

# **FCC Part 15C Test Report**

Report No.: BCTC-FY161004260E

**FCC ID: 2AKFO-1304H** 

Product Name:	Wireless NVR Kit
Trademark:	N/A
Model Name :	XF-1304H-W-K XF1104H-W-K, XF1104F-W-K, XF1304S-W-K, XF1304F-W-K, XF1514S-W-K, XF1514H-W-K, XF1504F-W-K, XF1518H-W-K, XF1518F-W-K, XF1604S-W-K, XF1604H-W-K, XF1604F-W-K, XF1608H-W-K, XF1608F-W-K, XF1704H-W-K, XF1704F-W-K, XF1708H-W-K, XF1904H-W-K, XF-1904F-W-K.
Prepared For :	Shenzhen Share Vision Co.,Ltd
Address :	4F, No.8Bldg, Fluent Industrial Park, Huaxing Rd., Longhua Dist., 518100, Shenzhen, GuangDong, China
Prepared By:	Shenzhen BCTC Technology Co., Ltd.
Address :	No.101, Yousong Road, Longhua New District, Shenzhen, China
Test Date:	Nov. 14– Nov. 21, 2016
Date of Report :	Nov. 21, 2016
Report No.:	BCTC-FY161004260E



**TEST RESULT CERTIFICATION** 

Report No.: BCTC-FY161004260E

This device described above has been tested by BCTC, and the test results show that the equipment under test (EUT) is in compliance with the FCC requirements. And it is applicable only to the tested sample identified in the report.

KDB 558074 D01 DTS Meas Guidance v03r03

This report shall not be reproduced except in full, without the written approval of BCTC, this document may be altered or revised by BCTC, personal only, and shall be noted in the revision of the document.

Testing Engineer	:	Frie Yang
		Eric Yang
Reviewer (Supervisor)	:	Finde Jang
	-	Jade Yang
Approved & Authorized Signer(Manager)	:	Carson Zhang  BCTC  Carson Zhang



#### **Table of Contents**

	Page
1 . SUMMARY OF TEST RESULTS	6
1.1 TEST FACILITY	7
1.2 MEASUREMENT UNCERTAINTY	7
2 . GENERAL INFORMATION	8
	_
2.1 GENERAL DESCRIPTION OF EUT	8
2.2 DESCRIPTION OF TEST MODES	9
2.3 BLOCK DIGRAM SHOWING THE CONFIGURATION OF SYSTEM TESTED	_
2.4 DESCRIPTION OF SUPPORT UNITS(CONDUCTED MODE)	10
2.5 EQUIPMENTS LIST FOR ALL TEST ITEMS	11
3 . EMC EMISSION TEST	12
3.1 CONDUCTED EMISSION MEASUREMENT	12
3.1.1 POWER LINE CONDUCTED EMISSION LIMITS	12
3.1.2 TEST PROCEDURE	12
3.1.3 DEVIATION FROM TEST STANDARD 3.1.4 TEST SETUP	12 13
3.1.5 EUT OPERATING CONDITIONS	13
3.1.6 TEST RESULTS	14
3.2 RADIATED EMISSION MEASUREMENT	16
3.2.1 RADIATED EMISSION LIMITS	16
3.2.2 TEST PROCEDURE	16
3.2.3 DEVIATION FROM TEST STANDARD	17
3.2.4 TEST SETUP 3.2.5 EUT OPERATING CONDITIONS	17 18
3.2.6 TEST RESULTS (BETWEEN 9KHZ – 30 MHZ)	19
3.2.7 TEST RESULTS (BETWEEN 30MHZ – 1GHZ)	20
3.3 RADIATED BAND EMISSION MEASUREMENT	26
3.3.1 TEST REQUIREMENT:	26
3.3.2 TEST PROCEDURE	26
3.3.3 DEVIATION FROM TEST STANDARD 3.3.4 TEST SETUP	27 27
3.3.5 EUT OPERATING CONDITIONS	27 27
4 . POWER SPECTRAL DENSITY TEST	32
4.1 APPLIED PROCEDURES / LIMIT	32



#### **Table of Contents**

	Page
4.1.1 TEST PROCEDURE 4.1.2 DEVIATION FROM STANDARD 4.1.3 TEST SETUP 4.1.4 EUT OPERATION CONDITIONS 4.1.5 TEST RESULTS	32 32 32 32 32
5 . BANDWIDTH TEST	49
5.1 APPLIED PROCEDURES / LIMIT 5.1.1 TEST PROCEDURE 5.1.2 DEVIATION FROM STANDARD 5.1.3 TEST SETUP 5.1.4 EUT OPERATION CONDITIONS 5.1.5 TEST RESULTS	49 49 49 49 49 50
6 . PEAK OUTPUT POWER TEST	66
6.1 APPLIED PROCEDURES / LIMIT	66
6.1.1 TEST PROCEDURE 6.1.2 DEVIATION FROM STANDARD 6.1.3 TEST SETUP 6.1.4 EUT OPERATION CONDITIONS 6.1.5 TEST RESULTS	66 66 66 67
7 . 100 KHZ BANDWIDTH OF FREQUENCY BAND EDGE 7.1 APPLICABLE STANDARD 7.2 TEST PROCEDURE 7.3 DEVIATION FROM STANDARD 7.4 TEST SETUP 7.5 EUT OPERATION CONDITIONS 7.1 TEST RESULTS	68 68 68 68 69
8. CONDUCTED SPURIOUS EMISSIONS	78
8.1 APPLICABLE STANDARD	78
8.2 MEASURING INSTRUMENTS	78
8.3 TEST SETUP	78
8.4 TEST RESULTS	79
9. ANTENNA REQUIREMENT	104
9.1 STANDARD REQUIREMENT	104
9.2 EUT ANTENNA	104



### Shenzhen BCTC Technology Co., Ltd. Report No.: BCTC-FY161004260E

lable of Contents	Page
10 . EUT TEST PHOTO	105
11 . EUT PHOTO	107



#### 1. SUMMARY OF TEST RESULTS

Test procedures according to the technical standards:

FCC Part15 (15.247) , Subpart C						
Standard Section	Test Item	Judgment	Remark			
15.207	Conducted Emission	PASS				
15.247 (a)(2)	6dB Bandwidth	PASS				
15.247 (b)	Peak Output Power	PASS				
15.247 (c)	Radiated Spurious Emission	PASS				
15.247 (d)	Power Spectral Density	PASS				
15.205	Band Edge Emission	PASS				
15.203	Antenna Requirement	PASS				

#### NOTE:

(1)" N/A" denotes test is not applicable in this Test Report



#### 1.1 TEST FACILITY

Shenzhen BCTC Technology Co., Ltd.

Add.: No.101, Yousong Road, Longhua New District, Shenzhen, China

FCC Registered No.: 187086

### 1.2 MEASUREMENT UNCERTAINTY

The reported uncertainty of measurement  $\mathbf{y} \pm \mathbf{U}$ , where expended uncertainty  $\mathbf{U}$  is based on a standard uncertainty multiplied by a coverage factor of  $\mathbf{k=2}$ , providing a level of confidence of approximately  $\mathbf{95}$ %.

No.	Item	Uncertainty
1	Conducted Emission Test	±1.38dB
2	RF power,conducted	±0.16dB
3	Spurious emissions,conducted	±0.21dB
4	All emissions,radiated(<1G)	±4.68dB
5	All emissions,radiated(>1G)	±4.89dB
6	Temperature	±0.5°C
7	Humidity	±2%



#### 2. GENERAL INFORMATION

#### 2.1 GENERAL DESCRIPTION OF EUT

Equipment	Wireless NVR Kit	Wireless NVR Kit			
Trade Name	N/A				
Model Name	XF-1304H-W-K				
Serial Model	XF1104H-W-K, XF1104F-W-K, XF1304S-W-K, XF1304F-W-K, XF1514S-W-K, XF1514H-W-K, XF1504F-W-K, XF1518H-W-K, XF1518F-W-K, XF1604S-W-K, XF1604H-W-K, XF1604F-W-K, XF1608H-W-K, XF1608F-W-K, XF1704H-W-K, XF1704F-W-K, XF1708H-W-K, XF1904H-W-K, XF-1904F-W-K.				
Model Difference		All the model are the same circuit and RF module, except model names and different for color.			
	The EUT is a Wireless N	-			
	Operation Frequency:	802.11b/g/n20MHz:2412~2462 MHz 802.11n40MHz:2422~2452 MHz			
	Modulation Type:	WIFI: OFDM/DSSS			
	Bit Rate of Transmitter	802.11b:11/5.5/2/1 Mbps 802.11g:54/48/36/24/18/12/9/6Mbps 802.11n Up to 150Mbps			
Product Description	Number Of Channel	802.11b/g/n20MHz:11 CH 802.11n40MHz: 7 CH			
	Antenna Designation:	Please see Note 3.			
	Based on the application, features, or specification exhibited in User's Manual, the EUT is considered as an ITE/Computing Device. More details of EUT technical specification, please refer to the User's Manual.				
Channel List	Please refer to the Note 2.				
Power source	DC 12V				
hardware version					
Software version					
Serial number					
Connecting I/O Port(s)	Please refer to the User	's Manual			

1. For a more detailed features description, please refer to the manufacturer's specifications or the User's Manual.



2.

	Channel List for 802.11b/g/n(20)						
Channel	Frequency (MHz)	Channel	Frequency (MHz)	Channel	Frequency (MHz)	Channel	Frequency (MHz)
01	2412	04	2427	07	2442	10	2457
02	2417	05	2432	08	2447	11	2462
03	2422	06	2437	09	2452		

	Channel List for 802.11n(40)						
Channel	Frequency (MHz)	Channel	Frequency (MHz)	Channel	Frequency (MHz)	Channel	Frequency (MHz)
03	2422	05	2432	07	2442	09	2452
04	2427	06	2437	08	2447		

3.

#### Table for Filed Antenna

Ant.	Brand	Model Name	Antenna Type	Connector	Gain (dBi)	NOTE
1	N/A	N/A	External antenna	N/A	5.0	
2	N/A	N/A	External antenna	N/A	5.0	

Note1: Directional Gain=5.0dBi+10log(5)=12.0dBi

Note2: The EUT incorporates a mimo funtion. Physically, the EUT provide two completed transmitter and two receivers.

#### 2.2 DESCRIPTION OF TEST MODES

Pretest Mode	Description
Mode 1	802.11b CH1/ CH6/ CH11
Mode 2	802.11g CH1/ CH6/ CH11
Mode 3	802.11n20 CH1/ CH6/ CH11
Mode 4	802.11n40 CH3/ CH6/ CH9
Mode 5	Link Mode

Conducted Emission					
Final Test Mode	Description				
Mode 5	Link Mode				

	For Radiated Emission							
Final Test Mode	Description							
Mode 1	802.11b CH1/ CH6/ CH11							
Mode 2	802.11g CH1/ CH6/ CH11							
Mode 3	802.11n20 CH1/ CH6/ CH11							
Mode 4	802.11n40 CH3/ CH6/ CH9							

#### Note:

(1) The measurements are performed at all Bit Rate of Transmitter, the worst data was reported.



#### 2.3 BLOCK DIGRAM SHOWING THE CONFIGURATION OF SYSTEM TESTED

Conducted Emission/Radiated Spurious Emission Test



#### 2.4 DESCRIPTION OF SUPPORT UNITS(CONDUCTED MODE)

The EUT has been tested as an independent unit together with other necessary accessories or support units. The following support units or accessories were used to form a representative test configuration during the tests.

Item	Equipment	Mfr/Brand	Model/Type No.	Series No.	Note
F-1	Wireless NVR Kit	N/A	XF-1304H-W-K	N/A	EUT
E-2	Adapter	N/A	GM26-120200-2A	N/A	lab provide

Item	Shielded Type	Ferrite Core	Length	Note
C-1	NO	NO	1.2M	AC cable unshielded

#### Note:

- (1) The support equipment was authorized by Declaration of Confirmation.
- (2) For detachable type I/O cable should be specified the length in cm in <code>『Length』</code> column.

