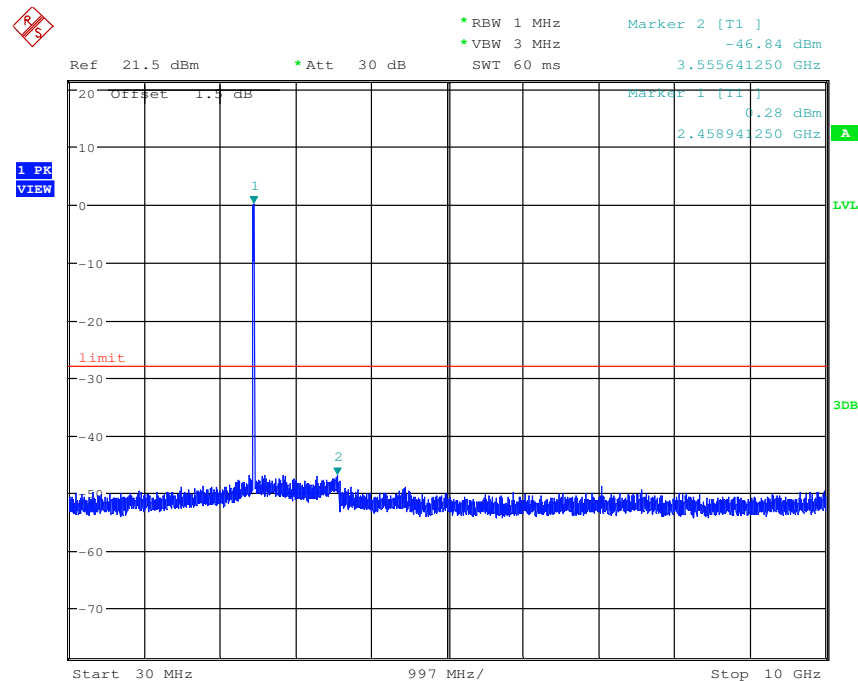
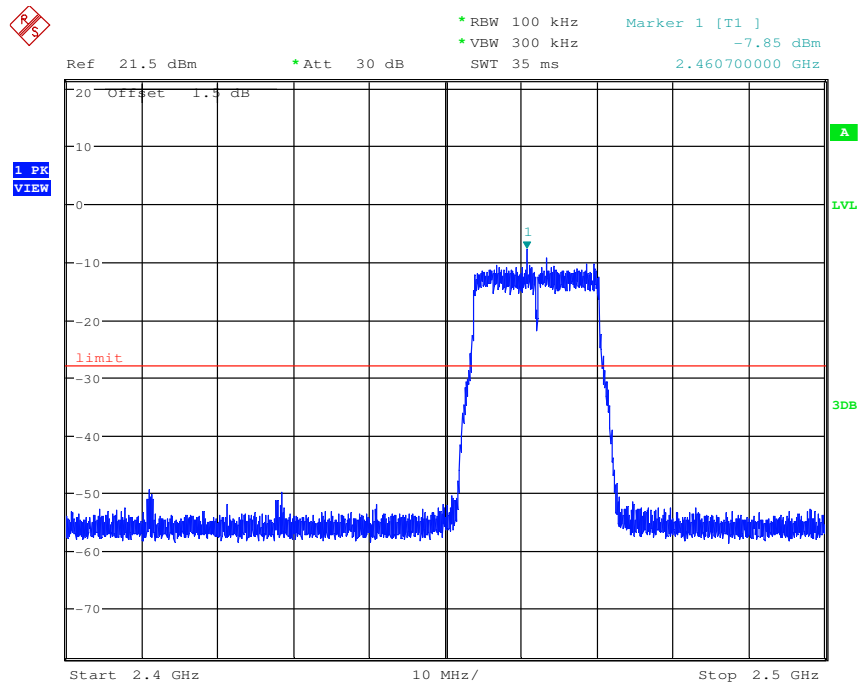


# SGS-CSTC Standards Technical Services Co., Ltd. Shenzhen Branch

Report No.: SZEM160700594002

Page: 51 of 80

Test mode:	802.11n(HT20)	Test channel:	Highest
------------	---------------	---------------	---------



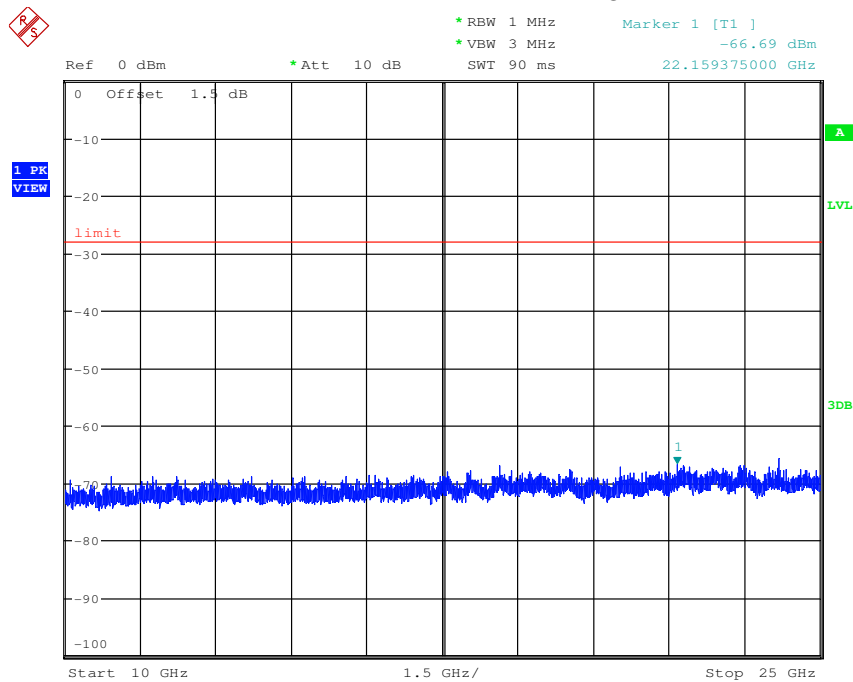
"This document is issued by the Company subject to its General Conditions of Service printed overleaf, available on request or accessible at [www.sgs.com/terms\\_and\\_conditions.htm](http://www.sgs.com/terms_and_conditions.htm) and, for electronic format documents, subject to Terms and Conditions for Electronic Documents at [www.sgs.com/terms\\_e-document.htm](http://www.sgs.com/terms_e-document.htm). 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 90 days only."



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

Report No.: SZEM160700594002

Page: 52 of 80



Remark:

Use 100kHz RBW to determine the relative limit in the band 2.4GHz to 2.5GHz, and Use 1MHz RBW to measure spurious emissions in the band 30MHz to 10GHz and 10GHz to 25GHz. The sweep points set to 30001.



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

Report No.: SZEM160700594002

Page: 53 of 80

## 6.7 Radiated Spurious Emissions

Test Requirement:	47 CFR Part 15C Section 15.209 and 15.205				
Test Method:	ANSI C63.10 :2013 Section 11.12				
Test Site:	Measurement Distance: 3m (Semi-Anechoic Chamber)				
Receiver Setup:	Frequency	Detector	RBW	VBW	Remark
	0.009MHz-0.090MHz	Peak	10kHz	30kHz	Peak
	0.009MHz-0.090MHz	Average	10kHz	30kHz	Average
	0.090MHz-0.110MHz	Quasi-peak	10kHz	30kHz	Quasi-peak
	0.110MHz-0.490MHz	Peak	10kHz	30kHz	Peak
	0.110MHz-0.490MHz	Average	10kHz	30kHz	Average
	0.490MHz -30MHz	Quasi-peak	10kHz	30kHz	Quasi-peak
	30MHz-1GHz	Quasi-peak	100 kHz	300kHz	Quasi-peak
	Above 1GHz	Peak	1MHz	3MHz	Peak
		Peak	1MHz	10Hz	Average
Limit:	Frequency	Field strength (microvolt/meter)	Limit (dBuV/m)	Remark	Measurement distance (m)
	0.009MHz-0.490MHz	2400/F(kHz)	-	-	300
	0.490MHz-1.705MHz	24000/F(kHz)	-	-	30
	1.705MHz-30MHz	30	-	-	30
	30MHz-88MHz	100	40.0	Quasi-peak	3
	88MHz-216MHz	150	43.5	Quasi-peak	3
	216MHz-960MHz	200	46.0	Quasi-peak	3
	960MHz-1GHz	500	54.0	Quasi-peak	3
	Above 1GHz	500	54.0	Average	3
	Note: 15.35(b), Unless otherwise specified, the limit on peak radio frequency emissions is 20dB above the maximum permitted average emission limit applicable to the equipment under test. This peak limit applies to the total peak emission level radiated by the device.				

**Test Setup:**

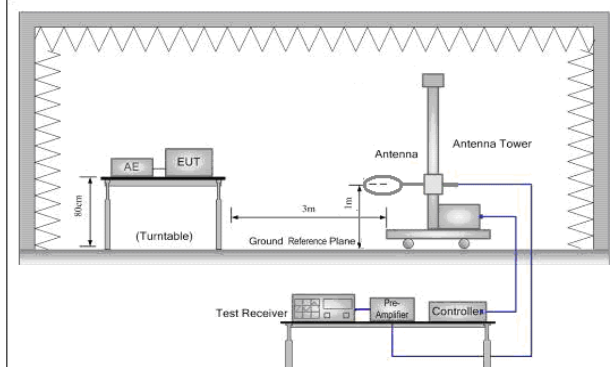


Figure 1. Below 30MHz

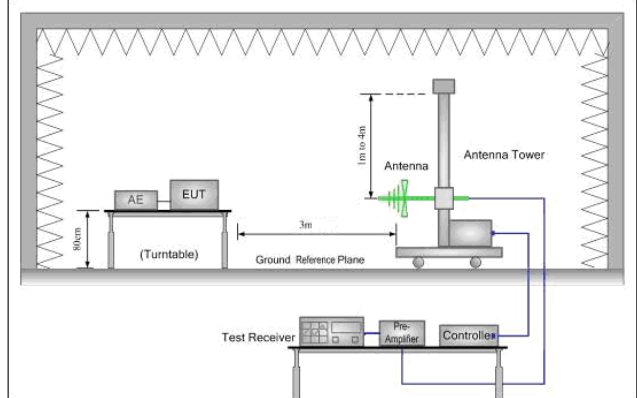


Figure 2. 30MHz to 1GHz

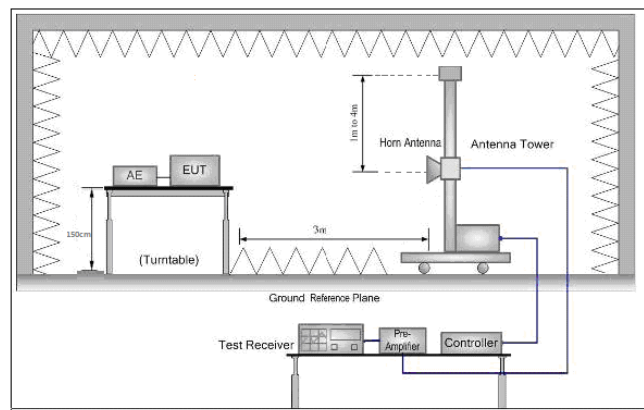


Figure 3. Above 1 GHz

**Test Procedure:**

- For below 1GHz, the EUT was placed on the top of a rotating table 0.8 meters above the ground at a 3 meter semi-anechoic chamber. The table was rotated 360 degrees to determine the position of the highest radiation.
- For above 1GHz, the EUT was placed on the top of a rotating table 1.5 meters above the ground at a 3 meter semi-anechoic chamber. The table was rotated 360 degrees to determine the position of the highest radiation
- The EUT was set 3 meters away from the interference-receiving antenna, which was mounted on the top of a variable-height antenna tower.
- 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.
- 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.
- The test-receiver system was set to Peak Detect Function and Specified Bandwidth with Maximum Hold Mode.
- If the emission level of the EUT in peak mode was 10dB lower than the



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

Report No.: SZEM160700594002

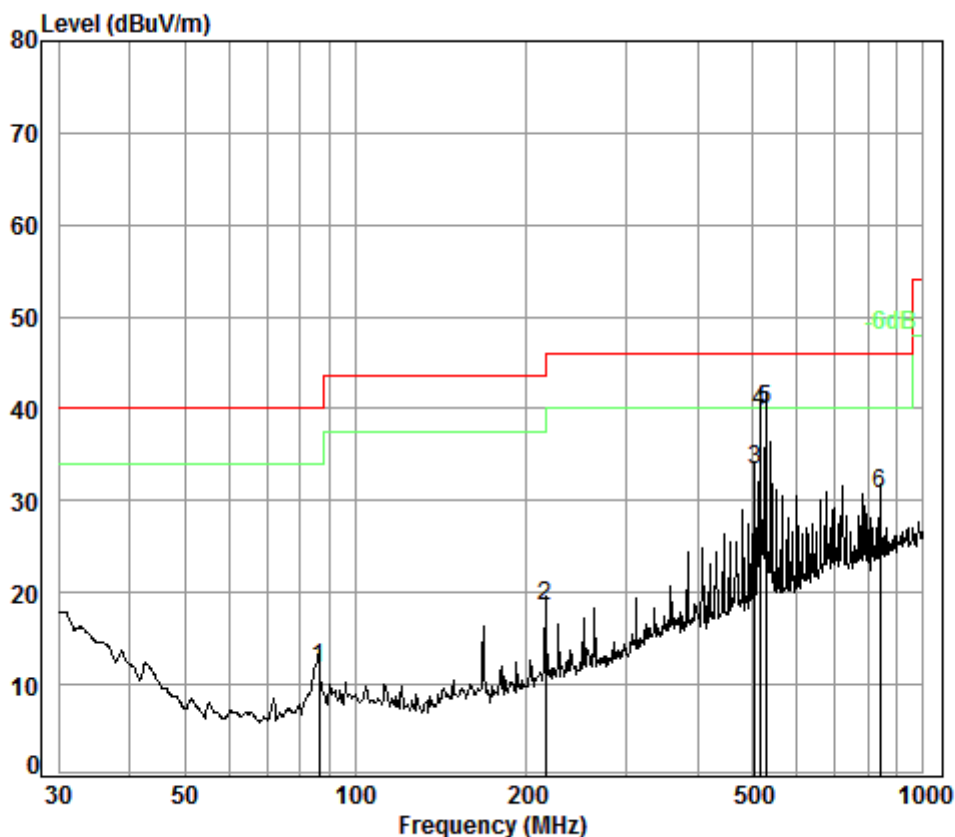
Page: 55 of 80

	<p>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.</p> <p>h. Test the EUT in the lowest channel ,the middle channel ,the Highest channel</p> <p>i. The radiation measurements are performed in X, Y, Z axis positioning for Transmitting mode,And found the X axis positioning which it is worse case.</p> <p>j. Repeat above procedures until all frequencies measured was complete.</p>
Exploratory Test Mode:	<p>Transmitting with all kind of modulations, data rates.</p> <p>Transmitting mode</p>
Final Test Mode:	<p>Pretest the EUT at Transmitting mode, found the Transmitting mode which it is worse case</p> <p>Through Pre-scan, find the 1Mbps of rate is the worst case of 802.11b; 6Mbps of rate is the worst case of 802.11g ; 6.5Mbps of rate is the worst case of 802.11n(HT20)</p> <p>For below 1GHz, through Pre-scan, find the 1Mbps of rate of 802.11b at lowest channel is the worst case.</p> <p>Only the worst case is recorded in the report.</p>
Instruments Used:	Refer to section 5.10 for details
Test Results:	Pass



### 6.7.1 Radiated emission below 1GHz

30MHz~1GHz (QP)		
Test mode:	Transmitting	Vertical



Condition: 3m VERTICAL  
Job No. : 5940CR  
Test mode: TX

	Freq	Cable Loss	Ant Factor	Preamp Factor	Read Level	Level	Limit Line	Over Limit
	MHz	dB	dB/m	dB	dBuV	dBuV/m	dBuV/m	dB
1	86.20	1.10	8.43	27.31	29.51	11.73	40.00	-28.27
2	216.02	1.49	10.99	26.81	32.89	18.56	46.00	-27.44
3	504.71	2.61	17.75	27.50	40.42	33.28	46.00	-12.72
4	515.44	2.62	18.10	27.54	46.49	39.67	46.00	-6.33
5 pp	528.25	2.63	18.48	27.58	46.31	39.84	46.00	-6.16
6	839.18	3.36	22.26	27.21	32.39	30.80	46.00	-15.20



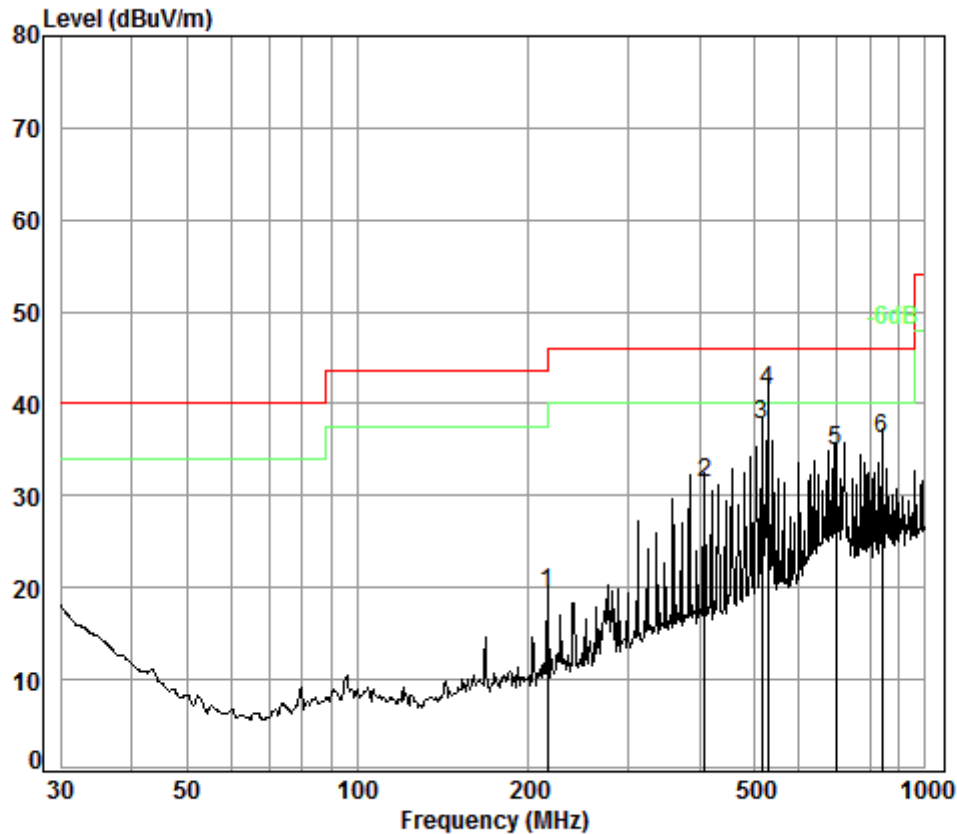


SGS-CSTC Standards Technical Services Co., Ltd.  
Shenzhen Branch

Report No.: SZEM160700594002

Page: 57 of 80

Test mode:	Transmitting	Horizontal
------------	--------------	------------



Condition: 3m HORIZONTAL

Job No. : 5940CR

Test mode: TX

		Cable	Ant	Preamp	Read		Limit	Over
	Freq	Loss	Factor	Factor	Level	Level	Line	Limit
	MHz	dB	dB/m	dB	dBuV	dBuV/m	dBuV/m	dB
1	216.02	1.49	10.99	26.81	33.68	19.35	46.00	-26.65
2	408.95	2.24	16.36	27.14	39.98	31.44	46.00	-14.56
3	515.44	2.62	18.10	27.54	44.44	37.62	46.00	-8.38
4 pp	528.25	2.63	18.48	27.58	47.93	41.46	46.00	-4.54
5	696.86	2.90	21.65	27.59	37.87	34.83	46.00	-11.17
6	839.18	3.36	22.26	27.21	37.78	36.19	46.00	-9.81

"This document is issued by the Company subject to its General Conditions of Service printed overleaf, available on request or accessible at [www.sgs.com/terms\\_and\\_conditions.htm](http://www.sgs.com/terms_and_conditions.htm) and, for electronic format documents, subject to Terms and Conditions for Electronic Documents at [www.sgs.com/terms\\_e-document.htm](http://www.sgs.com/terms_e-document.htm). 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 90 days only."