**EMC Report** 



#### 2.5 EQUIPMENTS LIST FOR ALL TEST ITEMS

### Radiation Test equipment

Item	Kind of Equipment	Manufacturer	Type No.	Serial No.	Last calibration	Calibrated until
1	Spectrum Analyzer	Agilent	E4407B	MY4510957 2	2016.08.25	2017.08.24
2	Test Receiver	R&S	ESPI	101396	2016.08.25	2017.08.24
3	Bilog Antenna	SCHWARZB ECK	VULB9160	VULB9160- 3369	2016.08.25	2017.08.24
4	50Ω Coaxial Switch	Anritsu	MP59B	620026441 6	2016.07.06	2017.07.05
5	Spectrum Analyzer	Agilent	N9020A	MY5051041	2016.07.06	2017.07.05
6	Horn Antenna	SCHWARZB ECK	9120D	9120D-1275	2016.08.25	2017.08.24
7	Horn Ant	Schwarzbeck	BBHA 9170	9170-181	2016.07.06	2017.07.05
8	Amplifier	SCHWARZB ECK	BBV9718	9718-270	2016.08.25	2017.08.24
9	Amplifier	SCHWARZB ECK	BBV9743	9743-119	2016.08.25	2017.08.24
10	Loop Antenna	ARA	PLXF-1304 H-W-K30/B	1029	2016.07.06	2017.07.05
11	Power Meter	R&S	NRVS	100696	2016.07.06	2017.07.05
12	Power Sensor	R&S	NRV-Z55	161905	2016.07.06	2017.07.05
13	RF cables	R&S	N/A	N/A	2016.07.06	2017.07.05

### Conduction Test equipment

Item	Kind of Equipment	Manufacturer	Type No.	Serial No.	Last calibration	Calibrated until
1	Test Receiver	R&S	ESCI	1166.5950K 03-101165- ha	2016.06.06	2017.06.05
2	LISN	R&S	NSLK81 26	812646 6	2016.08.24	2017.08.23
3	LISN	R&S	NSLK81 26	812648 7	2016.08.24	2017.08.23
4	50Ω Coaxial Switch	Anritsu	MP59B	620026441 7	2016.06.07	2017.06.06
5	RF cables	R&S	R204	R20X	2016.07.06	2017.07.05



#### 3. EMC EMISSION TEST

#### 3.1 CONDUCTED EMISSION MEASUREMENT

#### 3.1.1 POWER LINE CONDUCTED EMISSION Limits (Frequency Range 150KHz-30MHz)

Report No.: BCTC-FY161004260E

FREQUENCY (MHz)	Class A	(dBuV)	Class B	Standard	
FREQUENCT (IVITZ)	Quasi-peak	Average	Quasi-peak	Average	Statiuatu
0.15 -0.5	79.00	66.00	66 - 56 *	56 - 46 *	FCC
0.50 -5.0	73.00	60.00	56.00	46.00	FCC
5.0 -30.0	73.00	60.00	60.00	50.00	FCC

#### Note:

- (1) The tighter limit applies at the band edges.
- (2) The limit of " \* " marked band means the limitation decreases linearly with the logarithm of the frequency in the range.

The following table is the setting of the receiver

Receiver Parameters	Setting		
Attenuation	10 dB		
Start Frequency	0.15 MHz		
Stop Frequency	30 MHz		
IF Bandwidth	9 kHz		

#### 3.1.2 TEST PROCEDURE

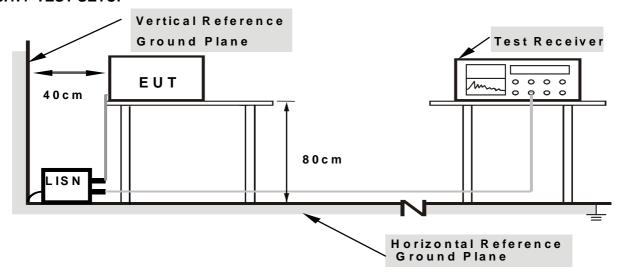
- a. The EUT was placed 0.8 meters from the horizontal ground plane with EUT being connected to the power mains through a line impedance stabilization network (LISN). All other support equipments powered from additional LISN(s). The LISN provide 50 Ohm/ 50uH of coupling impedance for the measuring instrument.
- b. Interconnecting cables that hang closer than 40 cm to the ground plane shall be folded back and forth in the center forming a bundle 30 to 40 cm long.
- c. I/O cables that are not connected to a peripheral shall be bundled in the center. The end of the cable may be terminated, if required, using the correct terminating impedance. The overall length shall not exceed 1 m.
- d. LISN at least 80 cm from nearest part of EUT chassis.
- e. For the actual test configuration, please refer to the related Item -EUT Test Photos.

#### 3.1.3 DEVIATION FROM TEST STANDARD

No deviation



#### 3.1.4 TEST SETUP



Report No.: BCTC-FY161004260E

Note: 1.Support units were connected to second LISN.

2.Both of LISNs (AMN) are 80 cm from EUT and at least 80 from other units and other metal planes

#### 3.1.5 EUT OPERATING CONDITIONS

The EUT was configured for testing in a typical fashion (as a customer would normally use it). The EUT has been programmed to continuously transmit during test. This operating condition was tested and used to collect the included data.

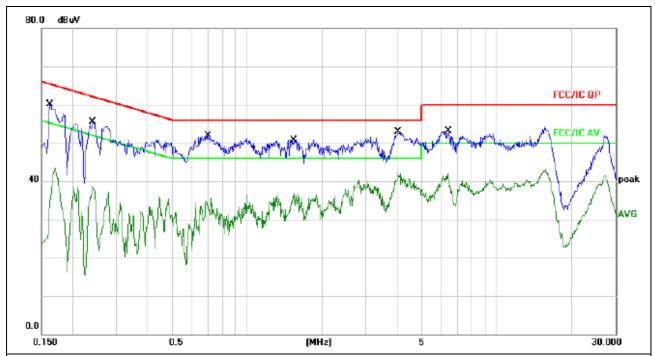
We pretest AC 120V and AC 240V, the worst voltage was AC 120V and the data recording in the report.



#### 3.1.6 TEST RESULTS

Temperature :	26℃	Relative Humidity:	54%
Pressure :	1010hPa	Phase :	L
Test Voltage :	AC120V 60Hz	Test Mode :	Mode 5

Shenzhen BCTC Technology Co., Ltd.



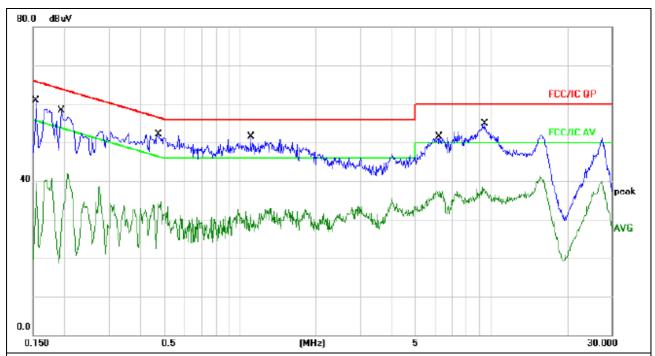
- All readings are Quasi-Peak and Average values.
   Factor = Insertion Loss + Cable Loss.

No. Mk.	Freq.	Reading Level	Correct Factor	Measure- ment	Limit	Over			
	MHz	dBu∀	dB	dBu∀	dBu∀	dB	Detector	Comment	
1	0.1620	50.38	9.67	60.05	65.36	-5.31	QP		
2	0.1620	33.84	9.67	43.51	55.36	-11.85	AVG		
3	0.2391	45.92	9.65	55.57	62.12	-6.55	QP		
4	0.2391	29.03	9.65	38.68	52.12	-13.44	AVG		
5	0.6980	42.23	9.68	51.91	56.00	-4.09	QP		
6	0.6980	25.97	9.68	35.65	46.00	-10.35	AVG		
7	1.5420	41.10	9.70	50.80	56.00	-5.20	QP		
8	1.5420	27.21	9.70	36.91	46.00	-9.09	AVG		
9 *	4.0419	43.16	9.73	52.89	56.00	-3.11	QP		
10	4.0419	32.35	9.73	42.08	46.00	-3.92	AVG		
11	6.3939	43.41	9.78	53.19	60.00	-6.81	QP		
12	6.3939	29.24	9.78	39.02	50.00	-10.98	AVG		



Temperature :	<b>26</b> ℃	Relative Humidity:	54%
Pressure :	1010hPa	Phase :	Ν
Test Voltage :	AC120V 60Hz	Test Mode :	Mode 5

Report No.: BCTC-FY161004260E



#### Remark:

- All readings are Quasi-Peak and Average values.
   Factor = Insertion Loss + Cable Loss.

No.	Mk.	Freq.	Reading Level	Correct Factor	Measure- ment	Limit	Over			
		MHz	dBu∀	dB	dBu∀	dBu∀	dB	Detector	Comment	
1		0.1539	51.15	9.67	60.82	65.78	-4.96	QP		
2		0.1539	29.84	9.67	39.51	55.78	-16.27	AVG		
3		0.1940	48.69	9.65	58.34	63.86	-5.52	QP		
4		0.1940	27.64	9.65	37.29	53.86	-16.57	AVG		
5	*	0.4740	42.51	9.68	52.19	56.44	-4.25	QP		
6		0.4740	25.08	9.68	34.76	46.44	-11.68	AVG		
7		1.1019	41.79	9.69	51.48	56.00	-4.52	QP		
8		1.1019	21.57	9.69	31.26	46.00	-14.74	AVG		
9		6.2139	41.68	9.78	51.46	60.00	-8.54	QP		
10		6.2139	27.79	9.78	37.57	50.00	-12.43	AVG		
11		9.3979	45.01	9.82	54.83	60.00	-5.17	QP		
12		9.3979	28.63	9.82	38.45	50.00	-11.55	AVG		

Tel: 400-788-9558 0755-33019988



#### 3.2 RADIATED EMISSION MEASUREMENT

#### 3.2.1 RADIATED EMISSION LIMITS (Frequency Range 9kHz-1000MHz)

20dBc in any 100 kHz bandwidth outside the operating frequency band. In case the emission fall within the restricted band specified on 15.205(a), then the 15.209(a) limit in the table below has to be followed.

Report No.: BCTC-FY161004260E

Frequencies	Field Strength	Measurement Distance
(MHz)	(micorvolts/meter)	(meters)
0.009~0.490	2400/F(KHz)	300
0.490~1.705	24000/F(KHz)	30
1.705~30.0	30	30
30~88	100	3
88~216	150	3
216~960	200	3
Above 960	500	3

#### LIMITS OF RADIATED EMISSION MEASUREMENT (Above 1000MHz)

	Class B (dBuV/m) (at 3M)				
FREQUENCY (MHz)	PEAK	AVERAGE			
Above 1000	74	54			

#### Notes:

- (1) The limit for radiated test was performed according to FCC PART 15C.
- (2) The tighter limit applies at the band edges.
- (3) Emission level (dBuV/m)=20log Emission level (uV/m).

Spectrum Parameter	Setting		
Attenuation	Auto		
Start Frequency	1000 MHz		
Stop Frequency	25GHz		
RB / VB (emission in restricted	4 Mile / 4 Mile for Dook 4 Mile / 40/Jefor Average		
band)	1 MHz / 1 MHz for Peak, 1 MHz / 10Hz for Average		

Receiver Parameter	Setting
Attenuation	Auto
Start ~ Stop Frequency	9kHz~150kHz / RB 200Hz for QP
Start ~ Stop Frequency	150kHz~30MHz / RB 9kHz for QP
Start ~ Stop Frequency	30MHz~1000MHz / RB 120kHz for QP

#### 3.2.2 TEST PROCEDURE

Below 1GHz test procedure as below:



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

Above 1GHz test procedure as below:

- g. Different between above is the test site, change from Semi- Anechoic Chamber to fully Anechoic Chamber and change form table 0.8 metre to 1.5 metre( Above 18GHz the distance is 1 meter and table is 1.5 metre).
- h. Test the EUT in the lowest channel ,the middle channel ,the Highest channel Note:

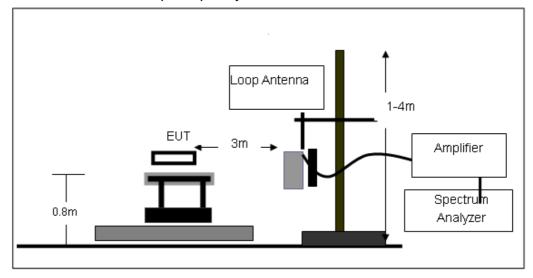
Both horizontal and vertical antenna polarities were tested and performed pretest to three orthogonal axis. The worst case emissions were reported

#### 3.2.3 DEVIATION FROM TEST STANDARD

No deviation

#### 3.2.4 TEST SETUP

(A) Radiated Emission Test-Up Frequency Below 30MHz



**EMC Report** 

Tel: 400-788-9558 0755-33019988

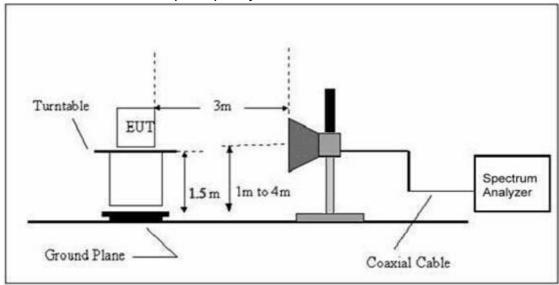


#### (B) Radiated Emission Test-Up Frequency 30MHz~1GHz



Report No.: BCTC-FY161004260E

#### (C) Radiated Emission Test-Up Frequency Above 1GHz



#### 3.2.5 EUT OPERATING CONDITIONS

The EUT tested system was configured as the statements of 2.4 Unless otherwise a special operating condition is specified in the follows during the testing.



### 3.2.6 TEST RESULTS (BETWEEN 9KHZ - 30 MHZ)

Temperature:	20℃	Relative Humidtity:	48%
Pressure:	1010 hPa	Test Voltage:	AC120V 60Hz
Test Mode:	Mode 5	Polarization :	

Freq.	Reading	Limit	Margin	State
(MHz)	(dBuV/m)	(dBuV/m)	(dB)	P/F
				PASS
				PASS

#### NOTE:

The amplitude of spurious emissions which are attenuated by more than 20dB below the permissible value has no need to be reported.