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

Report No.: SZEM160700594002

Page: 58 of 80

## 6.7.2 Transmitter emission above 1GHz

Test mode:		802.11b		Test channel:		Lowest		Remark:		Peak	
Frequency (MHz)	Antenna Factor (dB/m)	Cable loss (dB)	Preamp Factor (dB)	Read Level (dBuV)	Level (dBuV/m)	Limit Line (dBuV/m)	Over Limit (dB)	Polarization			
3183.356	31.71	7.56	38.23	43.85	44.89	74.00	-29.11	Vertical			
4824.000	34.12	8.90	38.75	51.09	55.36	74.00	-18.64	Vertical			
6087.002	34.74	10.45	38.85	44.96	51.30	74.00	-22.70	Vertical			
7236.000	35.58	10.69	37.63	46.38	55.02	74.00	-18.98	Vertical			
9648.000	37.10	12.52	36.29	32.94	46.27	74.00	-27.73	Vertical			
12208.390	37.70	14.39	37.37	35.72	50.44	74.00	-23.56	Vertical			
3305.395	31.80	7.59	38.28	44.29	45.40	74.00	-28.60	Horizontal			
4824.000	34.12	8.90	38.75	49.88	54.15	74.00	-19.85	Horizontal			
7236.000	35.58	10.69	37.63	47.10	55.74	74.00	-18.26	Horizontal			
8739.783	36.81	11.82	37.22	33.43	44.84	74.00	-29.16	Horizontal			
9643.421	37.10	12.52	36.30	33.53	46.85	74.00	-27.15	Horizontal			
12261.500	37.70	14.34	37.43	36.08	50.69	74.00	-23.31	Horizontal			

Test mode:		802.11b		Test channel:		Lowest		Remark:		Average	
Frequency (MHz)	Antenna Factor (dB/m)	Cable loss (dB)	Preamp Factor (dB)	Read Level (dBuV)	Level (dBuV/m)	Limit Line (dBuV/m)	Over Limit (dB)	Polarization			
4824.000	34.13	8.90	38.75	48.70	52.98	54.00	-1.02	Vertical			
7236.000	35.58	10.69	37.62	43.80	52.45	54.00	-1.55	Vertical			
4824.000	34.12	8.90	38.75	48.11	52.38	54.00	-1.62	Horizontal			
7236.000	35.59	10.69	37.63	43.59	52.24	54.00	-1.76	Horizontal			

"This document is issued by the Company subject to its General Conditions of Service printed overleaf, available on request or accessible at [www.sgs.com/terms\\_and\\_conditions.htm](http://www.sgs.com/terms_and_conditions.htm) and, for electronic format documents, subject to Terms and Conditions for Electronic Documents at [www.sgs.com/terms\\_e-document.htm](http://www.sgs.com/terms_e-document.htm). 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 90 days only."



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

Report No.: SZEM160700594002

Page: 59 of 80

Test mode:		802.11b		Test channel:		Middle		Remark:		Peak	
Frequency (MHz)	Antenna Factor (dB/m)	Cable loss (dB)	Preamp Factor (dB)	Read Level (dBuV)	Level (dBuV/m)	Limit Line (dBuV/m)	Over Limit (dB)	Polarization			
3422.194	31.83	7.61	38.33	44.04	45.15	74.00	-28.85	Vertical			
4874.000	34.17	8.97	38.76	50.35	54.73	74.00	-19.27	Vertical			
7311.000	35.54	10.72	37.59	46.98	55.65	74.00	-18.35	Vertical			
8527.428	36.53	11.85	37.24	32.93	44.07	74.00	-29.93	Vertical			
9748.000	37.10	12.58	36.16	38.41	51.93	74.00	-22.07	Vertical			
12332.670	37.70	14.29	37.49	36.09	50.59	74.00	-23.41	Vertical			
3334.215	31.80	7.59	38.29	43.67	44.77	74.00	-29.23	Horizontal			
4874.000	34.17	8.97	38.76	47.98	52.36	74.00	-21.64	Horizontal			
7311.000	35.54	10.72	37.59	45.99	54.66	74.00	-19.34	Horizontal			
9140.727	36.93	11.98	36.99	30.87	42.79	74.00	-31.21	Horizontal			
9748.000	37.10	12.58	36.16	36.78	50.30	74.00	-23.70	Horizontal			
12243.770	37.70	14.36	37.41	35.72	50.37	74.00	-23.63	Horizontal			

Test mode:		802.11b		Test channel:		Middle		Remark:		Average	
Frequency (MHz)	Antenna Factor (dB/m)	Cable loss (dB)	Preamp Factor (dB)	Read Level (dBuV)	Level (dBuV/m)	Limit Line (dBuV/m)	Over Limit (dB)	Polarization			
4874.000	34.17	8.96	38.76	48.40	52.77	54.00	-1.23	Vertical			
7311.000	35.55	10.72	37.60	41.20	49.87	54.00	-4.13	Vertical			
4874.000	34.17	8.96	38.76	45.80	50.17	54.00	-3.83	Horizontal			
7311.000	35.55	10.72	37.60	40.30	48.97	54.00	-5.03	Horizontal			

"This document is issued by the Company subject to its General Conditions of Service printed overleaf, available on request or accessible at [www.sgs.com/terms\\_and\\_conditions.htm](http://www.sgs.com/terms_and_conditions.htm) and, for electronic format documents, subject to Terms and Conditions for Electronic Documents at [www.sgs.com/terms\\_e-document.htm](http://www.sgs.com/terms_e-document.htm). 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 90 days only."



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

Report No.: SZEM160700594002

Page: 60 of 80

Test mode:		802.11b		Test channel:		Highest		Remark:		Peak	
Frequency (MHz)	Antenna Factor (dB/m)	Cable loss (dB)	Preamp Factor (dB)	Read Level (dBuV)	Level (dBuV/m)	Limit Line (dBuV/m)	Over Limit (dB)	Polarization			
3492.224	31.94	7.63	38.36	44.02	45.23	74.00	-28.77	Vertical			
4924.000	34.22	9.04	38.77	49.84	54.33	74.00	-19.67	Vertical			
7386.000	35.51	10.75	37.56	42.00	50.70	74.00	-23.30	Vertical			
8918.630	36.96	11.80	37.20	34.91	46.47	74.00	-27.53	Vertical			
9848.000	37.15	12.63	36.03	37.23	50.98	74.00	-23.02	Vertical			
12137.940	37.67	14.45	37.31	35.49	50.30	74.00	-23.70	Vertical			
3397.525	31.80	7.61	38.32	44.08	45.17	74.00	-28.83	Horizontal			
4924.000	34.22	9.04	38.77	50.02	54.51	74.00	-19.49	Horizontal			
7386.000	35.51	10.75	37.56	40.56	49.26	74.00	-24.74	Horizontal			
8676.783	36.72	11.83	37.23	32.40	43.72	74.00	-30.28	Horizontal			
9848.000	37.15	12.63	36.03	41.20	54.95	74.00	-19.05	Horizontal			
12120.390	37.66	14.46	37.29	35.89	50.72	74.00	-23.28	Horizontal			

Test mode:		802.11b		Test channel:		Highest		Remark:		Average	
Frequency (MHz)	Antenna Factor (dB/m)	Cable loss (dB)	Preamp Factor (dB)	Read Level (dBuV)	Level (dBuV/m)	Limit Line (dBuV/m)	Over Limit (dB)	Polarization			
4924.000	34.21	9.02	38.77	45.60	50.06	54.00	-3.94	Vertical			
4924.000	34.23	9.04	38.78	46.50	50.99	54.00	-3.01	Horizontal			

"This document is issued by the Company subject to its General Conditions of Service printed overleaf, available on request or accessible at [www.sgs.com/terms\\_and\\_conditions.htm](http://www.sgs.com/terms_and_conditions.htm) and, for electronic format documents, subject to Terms and Conditions for Electronic Documents at [www.sgs.com/terms\\_e-document.htm](http://www.sgs.com/terms_e-document.htm). 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 90 days only."



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

Report No.: SZEM160700594002

Page: 61 of 80

Test mode:		802.11g		Test channel:		Lowest		Remark:		Peak	
Frequency (MHz)	Antenna Factor (dB/m)	Cable loss (dB)	Preamp Factor (dB)	Read Level (dBuV)	Level (dBuV/m)	Limit Line (dBuV/m)	Over Limit (dB)	Polarization			
3770.567	32.78	7.73	38.47	45.86	47.90	74.00	-26.10	Vertical			
4824.000	34.12	8.90	38.75	46.06	50.33	74.00	-23.67	Vertical			
5999.562	34.70	10.56	38.96	46.30	52.60	74.00	-21.40	Vertical			
7236.000	35.58	10.69	37.63	44.09	52.73	74.00	-21.27	Vertical			
9648.000	37.10	12.52	36.29	37.15	50.48	74.00	-23.52	Vertical			
12530.530	37.83	14.24	37.68	37.67	52.06	74.00	-21.94	Vertical			
3727.173	32.61	7.71	38.46	46.35	48.21	74.00	-25.79	Horizontal			
4824.000	34.12	8.90	38.75	47.08	51.35	74.00	-22.65	Horizontal			
6008.249	34.70	10.55	38.95	46.50	52.80	74.00	-21.20	Horizontal			
7236.000	35.58	10.69	37.63	43.80	52.44	74.00	-21.56	Horizontal			
9648.000	37.10	12.52	36.29	36.64	49.97	74.00	-24.03	Horizontal			
12566.850	37.87	14.34	37.72	37.93	52.42	74.00	-21.58	Horizontal			

Test mode:		802.11g		Test channel:		Middle		Remark:		Peak	
Frequency (MHz)	Antenna Factor (dB/m)	Cable loss (dB)	Preamp Factor (dB)	Read Level (dBuV)	Level (dBuV/m)	Limit Line (dBuV/m)	Over Limit (dB)	Polarization			
3599.965	32.10	7.67	38.41	46.39	47.75	74.00	-26.25	Vertical			
4874.000	34.17	8.97	38.76	46.21	50.59	74.00	-23.41	Vertical			
6025.661	34.71	10.53	38.93	46.40	52.71	74.00	-21.29	Vertical			
7311.000	35.54	10.72	37.59	42.28	50.95	74.00	-23.05	Vertical			
9748.000	37.10	12.58	36.16	37.28	50.80	74.00	-23.20	Vertical			
12566.850	37.87	14.34	37.72	37.91	52.40	74.00	-21.60	Vertical			
3705.664	32.53	7.71	38.45	46.23	48.02	74.00	-25.98	Horizontal			
4874.000	34.17	8.97	38.76	47.56	51.94	74.00	-22.06	Horizontal			
5999.562	34.70	10.56	38.96	47.00	53.30	74.00	-20.70	Horizontal			
7311.000	35.54	10.72	37.59	41.25	49.92	74.00	-24.08	Horizontal			
9748.000	37.10	12.58	36.16	37.43	50.95	74.00	-23.05	Horizontal			
12585.040	37.89	14.39	37.73	37.43	51.98	74.00	-22.02	Horizontal			

"This document is issued by the Company subject to its General Conditions of Service printed overleaf, available on request or accessible at [www.sgs.com/terms\\_and\\_conditions.htm](http://www.sgs.com/terms_and_conditions.htm) and, for electronic format documents, subject to Terms and Conditions for Electronic Documents at [www.sgs.com/terms\\_e-document.htm](http://www.sgs.com/terms_e-document.htm). 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 90 days only."



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

Report No.: SZEM160700594002

Page: 62 of 80

Test mode:		802.11g		Test channel:		Highest		Remark:		Peak	
Frequency (MHz)	Antenna Factor (dB/m)	Cable loss (dB)	Preamp Factor (dB)	Read Level (dBuV)	Level (dBuV/m)	Limit Line (dBuV/m)	Over Limit (dB)	Polarization			
3759.672	32.74	7.73	38.47	45.75	47.75	74.00	-26.25	Vertical			
4924.000	34.22	9.04	38.77	47.60	52.09	74.00	-21.91	Vertical			
6016.949	34.71	10.54	38.94	46.40	52.71	74.00	-21.29	Vertical			
7386.000	35.51	10.75	37.56	40.69	49.39	74.00	-24.61	Vertical			
9848.000	37.15	12.63	36.03	37.49	51.24	74.00	-22.76	Vertical			
12530.530	37.83	14.24	37.68	37.32	51.71	74.00	-22.29	Vertical			
3641.878	32.27	7.68	38.42	46.07	47.60	74.00	-26.40	Horizontal			
4924.000	34.22	9.04	38.77	48.80	53.29	74.00	-20.71	Horizontal			
5999.562	34.70	10.56	38.96	46.41	52.71	74.00	-21.29	Horizontal			
7386.000	35.51	10.75	37.56	42.65	51.35	74.00	-22.65	Horizontal			
9848.000	37.15	12.63	36.03	37.37	51.12	74.00	-22.88	Horizontal			
12494.320	37.79	14.15	37.65	38.00	52.29	74.00	-21.71	Horizontal			

Test mode:		802.11n(HT20)		Test channel:		Lowest		Remark:		Peak	
Frequency (MHz)	Antenna Factor (dB/m)	Cable loss (dB)	Preamp Factor (dB)	Read Level (dBuV)	Level (dBuV/m)	Limit Line (dBuV/m)	Over Limit (dB)	Polarization			
3770.567	32.78	7.73	38.47	45.86	47.90	74.00	-26.10	Vertical			
4824.000	34.12	8.90	38.75	46.06	50.33	74.00	-23.67	Vertical			
5999.562	34.70	10.56	38.96	46.30	52.60	74.00	-21.40	Vertical			
7236.000	35.58	10.69	37.63	44.09	52.73	74.00	-21.27	Vertical			
9648.000	37.10	12.52	36.29	37.15	50.48	74.00	-23.52	Vertical			
12530.530	37.83	14.24	37.68	37.67	52.06	74.00	-21.94	Vertical			
3727.173	32.61	7.71	38.46	46.35	48.21	74.00	-25.79	Horizontal			
4824.000	34.12	8.90	38.75	47.08	51.35	74.00	-22.65	Horizontal			
6008.249	34.70	10.55	38.95	46.50	52.80	74.00	-21.20	Horizontal			
7236.000	35.58	10.69	37.63	43.80	52.44	74.00	-21.56	Horizontal			
9648.000	37.10	12.52	36.29	36.64	49.97	74.00	-24.03	Horizontal			
12566.850	37.87	14.34	37.72	37.93	52.42	74.00	-21.58	Horizontal			

"This document is issued by the Company subject to its General Conditions of Service printed overleaf, available on request or accessible at [www.sgs.com/terms\\_and\\_conditions.htm](http://www.sgs.com/terms_and_conditions.htm) and, for electronic format documents, subject to Terms and Conditions for Electronic Documents at [www.sgs.com/terms\\_e-document.htm](http://www.sgs.com/terms_e-document.htm). 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 90 days only."



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

Report No.: SZEM160700594002

Page: 63 of 80

Test mode:		802.11n(HT20)		Test channel:		Middle		Remark:		Peak	
Frequency (MHz)	Antenna Factor (dB/m)	Cable loss (dB)	Preamp Factor (dB)	Read Level (dBuV)	Level (dBuV/m)	Limit Line (dBuV/m)	Over Limit (dB)	Polarization			
3599.965	32.10	7.67	38.41	46.39	47.75	74.00	-26.25	Vertical			
4874.000	34.17	8.97	38.76	46.21	50.59	74.00	-23.41	Vertical			
6025.661	34.71	10.53	38.93	46.40	52.71	74.00	-21.29	Vertical			
7311.000	35.54	10.72	37.59	42.28	50.95	74.00	-23.05	Vertical			
9748.000	37.10	12.58	36.16	37.28	50.80	74.00	-23.20	Vertical			
12566.850	37.87	14.34	37.72	37.91	52.40	74.00	-21.60	Vertical			
3705.664	32.53	7.71	38.45	46.23	48.02	74.00	-25.98	Horizontal			
4874.000	34.17	8.97	38.76	47.56	51.94	74.00	-22.06	Horizontal			
5999.562	34.70	10.56	38.96	47.00	53.30	74.00	-20.70	Horizontal			
7311.000	35.54	10.72	37.59	41.25	49.92	74.00	-24.08	Horizontal			
9748.000	37.10	12.58	36.16	37.43	50.95	74.00	-23.05	Horizontal			
12585.040	37.89	14.39	37.73	37.43	51.98	74.00	-22.02	Horizontal			

Test mode:		802.11n(HT20)		Test channel:		Highest		Remark:		Peak	
Frequency (MHz)	Antenna Factor (dB/m)	Cable loss (dB)	Preamp Factor (dB)	Read Level (dBuV)	Level (dBuV/m)	Limit Line (dBuV/m)	Over Limit (dB)	Polarization			
3759.672	32.74	7.73	38.47	45.75	47.75	74.00	-26.25	Vertical			
4924.000	34.22	9.04	38.77	47.60	52.09	74.00	-21.91	Vertical			
6016.949	34.71	10.54	38.94	46.40	52.71	74.00	-21.29	Vertical			
7386.000	35.51	10.75	37.56	40.69	49.39	74.00	-24.61	Vertical			
9848.000	37.15	12.63	36.03	37.49	51.24	74.00	-22.76	Vertical			
12530.530	37.83	14.24	37.68	37.32	51.71	74.00	-22.29	Vertical			
3641.878	32.27	7.68	38.42	46.07	47.60	74.00	-26.40	Horizontal			
4924.000	34.22	9.04	38.77	48.80	53.29	74.00	-20.71	Horizontal			
5999.562	34.70	10.56	38.96	46.41	52.71	74.00	-21.29	Horizontal			
7386.000	35.51	10.75	37.56	42.65	51.35	74.00	-22.65	Horizontal			
9848.000	37.15	12.63	36.03	37.37	51.12	74.00	-22.88	Horizontal			
12494.320	37.79	14.15	37.65	38.00	52.29	74.00	-21.71	Horizontal			

"This document is issued by the Company subject to its General Conditions of Service printed overleaf, available on request or accessible at [www.sgs.com/terms\\_and\\_conditions.htm](http://www.sgs.com/terms_and_conditions.htm) and, for electronic format documents, subject to Terms and Conditions for Electronic Documents at [www.sgs.com/terms\\_e-document.htm](http://www.sgs.com/terms_e-document.htm). 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 90 days only."





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

Report No.: SZEM160700594002

Page: 64 of 80

Remark:

- 1) The field strength is calculated by adding the Antenna Factor, Cable Factor & Preamplifier. The basic equation with a sample calculation is as follows:  
Final Test Level = Receiver Reading + Antenna Factor + Cable Factor – Preamplifier Factor
- 2) Scan from 9kHz to 25GHz, The disturbance above 13GHz and below 30MHz was very low, and the above harmonics were the highest point could be found when testing, so only the above harmonics had been displayed. The amplitude of spurious emissions from the radiator which are attenuated more than 20dB below the limit need not be reported .
- 3) As shown in this section, for frequencies above 1GHz, the field strength limits are based on average limits.



## 6.8 Restricted bands around fundamental frequency

Test Requirement:	47 CFR Part 15C Section 15.209 and 15.205		
Test Method:	ANSI C63.10: 2013 Section 11.12		
Test Site:	Measurement Distance: 3m (Semi-Anechoic Chamber)		
Limit:	Frequency	Limit (dBuV/m @3m)	Remark
	30MHz-88MHz	40.0	Quasi-peak Value
	88MHz-216MHz	43.5	Quasi-peak Value
	216MHz-960MHz	46.0	Quasi-peak Value
	960MHz-1GHz	54.0	Quasi-peak Value
	Above 1GHz	54.0	Average Value
		74.0	Peak Value

### Test Setup:

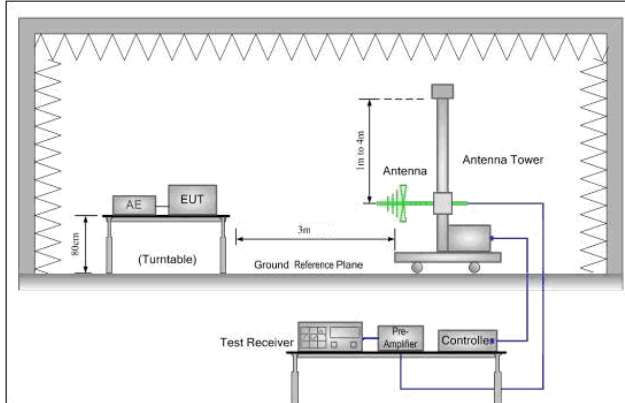


Figure 1. 30MHz to 1GHz

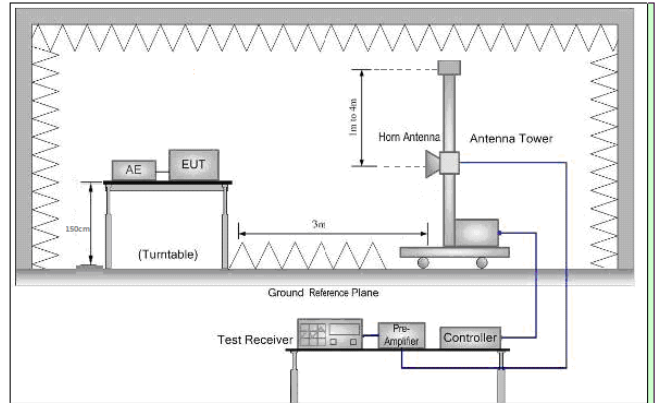


Figure 2. Above 1 GHz



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

Report No.: SZEM160700594002

Page: 66 of 80

Test Procedure:	<ul style="list-style-type: none"><li>a. For below 1GHz, the EUT was placed on the top of a rotating table 0.8 meters above the ground at a 3 meter semi-anechoic chamber. The table was rotated 360 degrees to determine the position of the highest radiation.</li><li>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 semi-anechoic chamber. The table was rotated 360 degrees to determine the position of the highest radiation.</li><li>c. The EUT was set 3 meters away from the interference-receiving antenna, which was mounted on the top of a variable-height antenna tower.</li><li>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.</li><li>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 and the rotatable table was turned from 0 degrees to 360 degrees to find the maximum reading.</li><li>f. The test-receiver system was set to Peak Detect Function and Specified Bandwidth with Maximum Hold Mode.</li><li>g. Place a marker at the end of the restricted band closest to the transmit frequency to show compliance. Also measure any emissions in the restricted bands. Save the spectrum analyzer plot. Repeat for each power and modulation for lowest and highest channel</li><li>h. Test the EUT in the lowest channel , the Highest channel</li><li>i. The radiation measurements are performed in X, Y, Z axis positioning for Transmitting mode, And found the X axis positioning which it is worse case.</li><li>j. Repeat above procedures until all frequencies measured was complete.</li></ul>
Exploratory Test Mode:	Transmitting with all kind of modulations, data rates.
Final Test Mode:	Transmitting mode Through Pre-scan, find the 1Mbps of rate is the worst case of 802.11b; 6Mbps of rate is the worst case of 802.11g ; 6.5Mbps of rate is the worst case of 802.11n(HT20) Only the worst case is recorded in the report.
Instruments Used:	Refer to section 5.10 for details
Test Results:	Pass