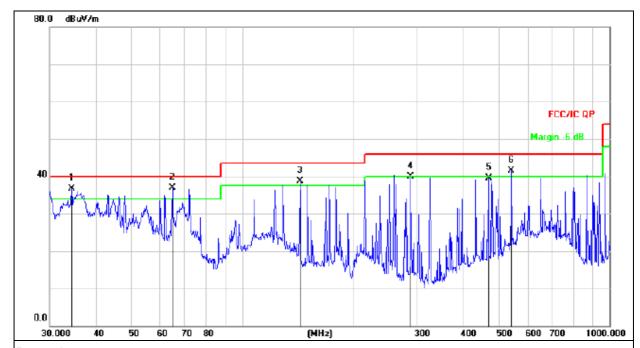
Distance extrapolation factor =40 log (specific distance/test distance)(dB);

Limit line = specific limits(dBuv) + distance extrapolation factor.



### 3.2.7 TEST RESULTS (BETWEEN 30MHZ - 1GHZ)

Temperature :	26℃	Relative Humidity:	54%
Pressure :	1010 hPa	Polarization :	Horizontal
Test Voltage :	AC120V 60Hz		
Test Mode :	Mode 5		



#### Remark:

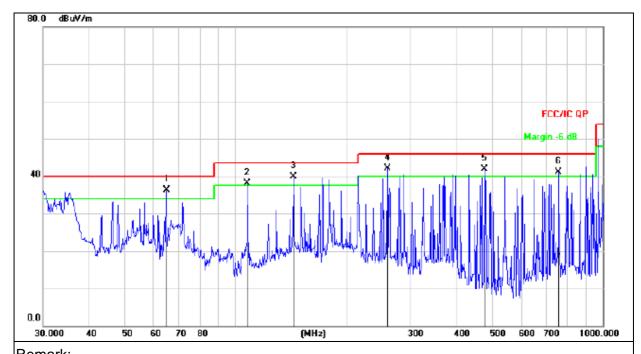
Factor = Antenna Factor + Cable Loss - Pre-amplifier.

No.	Mk	. Freq.	Reading Level	Correct Factor	Measure- ment	Limit	Over	
		MHz	dBuV	dB	dBuV/m	dB/m	dB	Detector
1	İ	34.3962	54.24	-17.61	36.63	40.00	-3.37	QP
2	*	64.6594	53.67	-16.79	36.88	40.00	-3.12	QP
3	İ	143.8293	58.52	-19.89	38.63	43.50	-4.87	QP
4		287.9904	52.31	-12.39	39.92	46.00	-6.08	QP
5		468.8761	47.62	-8.02	39.60	46.00	-6.40	QP
6	İ	541.3723	47.83	-6.24	41.59	46.00	-4.41	QP

EMC Report Tel: 400-788-9558 0755-33019988 Web:<u>Http://www.bctc-lab.com.cn</u>



Temperature :	<b>26</b> ℃	Relative Humidity:	54%
Pressure :	1010 hPa	Polarization :	Vertical
Test Voltage :	AC120V 60Hz		
Test Mode :	Mode 5		



Remark: Factor = Antenna Factor + Cable Loss – Pre-amplifier.

No.	Mk	. Freq.	Reading Level	Correct Factor	Measure- ment	Limit	Over	
		MHz	dBuV	dB	dBuV/m	dB/m	dB	Detector
1	ļ	64.8864	53.19	-16.85	36.34	40.00	-3.66	QP
2	İ	107.8876	54.52	-16.33	38.19	43.50	-5.31	QP
3	*	143.8294	59.74	-19.89	39.85	43.50	-3.65	QP
4	İ	259.2337	55.62	-13.43	42.19	46.00	-3.81	QP
5	İ	475.4990	49.71	-7.83	41.88	46.00	-4.12	QP
6	İ	758.0407	42.70	-1.66	41.04	46.00	-4.96	QP



Polar

(H/V)

٧

٧

V

٧

V

Η

Н

Н

Η

#### Shenzhen BCTC Technology Co., Ltd.

Pre-amplifier

(dB)

39.55

39.55

38.33

38.33

35.23

39.55

39.55

38.33

38.33

35.45

6.75

7.85

7.85

7.52

7.52

6.75

26.59

25.66

25.66

23.55

23.22

27.88

#### 3.2.8 TEST RESULTS (1GHz - 26GHZ)

Frequency

(MHz)

4824.00

4824.00

7236.00

7236.00

15450.00

4824.00

4824.00

7236.00

7236.00

15450.00

Meter

Reading

(dBuV)

68.75

49.67

66.68

48.59

52.35

68.87

49.86

68.23

51.72

48.56

#### 802.11b Cable Antenna **Emission** Limits Margin Level Loss Factor Detector Type (dB) (dB) (dBuV/m) (dBuV/m) (dB) operation frequency:2412 62.71 7.85 74 -11.29 25.66 PΚ 7.85 25.66 43.63 -10.37 ΑV 7.52 24.55 60.42 74 -13.58 PΚ 7.52 24.55 42.33 54 -11.67 ΑV

74

74

54

74

54

50.46

62.83

43.82

60.97

44.13

47.74

Report No.: BCTC-FY161004260E

-23.54

-11.17

-10.18

-13.03

-9.87

-26.26

PΚ

PΚ

 $\mathsf{AV}$ 

PΚ

ΑV

PΚ

Polar	Frequency	Meter Reading	Pre-amplifier	Cable Loss	Antenna Factor	Emission Level	Limits	Margin	Detector
(H/V)						1 1			Type
	(MHz)	(dBuV)	(dB)	(dB)	(dB)	(dBuV/m)	(dBuV/m)	(dB)	
					operation freq	uency:2437			
V	4874.00	67.43	38.89	7.57	25.45	61.56	74	-12.44	PK
٧	4874.00	49.57	38.89	7.57	25.45	43.70	54	-10.30	AV
V	7311.00	68.32	38.78	7.35	24.78	61.67	74	-12.33	PK
V	7311.00	48.25	38.78	7.35	24.78	41.60	54	-12.40	AV
V	15450.00	53.19	35.89	6.42	26.47	50.19	74	-23.81	PK
Η	4874.00	66.46	38.89	7.57	25.45	60.59	74	-13.41	PK
Н	4874.00	50.38	38.89	7.57	25.45	44.51	54	-9.49	AV
Н	7311.00	68.69	38.78	7.35	24.78	62.04	74	-11.96	PK
Н	7311.00	49.72	38.78	7.35	24.78	43.07	54	-10.93	AV
Ι	15450.00	50.85	36.68	6.42	26.65	47.24	74	-26.76	PK

Polar	Frequency	Meter Reading	Pre-amplifier	Cable Loss	Antenna Factor	Emission Level	Limits	Margin	Detector
(H/V)	(MHz)	(dBuV)	(dB)	(dB)	(dB)	(dBuV/m)	(dBuV/m)	(dB)	Туре
					operation freq	uency:2462			
V	4924.00	68.22	38.75	7.46	25.45	62.38	74	-11.62	PK
V	4924.00	48.45	38.75	7.46	25.45	42.61	54	-11.39	AV
V	7386.00	67.98	38.65	7.22	24.78	61.33	74	-12.67	PK
V	7386.00	48.34	38.65	7.22	24.78	41.69	54	-12.31	AV
V	15450.00	53.85	35.58	6.35	26.47	51.09	74	-22.91	PK
Н	4924.00	67.69	38.75	7.46	25.45	61.85	74	-12.15	PK
Н	4924.00	48.36	38.75	7.46	25.45	42.52	54	-11.48	AV
Н	7386.00	69.07	38.65	7.22	24.78	62.42	74	-11.58	PK
Н	7386.00	51.78	38.65	7.22	24.78	45.13	54	-8.87	AV
Н	15450.00	49.88	36.42	6.32	26.65	46.43	74	-27.57	PK

#### Remark:

- Emission Level = Meter Reading + Antenna Factor + Cable Loss Pre-amplifier,
   Margin= Emission Level Limit
- 2. If peak below the average limit, the average emission was no test.
- 3. Testing is carried out with frequency range 9 kHz to the 10th harmonics, which above 5th harmonics, According to 15.31(o), the amplitude of spurious emissions from intentional radiators and emissions from unintentional radiators which are attenuated more than 20 dB below the permissible value need not be reported.

EMC Report Tel: 400-788-9558 0755-33019988 Web:Http://www.bctc-lab.com.cn Page 22 of 107



				80	)2.11g						
Polar (H/V)		Meter Reading	Pre-amplifier	Cable Loss	Antenna Factor	Emission Level	Limits	Margin	Detector		
(H/	(MHz)	(dBuV)	(dB)	(dB)	(dB)	(dBuV/m)	(dBuV/m)	(dB)	Type		
			operation frequency:2412								
V	4824.00	66.23	39.55	7.85	25.66	60.19	74	-13.81	PK		
V	4824.00	49.58	39.55	7.85	25.66	43.54	54	-10.46	AV		
V	7236.00	66.39	38.33	7.52	24.55	60.13	74	-13.87	PK		
V	7236.00	47.67	38.33	7.52	24.55	41.41	54	-12.59	AV		
V	15450.00	50.95	35.23	6.75	26.59	49.06	74	-24.94	PK		
Н	4824.00	63.25	39.55	7.85	25.66	57.21	74	-16.79	PK		
Н	4824.00	49.49	39.55	7.85	25.66	43.45	54	-10.55	AV		
Н	7236.00	69.35	38.33	7.52	23.55	62.09	74	-11.91	PK		
Н	7236.00	50.47	38.33	7.52	23.22	42.88	54	-11.12	AV		
Н	15450.00	45 78	35.45	6.75	27.88	44 96	74	-29 04	DK		

Report No.: BCTC-FY161004260E

Polar (H/V)	Frequency	Meter Reading	Pre-amplifier	Cable Loss	Antenna Factor	Emission Level	Limits	Margin	Detector Type
(11/4)	(MHz)	(dBuV)	(dB)	(dB)	(dB)	(dBuV/m)	(dBuV/m)	(dB)	туре
			operation frequency:2437						
V	4874.00	65.96	38.89	7.57	25.45	60.09	74	-13.91	PK
V	4874.00	48.58	38.89	7.57	25.45	42.71	54	-11.29	AV
V	7311.00	66.57	38.78	7.35	24.78	59.92	74	-14.08	PK
V	7311.00	48.87	38.78	7.35	24.78	42.22	54	-11.78	AV
V	15450.00	52.68	35.89	6.42	26.47	49.68	74	-24.32	PK
Н	4874.00	64.35	38.89	7.57	25.45	58.48	74	-15.52	PK
Н	4874.00	49.57	38.89	7.57	25.45	43.70	54	-10.30	AV
Н	7311.00	70.68	38.78	7.35	24.78	64.03	74	-9.97	PK
Н	7311.00	48.55	38.78	7.35	24.78	41.90	54	-12.10	AV
Н	15450.00	48.45	36.68	6.42	26.65	44.84	74	-29.16	PK

Polar (H/V)	Frequency	Meter Reading	Pre-amplifier	Cable Loss	Antenna Factor	Emission Level	Limits	Margin	Detector Type
(177)	(MHz)	(dBuV)	(dB)	(dB)	(dB)	(dBuV/m)	(dBuV/m)	(dB)	туре
V	4924.00	67.43	38.75	7.46	25.45	61.59	74	-12.41	PK
V	4924.00	48.74	38.75	7.46	25.45	42.90	54	-11.10	AV
V	7386.00	68.22	38.65	7.22	24.78	61.57	74	-12.43	PK
V	7386.00	49.78	38.65	7.22	24.78	43.13	54	-10.87	AV
V	15450.00	53.75	35.58	6.35	26.47	50.99	74	-23.01	PK
Н	4924.00	66.68	38.75	7.46	25.45	60.84	74	-13.16	PK
Н	4924.00	50.24	38.75	7.46	25.45	44.40	54	-9.60	AV
Н	7386.00	69.73	38.65	7.22	24.78	63.08	74	-10.92	PK
Н	7386.00	48.47	38.65	7.22	24.78	41.82	54	-12.18	AV
Н	15450.00	49.66	36.42	6.32	26.65	46.21	74	-27.79	PK

#### Remark:

- Emission Level = Meter Reading + Antenna Factor + Cable Loss Pre-amplifier,
   Margin= Emission Level Limit
- 2. If peak below the average limit, the average emission was no test.
- 3. Testing is carried out with frequency range 9 kHz to the 10th harmonics, which above 5th harmonics, According to 15.31(o), the amplitude of spurious emissions from intentional radiators and emissions from unintentional radiators which are attenuated more than 20 dB below the permissible value need not be reported.