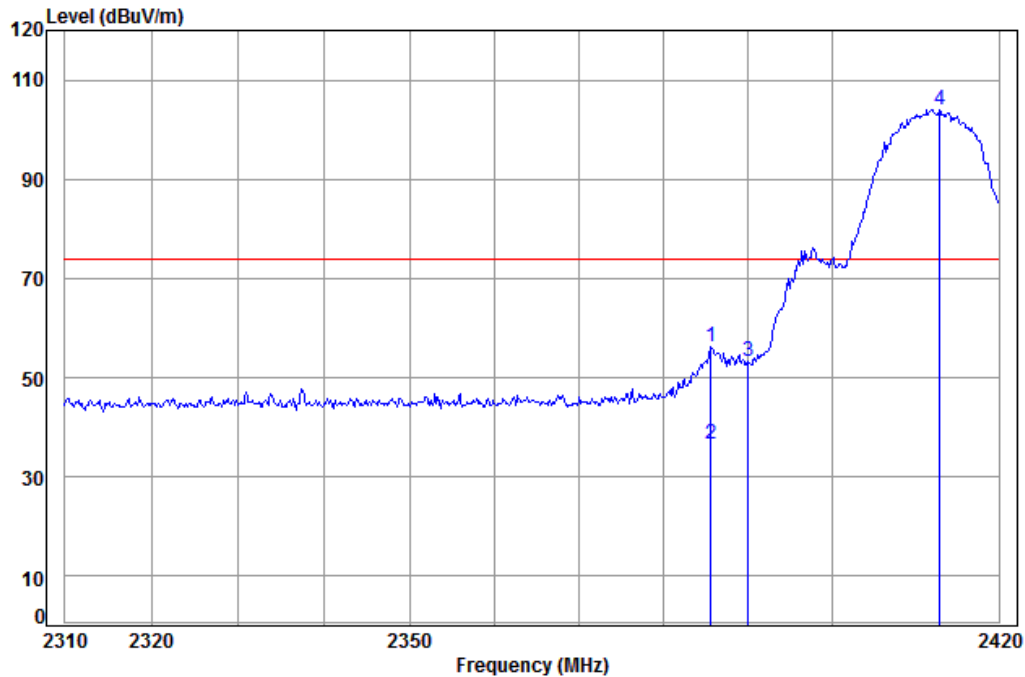
# SGS-CSTC Standards Technical Services Co., Ltd. Shenzhen Branch

Report No.: SZEM160700594002

Page: 67 of 80

Test plot as follows:

Worse case mode:	802.11b	Test channel:	Lowest	Remark:	Peak	Vertical
------------------	---------	---------------	--------	---------	------	----------



Condition: 3m Vertical

Job No: : 5940CR

Mode: : 2412 Band edge

: B

	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	2385.573	5.33	28.56	38.11	60.30	56.08	74.00	-17.92	
2 av	2385.573	5.33	28.56	38.11	41.00	36.78	54.00	-17.22	Average
3	2390.000	5.34	28.57	38.11	57.52	53.32	74.00	-20.68	
4 pp	2412.918	5.35	28.66	38.11	108.23	104.13	74.00	30.13	

"This document is issued by the Company subject to its General Conditions of Service printed overleaf, available on request or accessible at [www.sgs.com/terms\\_and\\_conditions.htm](http://www.sgs.com/terms_and_conditions.htm) and, for electronic format documents, subject to Terms and Conditions for Electronic Documents at [www.sgs.com/terms\\_e-document.htm](http://www.sgs.com/terms_e-document.htm). 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 90 days only."

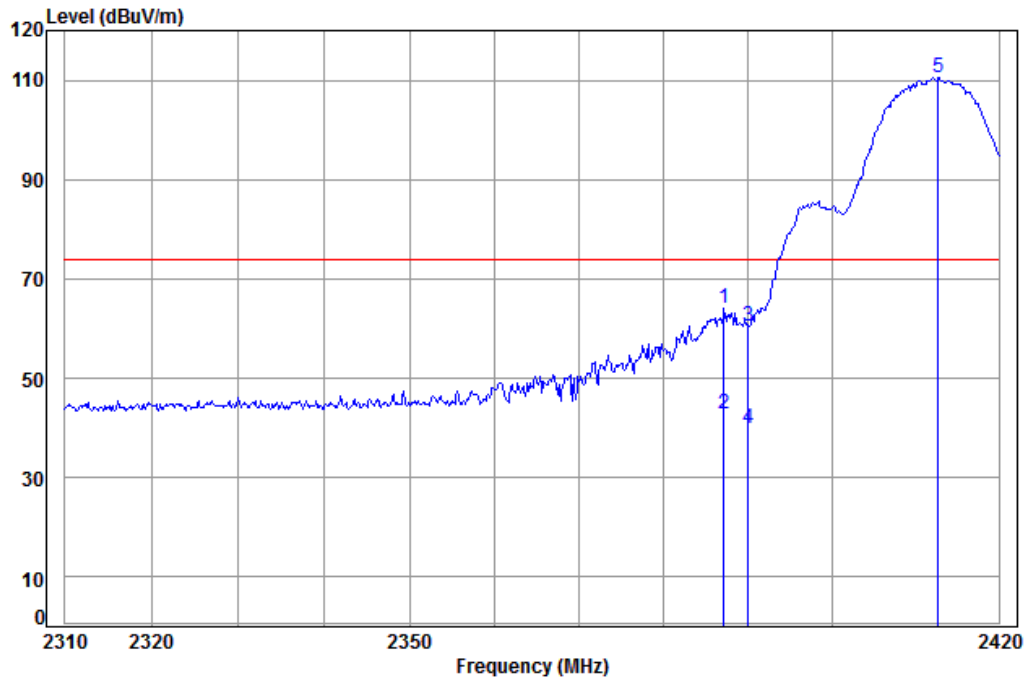


# SGS-CSTC Standards Technical Services Co., Ltd. Shenzhen Branch

Report No.: SZEM160700594002

Page: 68 of 80

Worse case mode:	802.11b	Test channel:	Lowest	Remark:	Peak	Horizontal
------------------	---------	---------------	--------	---------	------	------------



Condition: 3m Horizontal

Job No: : 5940CR

Mode: : 2412 Band edge

: B

	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	2387.127	5.34	28.56	38.11	68.31	64.10	74.00	-9.90	
2 av	2387.127	5.34	28.56	38.11	47.00	42.79	54.00	-11.21	Average
3	2390.000	5.34	28.57	38.11	64.75	60.55	74.00	-13.45	
4	2390.000	5.34	28.57	38.11	44.00	39.80	54.00	-14.20	Average
5 pp	2412.693	5.35	28.66	38.11	114.60	110.50	74.00	36.50	

"This document is issued by the Company subject to its General Conditions of Service printed overleaf, available on request or accessible at [www.sgs.com/terms\\_and\\_conditions.htm](http://www.sgs.com/terms_and_conditions.htm) and, for electronic format documents, subject to Terms and Conditions for Electronic Documents at [www.sgs.com/terms\\_e-document.htm](http://www.sgs.com/terms_e-document.htm). 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 90 days only."

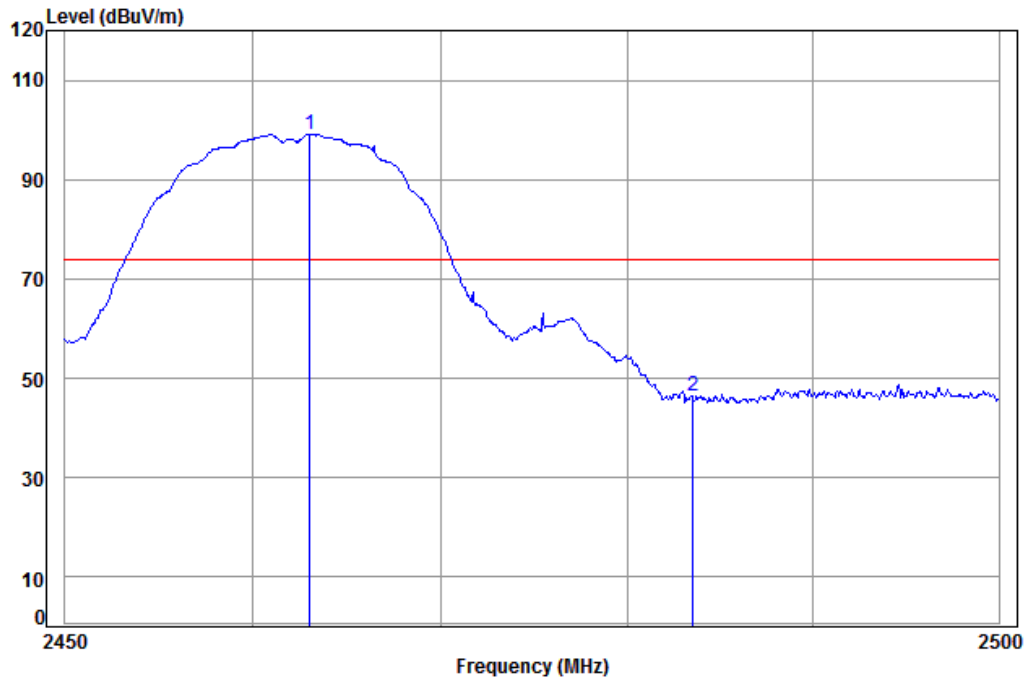


# SGS-CSTC Standards Technical Services Co., Ltd. Shenzhen Branch

Report No.: SZEM160700594002

Page: 69 of 80

Worse case mode:	802.11b	Test channel:	Lowest	Remark:	Average	Vertical
------------------	---------	---------------	--------	---------	---------	----------



Condition: 3m Vertical

Job No: : 5940CR

Mode: : 2462 Band edge

: B

	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 pp	2463.002	5.39	28.89	38.12	103.03	99.19	74.00	25.19	
2	2483.500	5.41	28.98	38.12	50.02	46.29	74.00	-27.71	

"This document is issued by the Company subject to its General Conditions of Service printed overleaf, available on request or accessible at [www.sgs.com/terms\\_and\\_conditions.htm](http://www.sgs.com/terms_and_conditions.htm) and, for electronic format documents, subject to Terms and Conditions for Electronic Documents at [www.sgs.com/terms\\_e-document.htm](http://www.sgs.com/terms_e-document.htm). 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 90 days only."

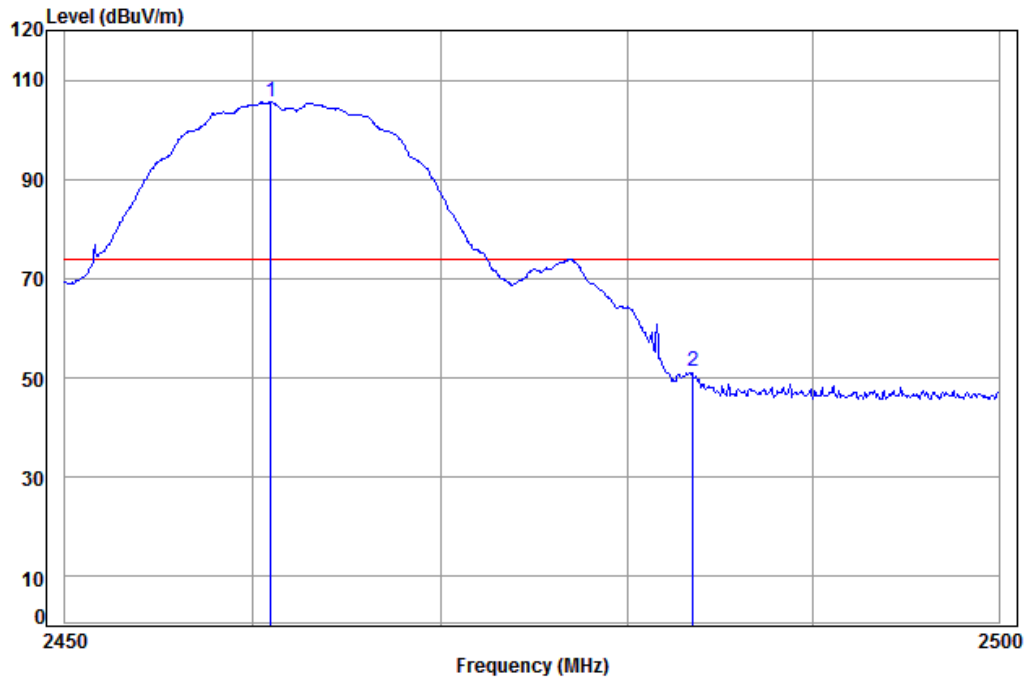


# SGS-CSTC Standards Technical Services Co., Ltd. Shenzhen Branch

Report No.: SZEM160700594002

Page: 70 of 80

Worse case mode:	802.11b	Test channel:	Lowest	Remark:	Average	Horizontal
------------------	---------	---------------	--------	---------	---------	------------



Condition: 3m Horizontal  
Job No: : 5940CR  
Mode: : 2462 Band edge  
: B

	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 pp	2460.914	5.39	28.88	38.12	109.34	105.49	74.00	31.49	
2	2483.500	5.41	28.98	38.12	55.03	51.30	74.00	-22.70	

"This document is issued by the Company subject to its General Conditions of Service printed overleaf, available on request or accessible at [www.sgs.com/terms\\_and\\_conditions.htm](http://www.sgs.com/terms_and_conditions.htm) and, for electronic format documents, subject to Terms and Conditions for Electronic Documents at [www.sgs.com/terms\\_e-document.htm](http://www.sgs.com/terms_e-document.htm). 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 90 days only."

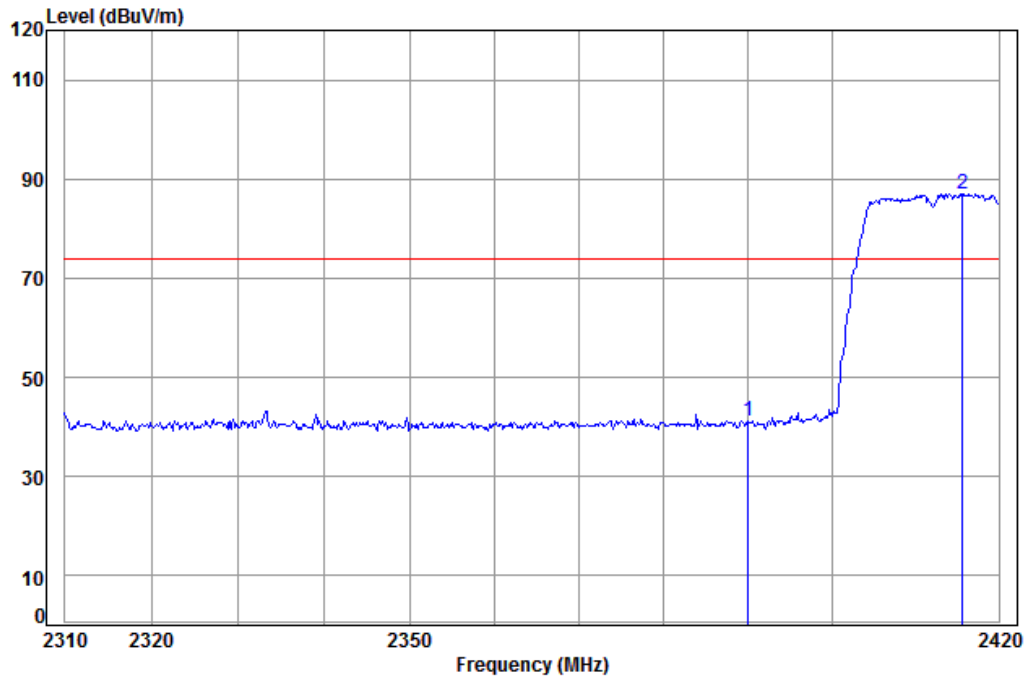


# SGS-CSTC Standards Technical Services Co., Ltd. Shenzhen Branch

Report No.: SZEM160700594002

Page: 71 of 80

Worse case mode:	802.11g	Test channel:	Lowest	Remark:	Peak	Vertical
------------------	---------	---------------	--------	---------	------	----------



Condition: 3m Vertical

Job No: : 5940CR

Mode: : 2412 Band edge

: G

	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	2390.000	5.34	28.57	38.11	45.26	41.06	74.00	-32.94	
2 pp	2415.614	5.36	28.67	38.11	91.19	87.11	74.00	13.11	

"This document is issued by the Company subject to its General Conditions of Service printed overleaf, available on request or accessible at [www.sgs.com/terms\\_and\\_conditions.htm](http://www.sgs.com/terms_and_conditions.htm) and, for electronic format documents, subject to Terms and Conditions for Electronic Documents at [www.sgs.com/terms\\_e-document.htm](http://www.sgs.com/terms_e-document.htm). 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 90 days only."

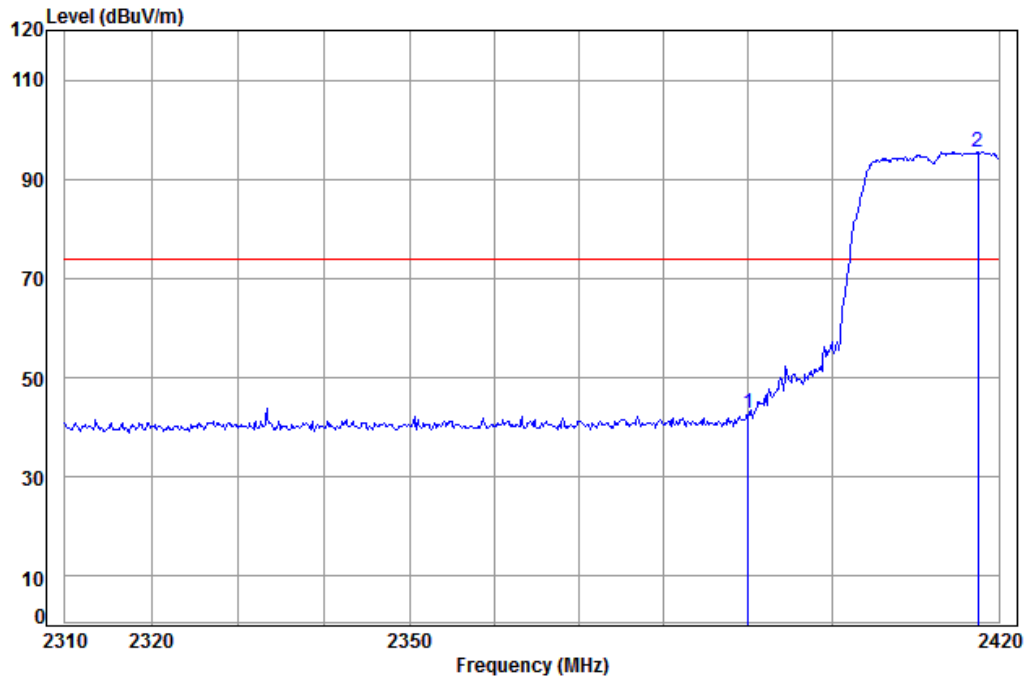


# SGS-CSTC Standards Technical Services Co., Ltd. Shenzhen Branch

Report No.: SZEM160700594002

Page: 72 of 80

Worse case mode:	802.11g	Test channel:	Lowest	Remark:	Peak	Horizontal
------------------	---------	---------------	--------	---------	------	------------



Condition: 3m Horizontal

Job No: : 5940CR

Mode: : 2412 Band edge

: G

	Freq	Cable Loss	Ant Factor	Preamplifier Factor	Read Level	Level	Limit Line	Over Limit	Remark
	MHz	dB	dB/m	dB	dBuV	dBuV/m	dBuV/m	dB	
1	2390.000	5.34	28.57	38.11	47.19	42.99	74.00	-31.01	
2 pp	2417.525	5.36	28.68	38.11	99.69	95.62	74.00	21.62	

"This document is issued by the Company subject to its General Conditions of Service printed overleaf, available on request or accessible at [www.sgs.com/terms\\_and\\_conditions.htm](http://www.sgs.com/terms_and_conditions.htm) and, for electronic format documents, subject to Terms and Conditions for Electronic Documents at [www.sgs.com/terms\\_e-document.htm](http://www.sgs.com/terms_e-document.htm). 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 90 days only."