EMC Report Tel: 400-788-9558 0755-33019988 Web:<u>Http://www.bctc-lab.com.cn</u> Page 23 of 107





802.11n(20MHz)

Report No.: BCTC-FY161004260E

				002	II(ZUIVII IZ)				
Polar	Frequency	Meter Reading	Pre-amplifier	Cable Loss	Antenna Factor	Emission Level	Limits	Margin	Detector
(H/V)	(MHz)	(dBuV)	(dB)	(dB)	(dB)	(dBuV/m)	(dBuV/m)	(dB)	Туре
			operation frequency:2412						
V	4824.00	67.25	39.55	7.85	25.66	61.21	74	-12.79	PK
V	4824.00	48.63	39.55	7.85	25.66	42.59	54	-11.41	AV
V	7236.00	66.47	38.33	7.52	24.55	60.21	74	-13.79	PK
V	7236.00	48.62	38.33	7.52	24.55	42.36	54	-11.64	AV
V	15450.00	51.49	35.23	6.75	26.59	49.60	74	-24.40	PK
Н	4824.00	68.53	39.55	7.85	25.66	62.49	74	-11.51	PK
Н	4824.00	49.34	39.55	7.85	25.66	43.30	54	-10.70	AV
Н	7236.00	69.42	38.33	7.52	23.55	62.16	74	-11.84	PK
Н	7236.00	52.25	38.33	7.52	23.22	44.66	54	-9.34	AV
Н	15450.00	47.18	35.45	6.75	27.88	46.36	74	-27.64	PK

Polar	Frequency	Meter Reading	Pre-amplifier	Cable Loss	Antenna Factor	Emission Level	Limits	Margin	Detector
(H/V)	(MHz)	(dBuV)	(dB)	(dB)	(dB)	(dBuV/m)	(dBuV/m)	(dB)	Туре
V	4874.00	66.49	38.89	7.57	25.45	60.62	74	-13.38	PK
V	4874.00	49.72	38.89	7.57	25.45	43.85	54	-10.15	AV
V	7311.00	67.19	38.78	7.35	24.78	60.54	74	-13.46	PK
V	7311.00	47.27	38.78	7.35	24.78	40.62	54	-13.38	AV
V	15450.00	52.38	35.89	6.42	26.47	49.38	74	-24.62	PK
Н	4874.00	65.26	38.89	7.57	25.45	59.39	74	-14.61	PK
Н	4874.00	49.17	38.89	7.57	25.45	43.30	54	-10.70	AV
Н	7311.00	69.22	38.78	7.35	24.78	62.57	74	-11.43	PK
Н	7311.00	48.45	38.78	7.35	24.78	41.80	54	-12.20	AV
Н	15450.00	49.56	36.68	6.42	26.65	45.95	74	-28.05	PK

Polar	Frequency	Meter Reading	Pre-amplifier	Cable Loss	Antenna Factor	Emission Level	Limits	Margin	Detector
(H/V)	(MHz)	(dBuV)	(dB)	(dB)	(dB)	(dBuV/m)	(dBuV/m)	(dB)	Туре
					operation freq	uency:2462			
V	4924.00	68.62	38.75	7.46	25.45	62.78	74	-11.22	PK
V	4924.00	50.74	38.75	7.46	25.45	44.90	54	-9.10	AV
V	7386.00	67.53	38.65	7.22	24.78	60.88	74	-13.12	PK
V	7386.00	49.15	38.65	7.22	24.78	42.50	54	-11.50	AV
V	15450.00	53.22	35.58	6.35	26.47	50.46	74	-23.54	PK
Н	4924.00	66.46	38.75	7.46	25.45	60.62	74	-13.38	PK
Н	4924.00	50.75	38.75	7.46	25.45	44.91	54	-9.09	AV
Н	7386.00	69.39	38.65	7.22	24.78	62.74	74	-11.26	PK
Н	7386.00	48.82	38.65	7.22	24.78	42.17	54	-11.83	AV
Н	15450.00	50.74	36.42	6.32	26.65	47.29	74	-26.71	PK

#### Remark:

- 1. Emission Level = Meter Reading + Antenna Factor + Cable Loss Pre-amplifier, Margin= Emission Level - Limit
- 2. If peak below the average limit, the average emission was no test.
- 3. Testing is carried out with frequency range 9 kHz to the 10th harmonics, which above 5th harmonics, According to 15.31(o), the amplitude of spurious emissions from intentional radiators and emissions from unintentional radiators which are attenuated more than 20 dB below the permissible value need not be reported.

EMC Report Tel: 400-788-9558 0755-33019988 Web:<u>Http://www.bctc-lab.com.cn</u> Page 24 of 107



#### 802.11n(40MHz)

Report No.: BCTC-FY161004260E

Polar	Frequency	Meter Reading	Pre-amplifier	Cable Loss	Antenna Factor	Emission Level	Limits	Margin	Detector
(H/V)	(MHz)	(dBuV)	(dB)	(dB)	(dB)	(dBuV/m)	(dBuV/m)	(dB)	Туре
				(	operation freq	uency:2422	•		
V	4844.000	69.81	39.55	7.77	25.66	63.69	74	-10.31	PK
V	4844.000	50.34	39.55	7.77	25.66	44.22	54	-9.78	AV
V	7266.000	67.88	38.33	7.30	24.55	61.40	74	-12.60	PK
V	7266.000	48.72	38.33	7.30	24.55	42.24	54	-11.76	AV
V	15450.00	51.85	35.23	6.60	26.59	49.81	74	-24.19	PK
Н	4844.000	68.69	39.55	7.77	25.66	62.57	74	-11.43	PK
Н	4844.000	49.88	39.55	7.77	25.66	43.76	54	-10.24	AV
Н	7266.000	69.66	38.33	7.30	23.55	62.18	74	-11.82	PK
Н	7266.000	51.21	38.33	7.30	23.22	43.40	54	-10.60	AV
Н	15450.00	49.68	35.45	6.60	27.88	48.71	74	-25.29	PK

Polar	Frequency	Meter Reading	Pre-amplifier	Cable Loss	Antenna Factor	Emission Level	Limits	Margin	Detector
(H/V)	(MHz)	(dBuV)	(dB)	(dB)	(dB)	(dBuV/m)	(dBuV/m)	(dB)	Туре
					uency:2437				
V	4874.00	67.68	38.89	7.57	25.45	61.81	74	-12.19	PK
V	4874.00	49.48	38.89	7.57	25.45	43.61	54	-10.39	AV
V	7311.00	68.95	38.78	7.35	24.78	62.30	74	-11.70	PK
V	7311.00	48.72	38.78	7.35	24.78	42.07	54	-11.93	AV
V	15450.00	53.37	35.89	6.42	26.47	50.37	74	-23.63	PK
Н	4874.00	66.25	38.89	7.57	25.45	60.38	74	-13.62	PK
Н	4874.00	50.49	38.89	7.57	25.45	44.62	54	-9.38	AV
Н	7311.00	68.56	38.78	7.35	24.78	61.91	74	-12.09	PK
Н	7311.00	49.33	38.78	7.35	24.78	42.68	54	-11.32	AV
Н	15450.00	50.44	36.68	6.42	26.65	46.83	74	-27.17	PK

Polar	Frequency	Meter Reading	Pre-amplifier	Cable Loss	Antenna Factor	Emission Level	Limits	Margin	Detector
(H/V)	(MHz)	(dBuV)	(dB)	(dB)	(dB)	(dBuV/m)	(dBuV/m)	(dB)	Туре
					operation freq	uency:2452			
V	4904.00	68.68	38.75	7.38	25.45	62.76	74	-11.24	PK
V	4904.00	50.95	38.75	7.38	25.45	45.03	54	-8.97	AV
V	7356.00	67.74	38.65	7.15	24.78	61.02	74	-12.98	PK
V	7356.00	49.55	38.65	7.15	24.78	42.83	54	-11.17	AV
V	15450.00	53.63	35.58	6.25	26.47	50.77	74	-23.23	PK
Н	4904.00	66.28	38.75	7.38	25.45	60.36	74	-13.64	PK
Н	4904.00	50.35	38.75	7.38	25.45	44.43	54	-9.57	AV
Н	7356.00	69.59	38.65	7.15	24.78	62.87	74	-11.13	PK
Н	7356.00	48.61	38.65	7.15	24.78	41.89	54	-12.11	AV
Н	15450.00	50.72	36.42	6.25	26.65	47.20	74	-26.80	PK

#### Remark:

- 1. Emission Level = Meter Reading + Antenna Factor + Cable Loss Pre-amplifier,
  Margin= Emission Level Limit
- 2. If peak below the average limit, the average emission was no test.
- 3. Testing is carried out with frequency range 9 kHz to the 10th harmonics, which above 5th harmonics, According to 15.31(o), the amplitude of spurious emissions from intentional radiators and emissions from unintentional radiators which are attenuated more than 20 dB below the permissible value need not be reported.

EMC Report Tel: 400-788-9558 0755-33019988 Web: <a href="http://www.bctc-lab.com.cn">Http://www.bctc-lab.com.cn</a> Page 25 of 107



### 3.3 RADIATED BAND EMISSION MEASUREMENT

#### 3.3.1 TEST REQUIREMENT:

FCC Part15 C Section 15.209 and 15.205

#### LIMITS OF RADIATED EMISSION MEASUREMENT (Above 1000MHz)

Shenzhen BCTC Technology Co., Ltd.

	Class B (dBuV/m) (at 3M)					
FREQUENCY (MHz)	PEAK	AVERAGE				
Above 1000	74	54				

#### Notes:

- (1) The limit for radiated test was performed according to FCC PART 15C.
- (2) The tighter limit applies at the band edges.
- (3) Emission level (dBuV/m)=20log Emission level (uV/m).

Spectrum Parameter	Setting			
Attenuation	Auto			
Start Frequency	2300MHz			
Stop Frequency	2520			
RB / VB (emission in restricted	1 MHz / 1 MHz for Dook 1 MHz / 10Hz for Average			
band)	1 MHz / 1 MHz for Peak, 1 MHz / 10Hz for Average			

#### 3.3.2 TEST PROCEDURE

Above 1GHz test procedure as below:

- a. 1. The EUT was placed on the top of a rotating table 1.5 meters above the ground at a 3 meter camber. The table was rotated 360 degrees to determine the position of the highest radiation.
- b. The EUT was set 3 meters away from the interference-receiving antenna, which was mounted on the top of a variable-height antenna tower.
- c. The antenna height is varied from one meter to four meters above the ground to determine the maximum value of the field strength. Both horizontal and vertical polarizations of the antenna are set to make the measurement.
- d. For each suspected emission, the EUT was arranged to its worst case and then the antenna was tuned to heights from 1 meter to 4 meters and the rota table was turned from 0 degrees to 360 degrees to find the maximum reading.
- e. The test-receiver system was set to Peak Detect Function and Specified Bandwidth with Maximum Hold Mode.
- f. If the emission level of the EUT in peak mode was 10dB lower than the limit specified, then testing could be stopped and the peak values of the EUT would be reported. Otherwise the emissions that did not have 10dB margin would be re-tested one by one using peak, quasi-peak or average method as specified and then reported in a data sheet.
- g. Test the EUT in the lowest channel, the Highest channel

Note:

Both horizontal and vertical antenna polarities were tested and performed pretest to three orthogonal axis. The worst case emissions were reported

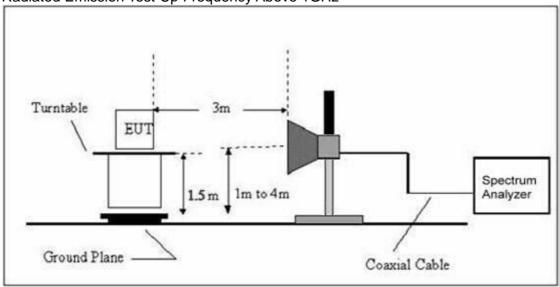


#### 3.3.3 DEVIATION FROM TEST STANDARD

No deviation

#### 3.3.4 TEST SETUP

Radiated Emission Test-Up Frequency Above 1GHz



#### 3.3.5 EUT OPERATING CONDITIONS

The EUT tested system was configured as the statements of 2.3 Unless otherwise a special operating condition is specified in the follows during the testing.

### 3.3.6 TEST RESULT



#### 802.11b

Polar (H/V)	Frequency	Meter Reading	Factor	Emission Level	Limits	Margin	Detector
(n/v)	(MHz)	(dBuV)	(dB)	(dBuV/m)	(dBuV/m)	(dB)	Type
		op	eration fre	equency:2412			
V	2390.00	38.27	13.83	52.1	74.00	-21.90	PK
V	2390.00	26.36	13.83	40.19	54.00	-13.81	AV
V	2400.00	38.47	13.85	52.32	74.00	-21.68	PK
V	2400.00	26.25	13.85	40.1	54.00	-13.90	AV
Н	2390.00	38.46	13.83	52.29	74.00	-21.71	PK
Н	2390.00	26.54	13.83	40.37	54.00	-13.63	AV
V	2400.00	38.33	13.85	52.18	74.00	-21.82	PK
V	2400.00	26.49	13.85	40.34	54.00	-13.66	AV

Polar	Frequency	Meter Reading	Factor	Emission Level	Limits	Margin	Detector	
(H/V)	(MHz)	(dBuV)	(dB)	(dBuV/m)	(dBuV/m)	(dB)	Type	
	operation frequency:2462							
V	2483.50	38.52	14.02	52.54	74.00	-21.46	PK	
V	2483.50	26.39	14.02	40.41	54.00	-13.59	AV	
V	2500.00	38.32	14.06	52.38	74.00	-21.62	PK	
V	2500.00	26.18	14.06	40.24	54.00	-13.76	AV	
Н	2483.50	38.5	14.02	52.52	74.00	-21.48	PK	
Н	2483.50	26.47	14.02	40.49	54.00	-13.51	AV	
Н	2500.00	38.12	14.06	52.18	74.00	-21.82	PK	
Н	2500.00	27.05	14.06	41.11	54.00	-12.89	AV	

- 1. Emission Level = Meter Reading + Factor, Margin= Emission Level Limit
- If peak below the average limit, the average emission was no test.
   The amplitude of spurious emissions which are attenuated by more than 20dB below the permissible value has no need to be reported.