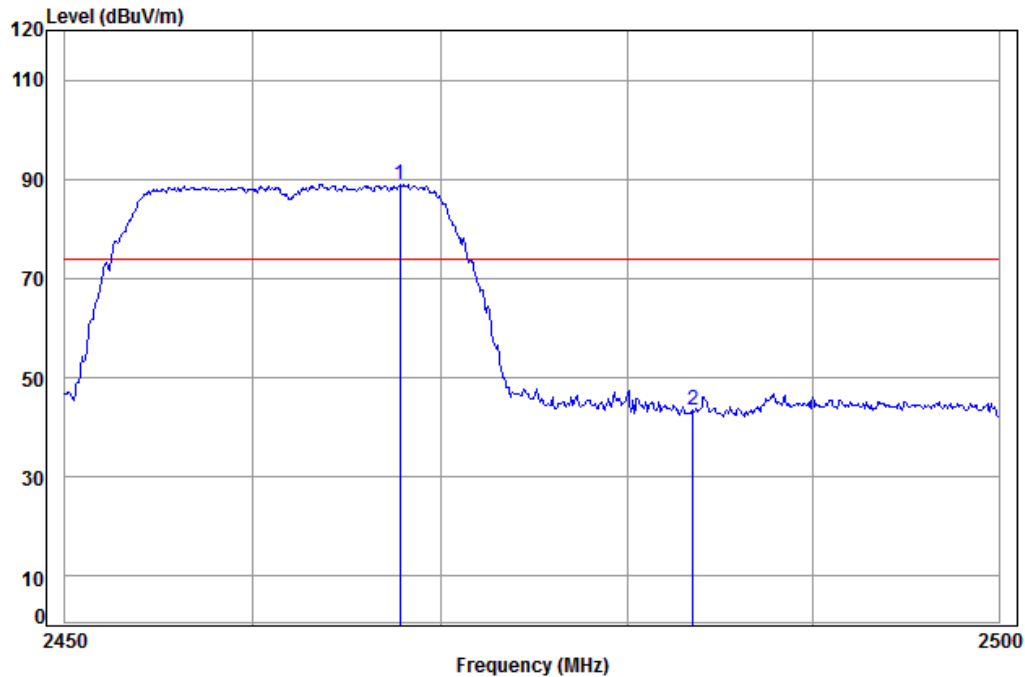


# SGS-CSTC Standards Technical Services Co., Ltd. Shenzhen Branch

Report No.: SZEM160700594002

Page: 73 of 80

Worse case mode:	802.11g	Test channel:	Highest	Remark:	Peak	Vertical
------------------	---------	---------------	---------	---------	------	----------



Condition: 3m Vertical

Job No: : 5940CR

Mode: : 2462 Band edge

: G

	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 pp	2467.834	5.40	28.91	38.12	92.77	88.96	74.00	14.96	
2	2483.500	5.41	28.98	38.12	47.26	43.53	74.00	-30.47	

"This document is issued by the Company subject to its General Conditions of Service printed overleaf, available on request or accessible at [www.sgs.com/terms\\_and\\_conditions.htm](http://www.sgs.com/terms_and_conditions.htm) and, for electronic format documents, subject to Terms and Conditions for Electronic Documents at [www.sgs.com/terms\\_e-document.htm](http://www.sgs.com/terms_e-document.htm). 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 90 days only."

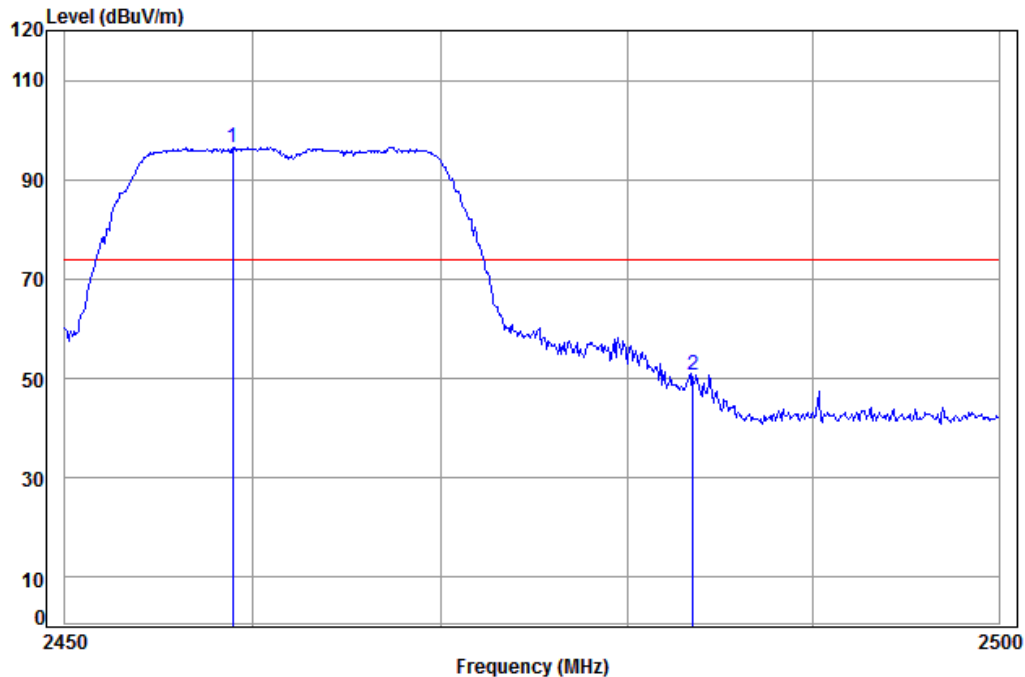


# SGS-CSTC Standards Technical Services Co., Ltd. Shenzhen Branch

Report No.: SZEM160700594002

Page: 74 of 80

Worse case mode:	802.11g	Test channel:	Highest	Remark:	Peak	Horizontal
------------------	---------	---------------	---------	---------	------	------------



Condition: 3m Horizontal

Job No: : 5940CR

Mode: : 2462 Band edge

: G

	Freq	Cable Loss	Ant Factor	Preamplifier Factor	Read Level	Level	Limit Line	Over Limit	Remark
	MHz	dB	dB/m	dB	dBuV	dBuV/m	dBuV/m	dB	
1 pp	2458.926	5.39	28.87	38.12	100.27	96.41	74.00	22.41	
2	2483.500	5.41	28.98	38.12	54.36	50.63	74.00	-23.37	

"This document is issued by the Company subject to its General Conditions of Service printed overleaf, available on request or accessible at [www.sgs.com/terms\\_and\\_conditions.htm](http://www.sgs.com/terms_and_conditions.htm) and, for electronic format documents, subject to Terms and Conditions for Electronic Documents at [www.sgs.com/terms\\_e-document.htm](http://www.sgs.com/terms_e-document.htm). 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 90 days only."

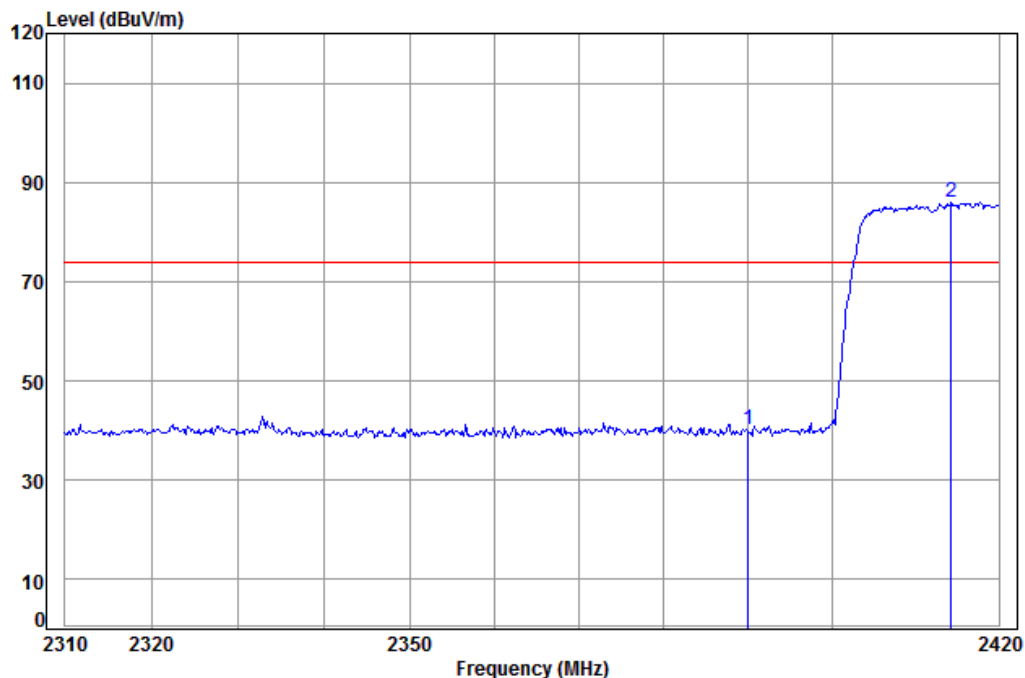


# SGS-CSTC Standards Technical Services Co., Ltd. Shenzhen Branch

Report No.: SZEM160700594002

Page: 75 of 80

Worse case mode:	802.11n(HT20)	Test channel:	Lowest	Remark:	Peak	Vertical
------------------	---------------	---------------	--------	---------	------	----------



Condition: 3m Vertical

Job No: : 5940CR

Mode: : 2412 Band edge

: N20

	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	2390.000	5.34	28.57	38.11	44.56	40.36	74.00	-33.64	
2 pp	2414.265	5.36	28.67	38.11	90.03	85.95	74.00	11.95	

"This document is issued by the Company subject to its General Conditions of Service printed overleaf, available on request or accessible at [www.sgs.com/terms\\_and\\_conditions.htm](http://www.sgs.com/terms_and_conditions.htm) and, for electronic format documents, subject to Terms and Conditions for Electronic Documents at [www.sgs.com/terms\\_e-document.htm](http://www.sgs.com/terms_e-document.htm). 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 90 days only."