802.11a

				<u>y</u>				
Polar (H/V)	Frequency	Meter Reading	Factor	Emission Level	Limits	Margin	Detector	
(177)	(MHz)	(dBuV)	(dB)	(dBuV/m)	(dBuV/m)	(dB)	Type	
	operation frequency:2412							
V	2390.00	38.63	13.83	52.46	74.00	-21.54	PK	
V	2390.00	26.47	13.83	40.3	54.00	-13.70	AV	
V	2400.00	38.63	13.85	52.48	74.00	-21.52	PK	
V	2400.00	26.49	13.85	40.34	54.00	-13.66	AV	
Н	2390.00	38.74	13.83	52.57	74.00	-21.43	PK	
Н	2390.00	26.82	13.83	40.65	54.00	-13.35	AV	
V	2400.00	38.49	13.85	52.34	74.00	-21.66	PK	
V	2400.00	26.22	13.85	40.07	54.00	-13.93	AV	

Polar (H/V)	Frequency	Meter Reading	Factor	Emission Level	Limits	Margin	Detector
(II/V)	(MHz)	(dBuV)	(dB)	(dBuV/m)	(dBuV/m)	(dB)	Type
		ор	eration fre	quency:2462			
V	2483.50	38.51	14.02	52.53	74.00	-21.47	PK
V	2483.50	26.48	14.02	40.5	54.00	-13.50	AV
V	2500.00	38.52	14.06	52.58	74.00	-21.42	PK
V	2500.00	26.29	14.06	40.35	54.00	-13.65	AV
Н	2483.50	38.47	14.02	52.49	74.00	-21.51	PK
Н	2483.50	26.55	14.02	40.57	54.00	-13.43	AV
Н	2500.00	38.33	14.06	52.39	74.00	-21.61	PK
Н	2500.00	27.12	14.06	41.18	54.00	-12.82	AV

- Emission Level = Meter Reading + Factor, Margin= Emission Level Limit
   If peak below the average limit, the average emission was no test.
   The amplitude of spurious emissions which are attenuated by more than 20dB below the permissible value has no need to be reported.



Polar	Frequency	Meter Reading	Factor	Emission Level	Limits	Margin	Detector
(H/V)	(MHz)	(dBuV)	(dB)	(dBuV/m)	(dBuV/m)	(dB)	Type
		ор	eration fre	quency:2412			
V	2390.00	37.83	13.83	51.66	74.00	-22.34	PK
V	2390.00	26.22	13.83	40.05	54.00	-13.95	AV
V	2400.00	38.05	13.85	51.9	74.00	-22.10	PK
V	2400.00	25.86	13.85	39.71	54.00	-14.29	AV
Н	2390.00	38.15	13.83	51.98	74.00	-22.02	PK
Н	2390.00	26.32	13.83	40.15	54.00	-13.85	AV
V	2400.00	38.01	13.85	51.86	74.00	-22.14	PK
V	2400.00	26.26	13.85	40.11	54.00	-13.89	AV

802 11n(20MHz)

Polar	Frequency	Meter Reading	Factor	Emission Level	Limits	Margin	Detector
(H/V)	(MHz)	(dBuV)	(dB)	(dBuV/m)	(dBuV/m)	(dB)	Type
		ор	eration fre	quency:2462			
V	2483.50	38.04	14.02	52.06	74.00	-21.94	PK
V	2483.50	26.52	14.02	40.54	54.00	-13.46	AV
V	2500.00	38.44	14.06	52.5	74.00	-21.50	PK
V	2500.00	25.27	14.06	39.33	54.00	-14.67	AV
Н	2483.50	38.19	14.02	52.21	74.00	-21.79	PK
Н	2483.50	26.58	14.02	40.6	54.00	-13.40	AV
Н	2500.00	37.84	14.06	51.9	74.00	-22.10	PK
Н	2500.00	26.39	14.06	40.45	54.00	-13.55	AV

- Emission Level = Meter Reading + Factor, Margin= Emission Level Limit
   If peak below the average limit, the average emission was no test.
   The amplitude of spurious emissions which are attenuated by more than 20dB below the permissible value has no need to be reported.



802.11n(40MHz)

			002.1111	( <del>+</del> 01411 12)				
Polar	Frequency	Meter Reading	Factor	Emission Level	Limits	Margin	Detector	
(H/V)	(MHz)	(dBuV)	(dB)	(dBuV/m)	(dBuV/m)	(dB)	Туре	
	operation frequency:2422							
V	2390.00	37.69	13.83	51.52	74.00	-22.48	PK	
V	2390.00	27.36	13.83	41.19	54.00	-12.81	AV	
V	2400.00	38.99	13.85	52.84	74.00	-21.16	PK	
V	2400.00	26.87	13.85	40.72	54.00	-13.28	AV	
Н	2390.00	38.09	13.83	51.92	74.00	-22.08	PK	
Н	2390.00	26.36	13.83	40.19	54.00	-13.81	AV	
V	2400.00	38.57	13.85	52.42	74.00	-21.58	PK	
V	2400.00	26.44	13.85	40.29	54.00	-13.71	AV	

Polar	Frequency	Meter Reading	Factor	Emission Level	Limits	Margin	Detector
(H/V)	(MHz)	(dBuV)	(dB)	(dBuV/m)	(dBuV/m)	(dB)	Туре
		ор	eration fre	equency:2452			
V	2483.50	38.52	14.02	52.54	74.00	-21.46	PK
V	2483.50	26.39	14.02	40.41	54.00	-13.59	AV
V	2500.00	38.32	14.06	52.38	74.00	-21.62	PK
V	2500.00	26.18	14.06	40.24	54.00	-13.76	AV
Н	2483.50	38.53	14.02	52.52	74.00	-21.48	PK
Н	2483.50	26.47	14.02	40.49	54.00	-13.51	AV
Н	2500.00	38.12	14.06	52.18	74.00	-21.82	PK
Н	2500.00	27.05	14.06	41.11	54.00	-12.89	AV

- Emission Level = Meter Reading + Factor, Margin= Emission Level Limit
   If peak below the average limit, the average emission was no test.
   The amplitude of spurious emissions which are attenuated by more than 20dB below the permissible value has no need to be reported.



## 4. POWER SPECTRAL DENSITY TEST

Shenzhen BCTC Technology Co., Ltd.

#### 4.1 APPLIED PROCEDURES / LIMIT

	/							
FCC Part15 (15.247), Subpart C								
Section	Test Item	Limit	Frequency Range (MHz)	Result				
15.247	Power Spectral Density	8 dBm (in any 3KHz)	2400-2483.5	PASS				

#### **4.1.1 TEST PROCEDURE**

- 1. Set analyzer center frequency to DTS channel center frequency.
- 2. Set the span to 1.5 times the DTS bandwidth.
- 3. Set the RBW to:  $3 \text{ kHz} \leq \text{RBW} \leq 100 \text{ kHz}$ .
- 4. Set the VBW  $\geq$  3 x RBW.
- 5. Detector = peak.
- 6. Sweep time = auto couple.
- 7. Trace mode = max hold.
- 8. Allow trace to fully stabilize.
- 9. Use the peak marker function to determine the maximum amplitude level within the RBW.
- 10. If measured value exceeds limit, reduce RBW (no less than 3 kHz) and repeat.

#### 4.1.2 DEVIATION FROM STANDARD

No deviation.

#### 4.1.3 TEST SETUP



#### 4.1.4 EUT OPERATION CONDITIONS

The EUT tested system was configured as the statements of 2.1 Unless otherwise a special operating condition is specified in the follows during the testing.

EMC Report Tel: 400-788-9558 0755-33019988 Web:Http://www.bctc-lab.com.cn Page 32 of 107

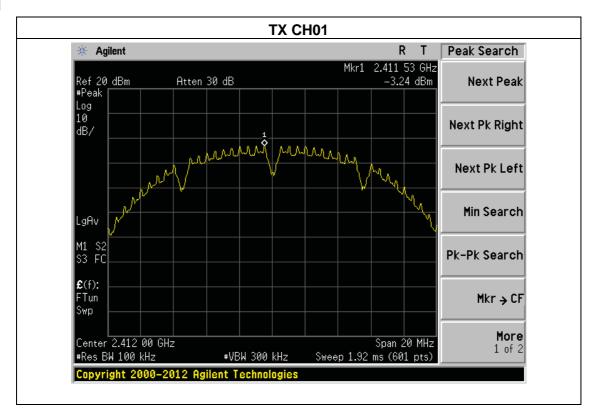


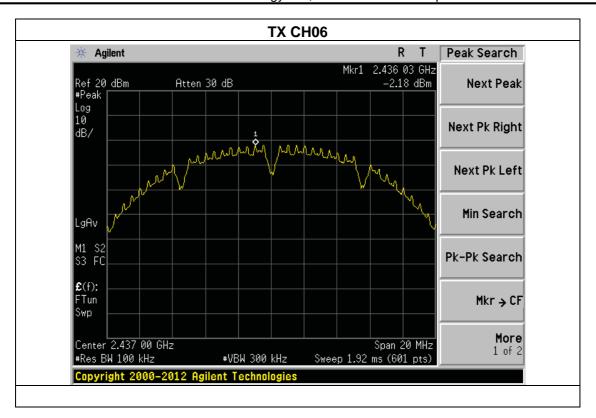
#### 4.1.5 TEST RESULTS

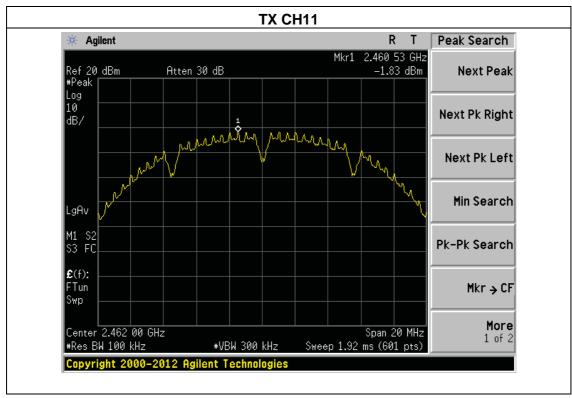
Temperature :	<b>25</b> ℃	Relative Humidity:	60%
Pressure :	1015 hPa	Test Voltage :	AC120V 60Hz
Test Mode :	TX b Mode		

Frequency	Power Density (dBm)		Limit (dBm)	Result	
2412 MHz	Ant.1	Ant.1 -3.24 8		PASS	
211211112	Ant.2	-3.93	O	1 7 100	
2437 MHz	Ant.1	-2.18	8	PASS	
2437 1011 12	Ant.2	-3.96	U	1 700	
2462 MHz	Ant.1	-1.83	8	PASS	
2402 IVII 12	Ant.2	-2.70	O		

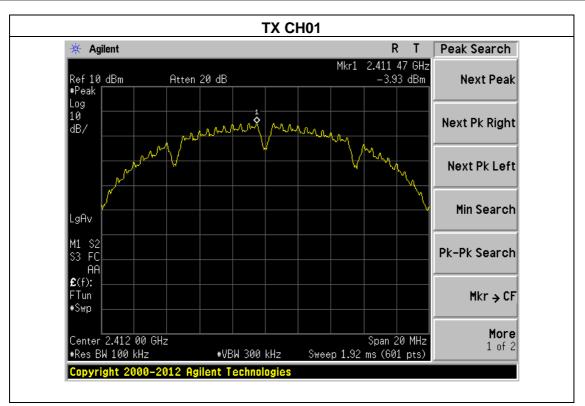
#### Ant.1



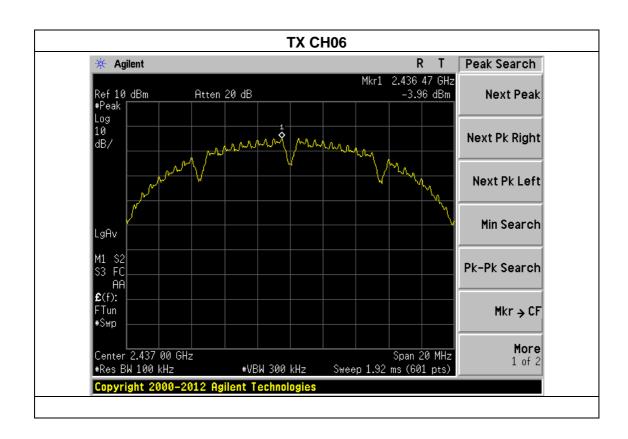




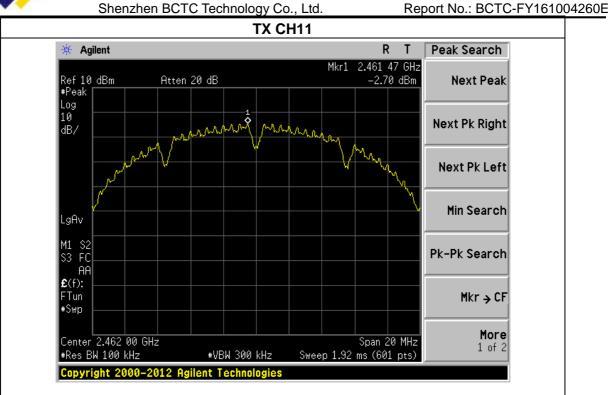
Ant. 2



Shenzhen BCTC Technology Co., Ltd.







**EMC Report** Tel: 400-788-9558 0755-33019988 Web:<u>Http://www.bctc-lab.com.cn</u>

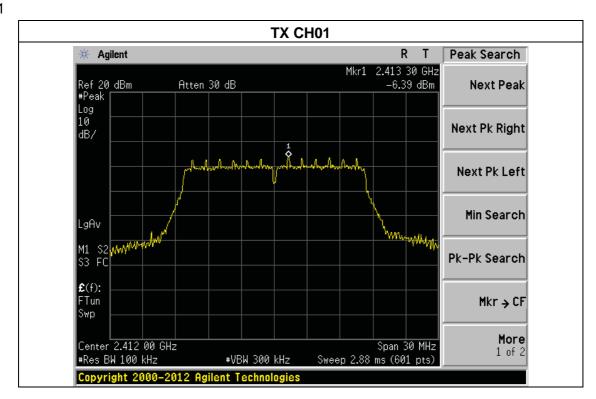


Temperature :	25℃	Relative Humidity:	60%
Pressure :	1015 hPa	Test Voltage :	AC120V 60Hz
Test Mode :	TX g Mode		

Report No.: BCTC-FY161004260E

Frequency	Power Density (dBm)		Limit (dBm)	Result	
2412 MHz	Ant.1	-6.39	8	PASS	
Z-712 WII 12	Ant.2	-5.85		17.00	
2437 MHz	Ant.1	-4.70	8	PASS	
2437 101112	Ant.2	-4.11	0	PASS	
2462 MHz	Ant.1	-4.70	8	PASS	
2402 WII 12	Ant.2	-5.14	O	1 700	

#### Ant.1

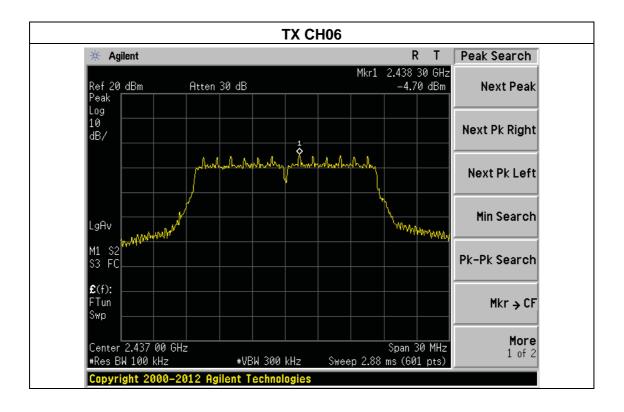


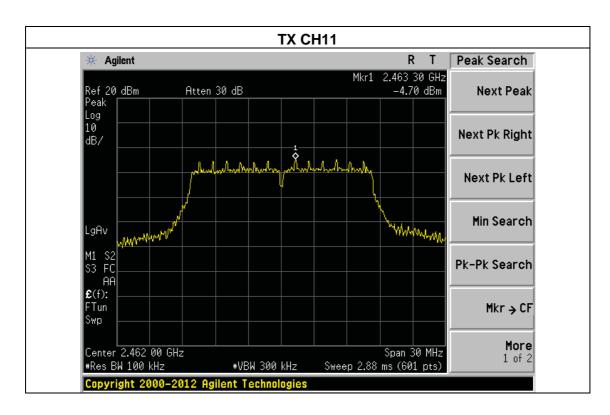
**EMC Report** 

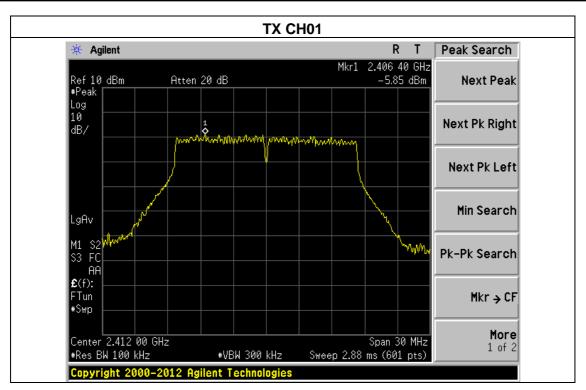
Tel: 400-788-9558 0755-33019988

Web:<u>Http://www.bctc-lab.com.cn</u>

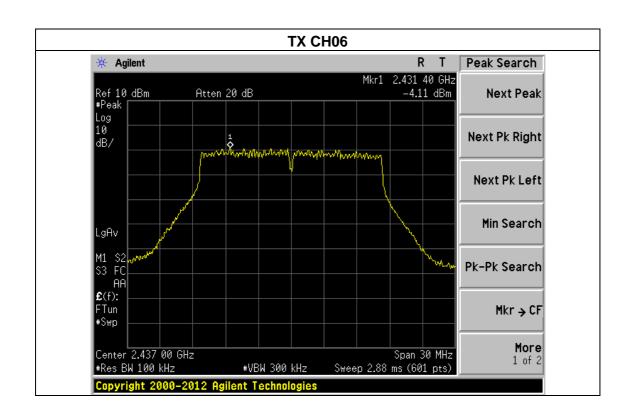




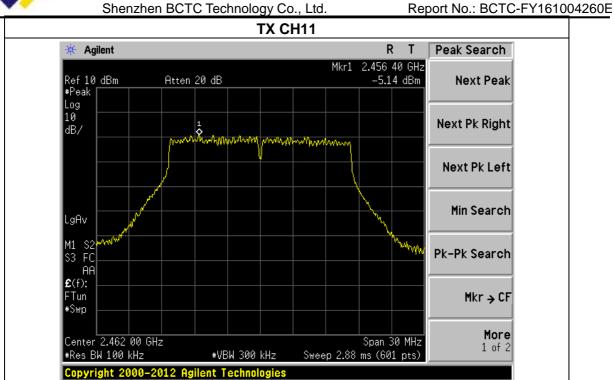




Shenzhen BCTC Technology Co., Ltd.







Tel: 400-788-9558 0755-33019988

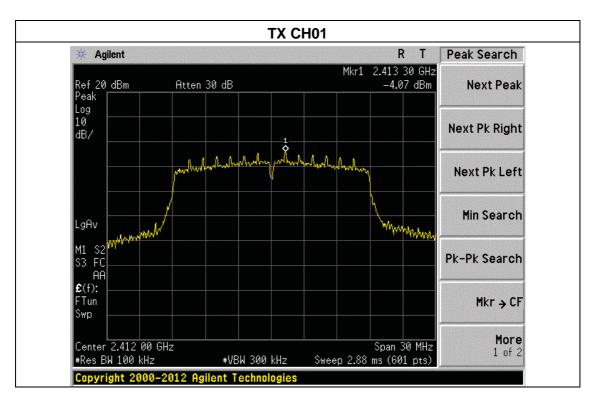


Temperature :	25℃	Relative Humidity:	60%
Pressure :	1015 hPa	Test Voltage :	AC120V 60Hz
Test Mode :	TX n Mode(20M)		

Report No.: BCTC-FY161004260E

Frequency	Read Level (dBm)		Total Power Spectral Density(dBm)	Limit (dBm)	Result
2412 MHz	Ant.1	-4.07	-3.28	8	PASS
Z712 WII 12	Ant.2	-10.76	-3.20	O	1 700
2437 MHz	Ant.1	-6.53	-4.77	8	PASS
2437 IVITIZ	Ant.2	-11.19	<del>-4</del> .77	0	PASS
2462 MHz	Ant.1	-4.87	-3.87	8	PASS
Z40Z IVINZ	Ant.2	-11.15	-3.01	0	FASS

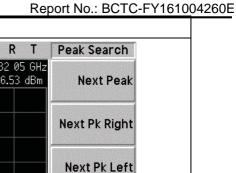
#### Ant.1

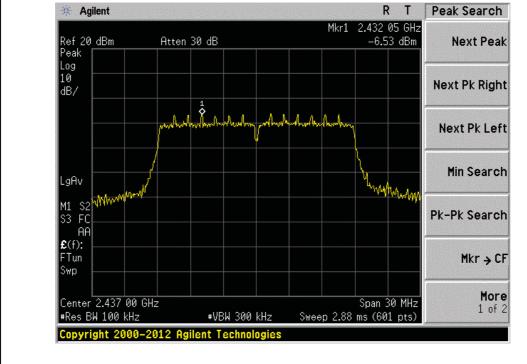


**EMC Report** 

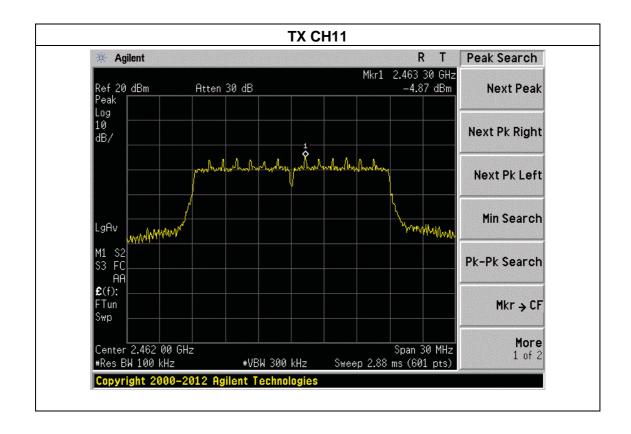
Tel: 400-788-9558 0755-33019988







**TX CH06** 

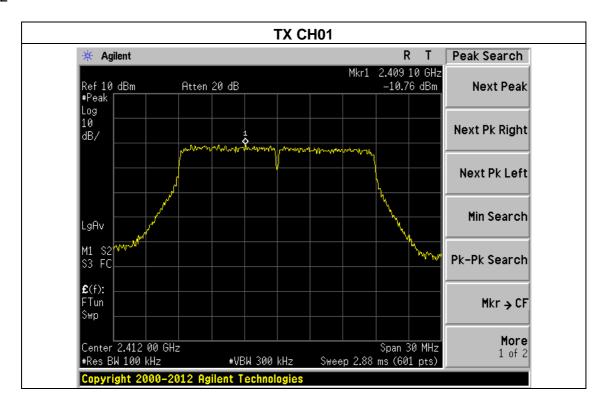


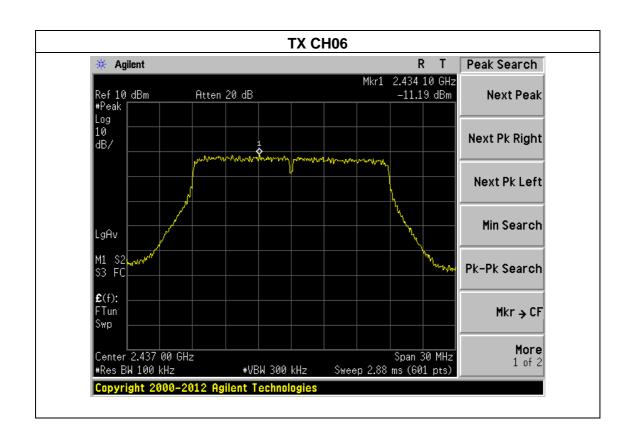
**EMC Report** 

Tel: 400-788-9558 0755-33019988

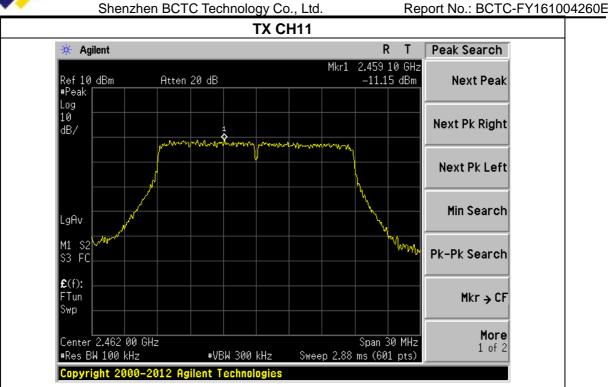
Web:Http://www.bctc-lab.com.cn









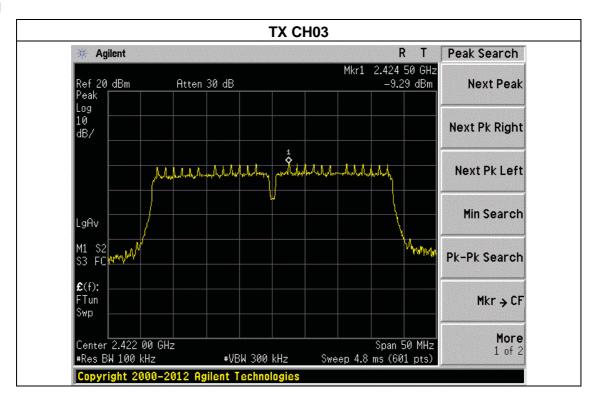


EMC Report



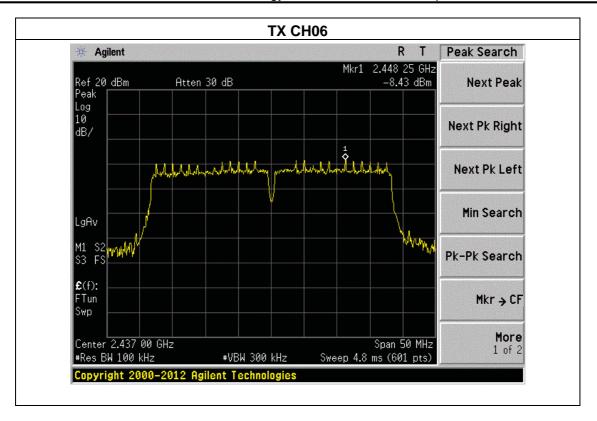
Temperature :	<b>25</b> ℃	Relative Humidity:	60%
Pressure :	1015 hPa	Test Voltage :	AC120V 60Hz
Test Mode :	TX n Mode(40M)		