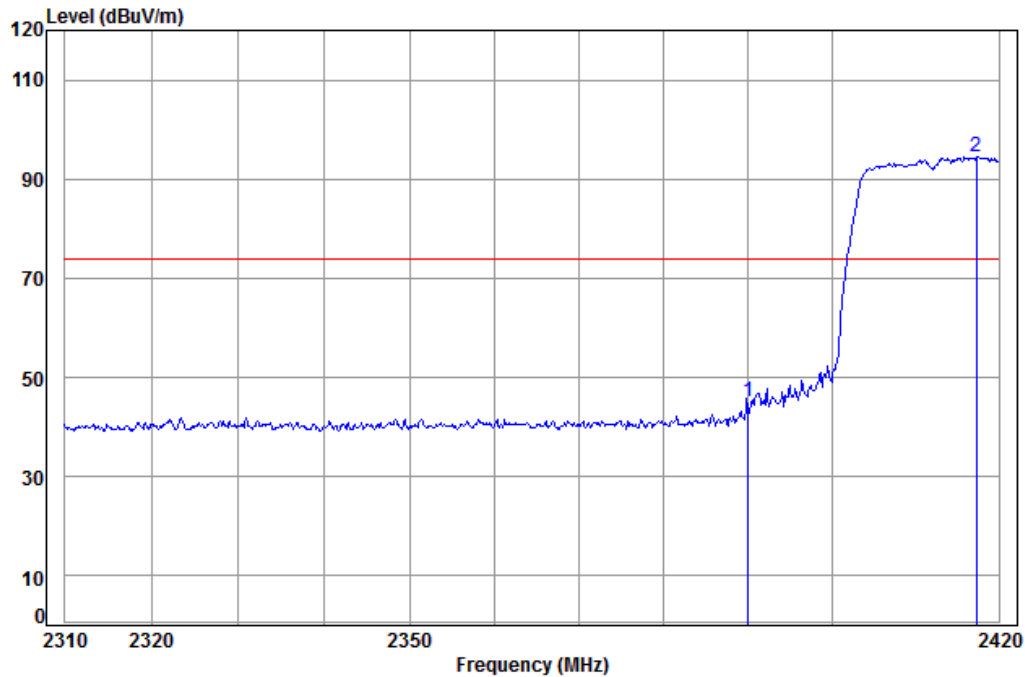


# SGS-CSTC Standards Technical Services Co., Ltd. Shenzhen Branch

Report No.: SZEM160700594002

Page: 76 of 80

Worse case mode:	802.11n(HT20)	Test channel:	Lowest	Remark:	Peak	Horizontal
------------------	---------------	---------------	--------	---------	------	------------



Condition: 3m Horizontal

Job No: : 5940CR

Mode: : 2412 Band edge

: N20

	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	2390.000	5.34	28.57	38.11	49.28	45.08	74.00	-28.92	
2 pp	2417.300	5.36	28.68	38.11	98.64	94.57	74.00	20.57	

"This document is issued by the Company subject to its General Conditions of Service printed overleaf, available on request or accessible at [www.sgs.com/terms\\_and\\_conditions.htm](http://www.sgs.com/terms_and_conditions.htm) and, for electronic format documents, subject to Terms and Conditions for Electronic Documents at [www.sgs.com/terms\\_e-document.htm](http://www.sgs.com/terms_e-document.htm). 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 90 days only."

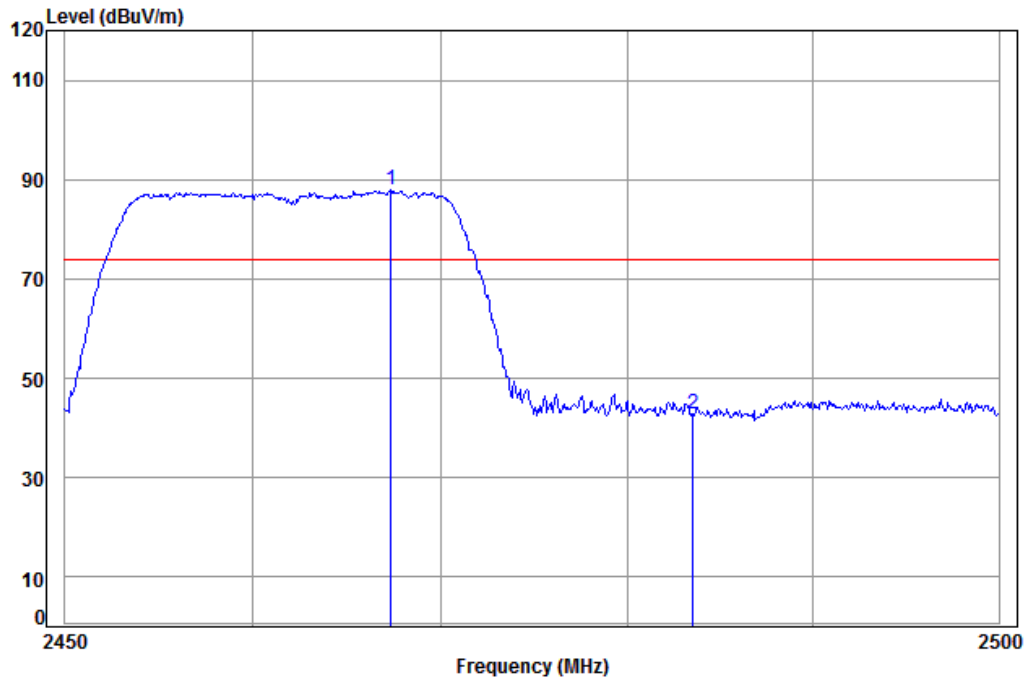


SGS-CSTC Standards Technical Services Co., Ltd.  
Shenzhen Branch

Report No.: SZEM160700594002

Page: 77 of 80

Worse case mode:	802.11n(HT20)	Test channel:	Highest	Remark:	Peak	Vertical
------------------	---------------	---------------	---------	---------	------	----------



Condition: 3m Vertical

Job No: : 5940CR

Mode: : 2462 Band edge

: N20

		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 pp	2467.335	5.40	28.91	38.12	91.70	87.89	74.00	13.89
2	2483.500	5.41	28.98	38.12	46.53	42.80	74.00	-31.20

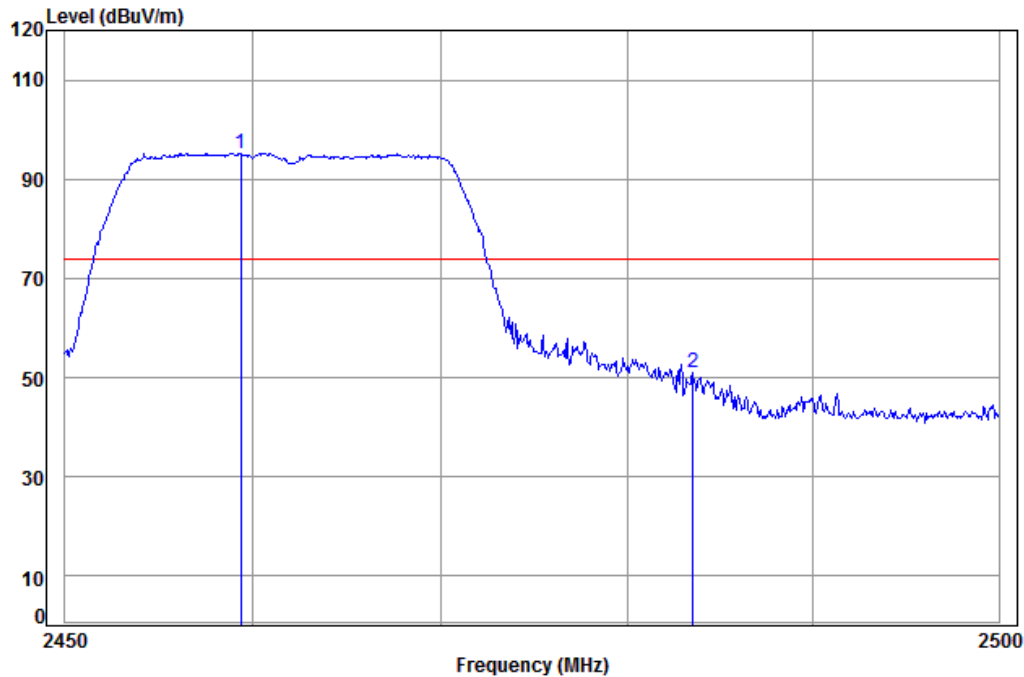


# SGS-CSTC Standards Technical Services Co., Ltd. Shenzhen Branch

Report No.: SZEM160700594002

Page: 78 of 80

Worse case mode:	802.11n(HT20)	Test channel:	Highest	Remark:	Peak	Horizontal
------------------	---------------	---------------	---------	---------	------	------------



Condition: 3m Horizontal  
Job No: : 5940CR  
Mode: : 2462 Band edge  
: N20

	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 pp	2459.323	5.39	28.87	38.12	99.13	95.27	74.00	21.27	
2	2483.500	5.41	28.98	38.12	54.66	50.93	74.00	-23.07	

## Note:

The field strength is calculated by adding the Antenna Factor, Cable Factor & Preamplifier. The basic equation with a sample calculation is as follows:

*Final Test Level = Receiver Reading + Antenna Factor + Cable Factor – Preamplifier Factor*

"This document is issued by the Company subject to its General Conditions of Service printed overleaf, available on request or accessible at [www.sgs.com/terms\\_and\\_conditions.htm](http://www.sgs.com/terms_and_conditions.htm) and, for electronic format documents, subject to Terms and Conditions for Electronic Documents at [www.sgs.com/terms\\_e-document.htm](http://www.sgs.com/terms_e-document.htm). 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 90 days only."

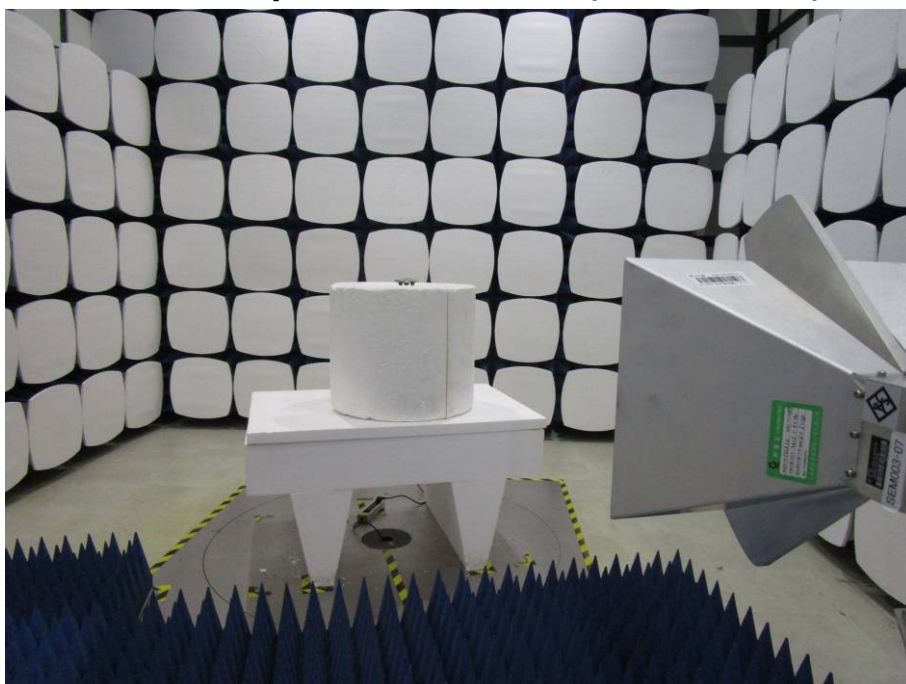
## 7 Photographs - EUT Test Setup

Test model No.:44565RX

### 7.1 Radiated Spurious Emission (below 1GHz)



### 7.2 Radiated Spurious Emission(above 1GHz)





## **8 Photographs - EUT Constructional Details**

Refer to Appendix A - Photographs of EUT Constructional Details for SZEM1607005940CR.