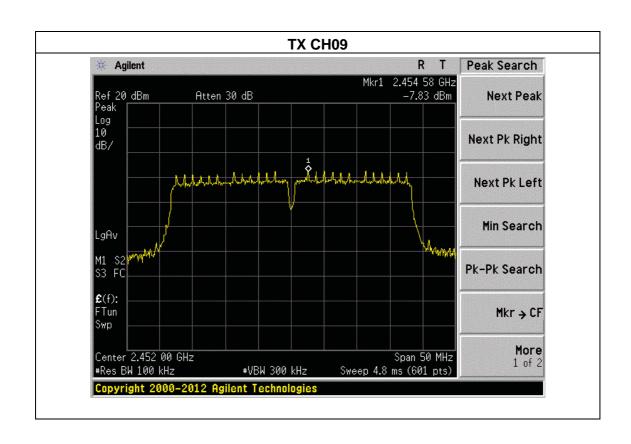
Frequency	Read Level (dBm)		Total Power Spectral Density(dBm)	Limit (dBm)	Result
2422 MHz	Ant.1	-9.29	-7.21	8	PASS
2422 IVII 12	Ant.2	-11.39	-7.21	0	1 700
2437 MHz	Ant.1	-8.43	-6.78	8	PASS
2437 IVIH2	Ant.2	-11.56	-0.70	0	PASS
2452 MHz	Ant.1	-7.83	-6.38	8	PASS
Z43Z IVITZ	Ant.2	-11.71	-0.30	0	PASS

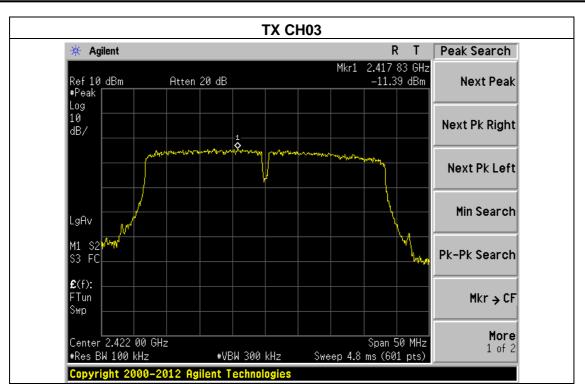


Tel: 400-788-9558 0755-33019988

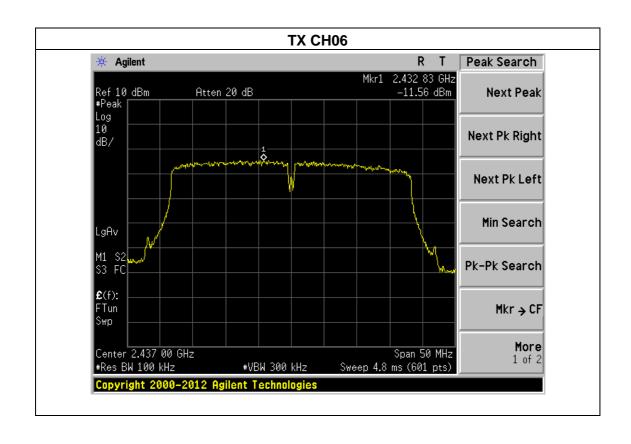




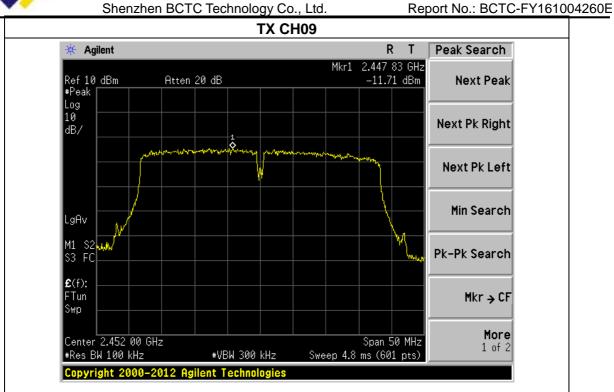




Shenzhen BCTC Technology Co., Ltd.







EMC Report

Tel: 400-788-9558 0755-33019988



#### 5. BANDWIDTH TEST

#### 5.1 APPLIED PROCEDURES / LIMIT

FCC Part15 (15.247), Subpart C					
Section Test Item Limit Frequency Range (MHz) Result					
15.247(a)(2)	Bandwidth	>= 500KHz (6dB bandwidth)	2400-2483.5	PASS	

#### **5.1.1 TEST PROCEDURE**

- 1. Set RBW = 100 kHz.
- 2. Set the video bandwidth (VBW)  $\geq$  3 x RBW.
- 3. Detector = Peak.
- 4. Trace mode = max hold.
- 5. Sweep = auto couple.
- 6. Allow the trace to stabilize.
- 7. Measure the maximum width of the emission that is constrained by the frequencies associated with the two outermost amplitude points (upper and lower frequencies) that are attenuated by 6 dB relative to the maximum level measured in the fundamental emission.

#### 5.1.2 DEVIATION FROM STANDARD

No deviation.

#### 5.1.3 TEST SETUP



#### **5.1.4 EUT OPERATION CONDITIONS**

The EUT tested system was configured as the statements of 2.4 Unless otherwise a special operating condition is specified in the follows during the testing.



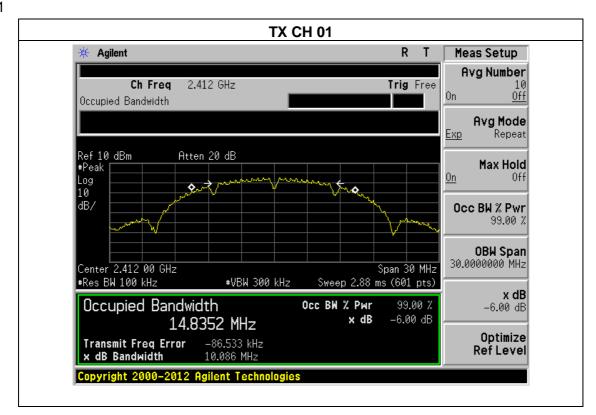
#### 5.1.5 TEST RESULTS

Temperature :	<b>25</b> ℃	Relative Humidity:	60%
Pressure :	1012 hPa	Test Voltage :	AC120V 60Hz
Test Mode :	TX b Mode		

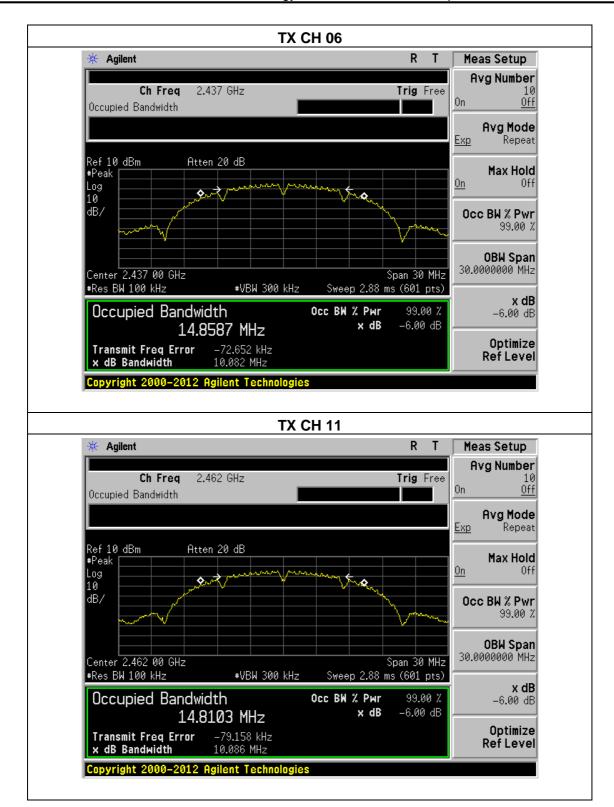
Report No.: BCTC-FY161004260E

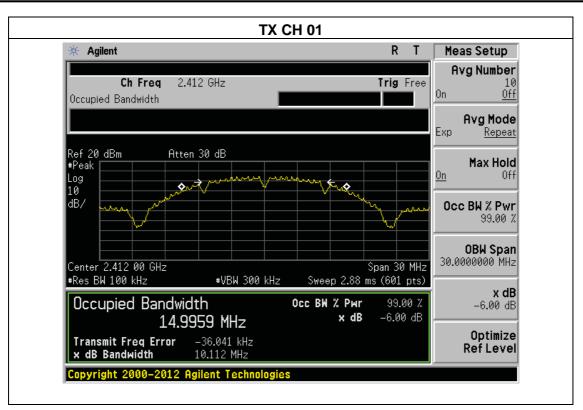
Channel	Frequency (MHz)		andwidth MHz)	Limit (kHz)	Result
Low	2412	Ant.1	10.086	500	Pass
Low	2412	Ant.2	10.112	500	Pass
Middle	0.407	Ant.1	10.082	500	Pass
ivildale	2437	Ant.2	10.134	500	Pass
Lliab	2462	Ant.1	10.086	500	Pass
High	2462	Ant.2	10.146	500	Pass

#### Ant.1

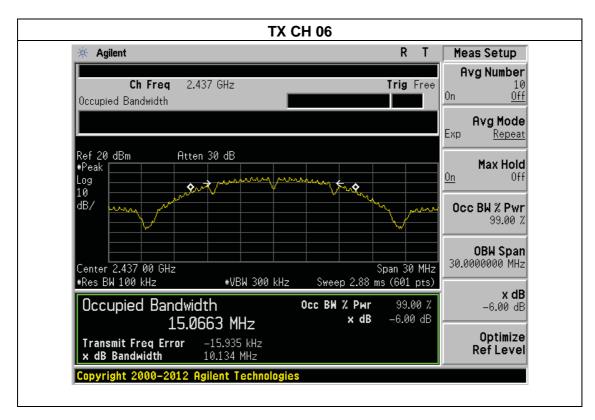


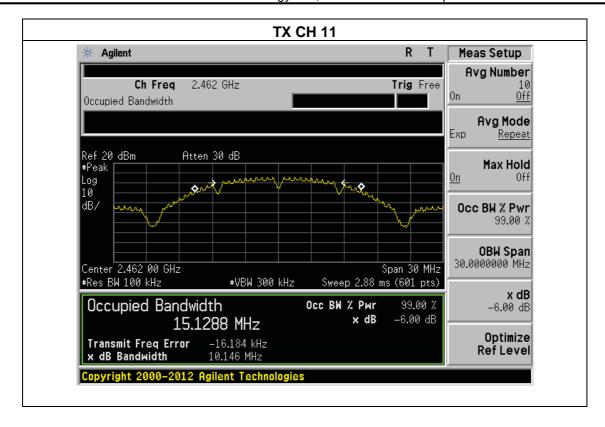






Shenzhen BCTC Technology Co., Ltd.





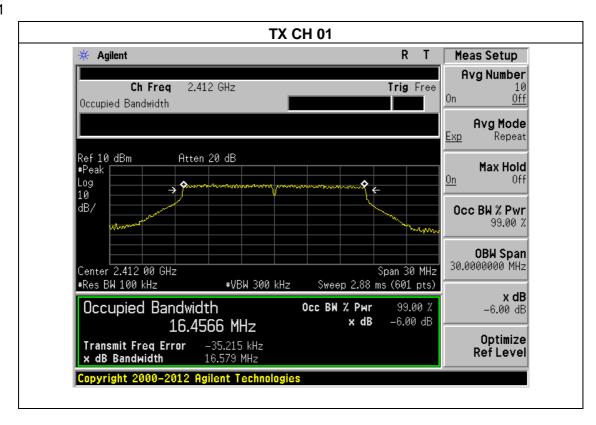


Temperature :	<b>25</b> ℃	Relative Humidity:	60%
Pressure :	1012 hPa	Test Voltage :	AC120V 60Hz
Test Mode :	TX g Mode		

Report No.: BCTC-FY161004260E

Channel	Frequency (MHz)		andwidth MHz)	Limit (kHz)	Result
Low	2412	Ant.1	16.579	500	Pass
Low	2412	Ant.2	16.438	500	Pass
Middle	2437	Ant.1	16.551	500	Pass
ivildale		Ant.2	15.142	500	Pass
Ligh	2462	Ant.1	16.574	500	Pass
High	2462	Ant.2	15.155	500	Pass

Ant.1

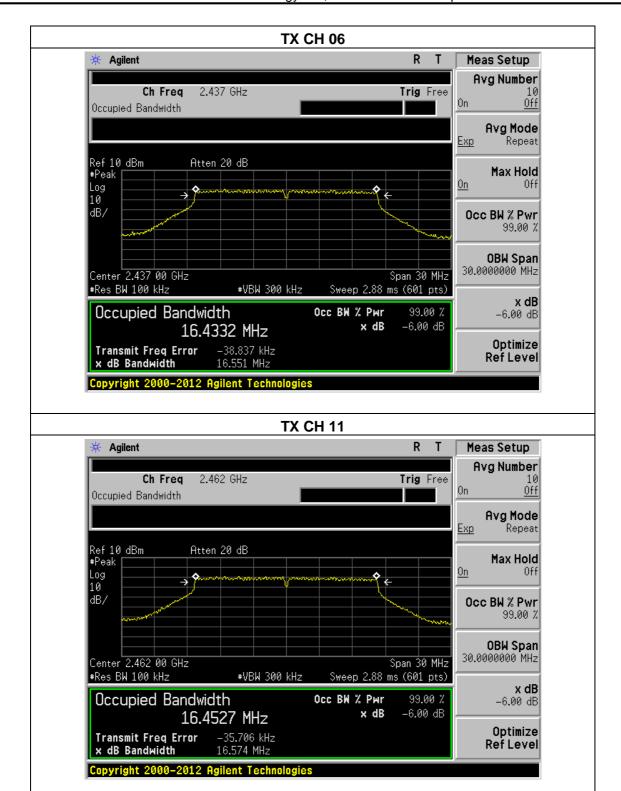


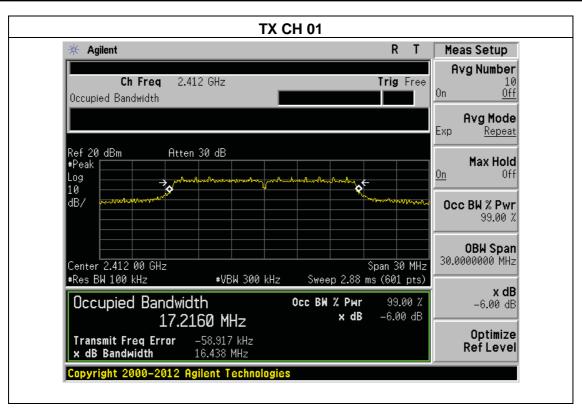
**EMC Report** 

Tel: 400-788-9558 0755-33019988

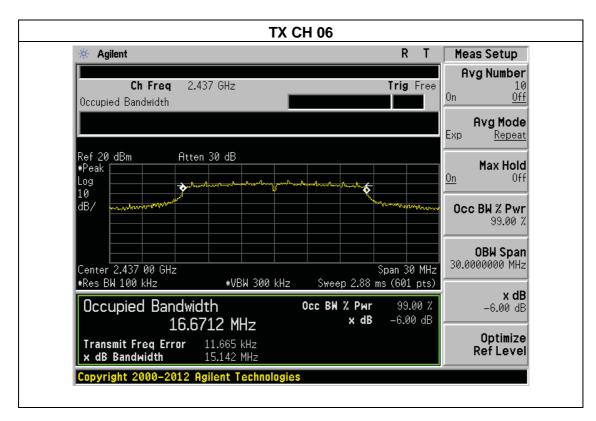
Web:Http://www.bctc-lab.com.cn

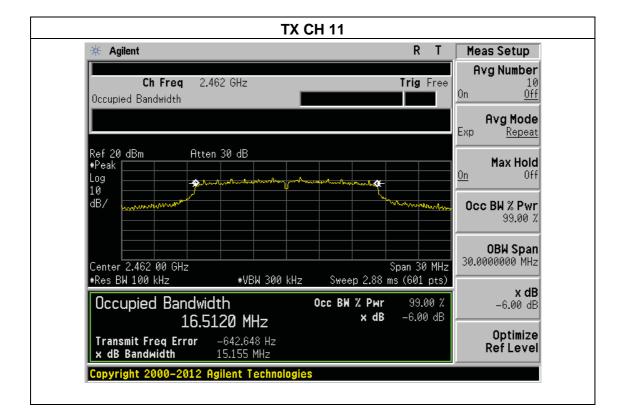






Shenzhen BCTC Technology Co., Ltd.





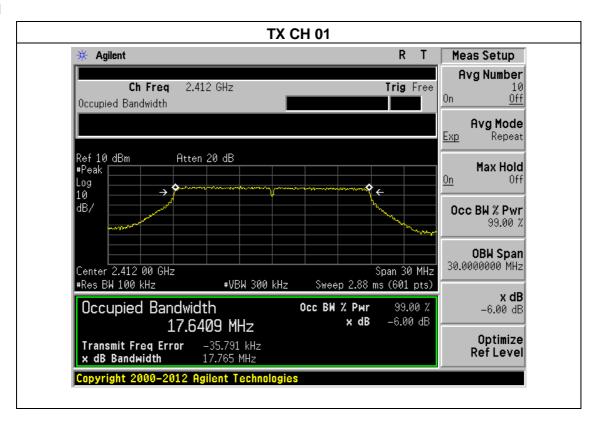


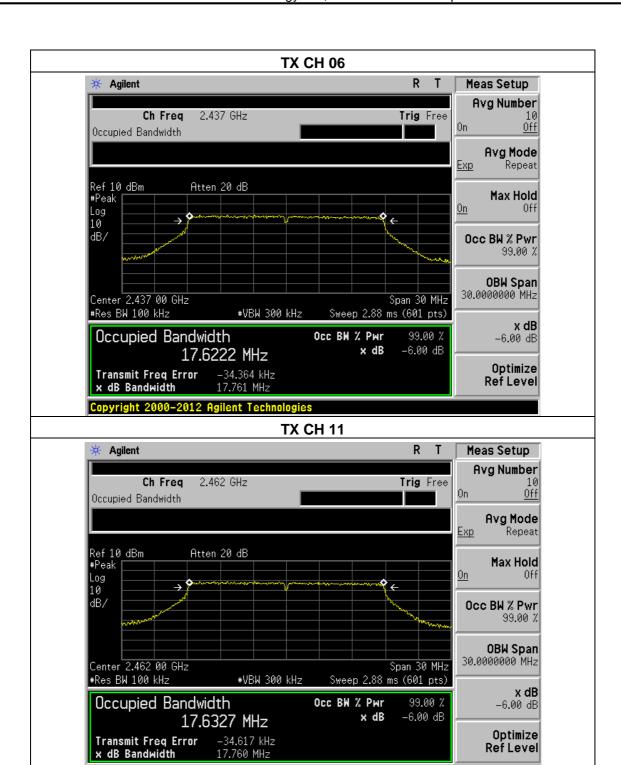
Temperature :	25℃	Relative Humidity:	60%
Pressure :	1012 hPa	Test Voltage :	AC120V 60Hz
Test Mode :	TX n Mode(20M)		

Report No.: BCTC-FY161004260E

Channel	Frequency (MHz)	6dB bandwidth (MHz)		Limit (kHz)	Result
Low	2412	Ant.1	17.765	500	Pass
		Ant.2	16.101	500	Pass
Middle	2437	Ant.1	17.761	500	Pass
		Ant.2	15.188	500	Pass
High	2462	Ant.1	17.760	500	Pass
		Ant.2	15.119	500	Pass

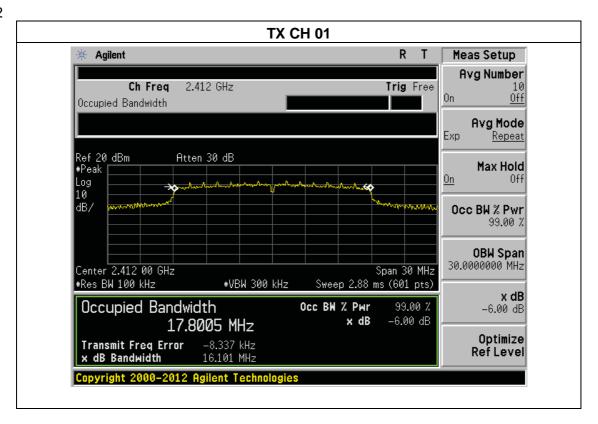
#### Ant.1

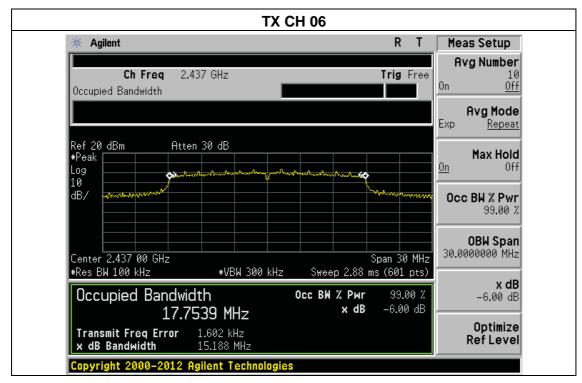




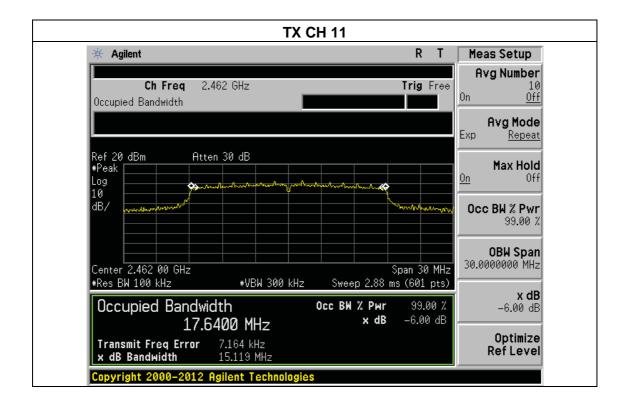
Copyright 2000-2012 Agilent Technologies











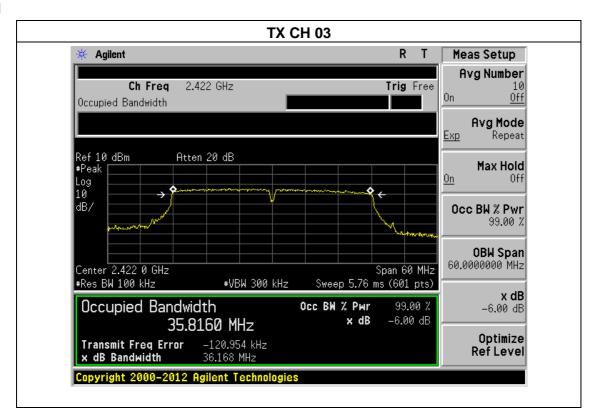


Temperature :	25℃	Relative Humidity:	60%
Pressure :	1012 hPa	Test Voltage :	AC120V 60Hz
Test Mode :	TX n Mode(40M)		

Report No.: BCTC-FY161004260E

Channel	Frequency (MHz)	6dB bandwidth (MHz)		Limit (kHz)	Result
Low	2422	Ant.1	36.168	500	Pass
		Ant.2	36.352	500	Pass
Middle	2437	Ant.1	36.177	500	Pass
		Ant.2	35.235	500	Pass
High	2452	Ant.1	36.199	500	Pass
		Ant.2	35.325	500	Pass

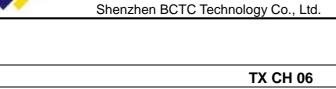
#### Ant.1

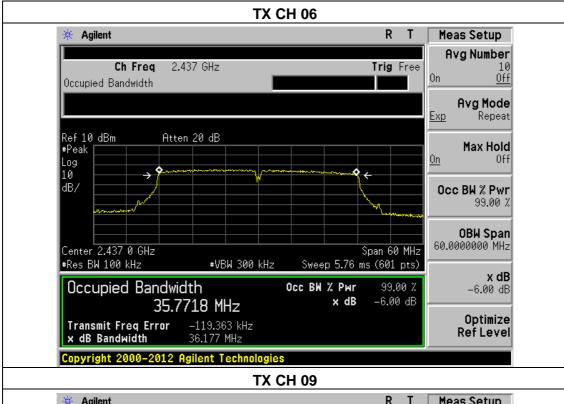


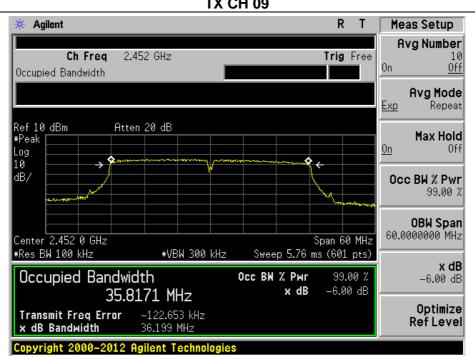
**EMC Report** 

Tel: 400-788-9558 0755-33019988

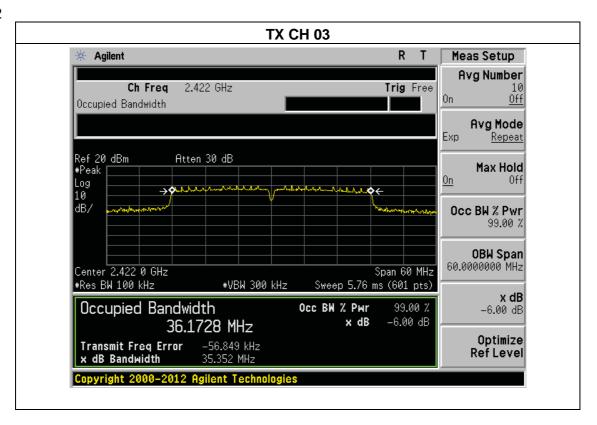
Web:Http://www.bctc-lab.com.cn

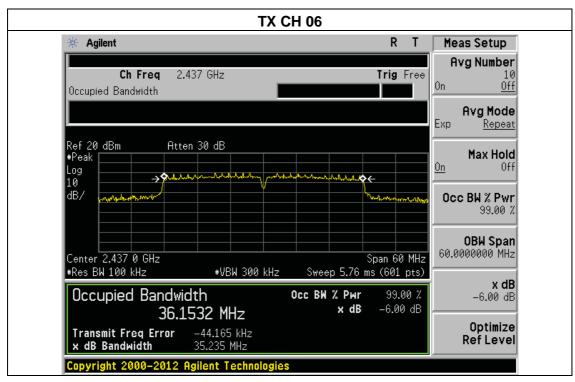




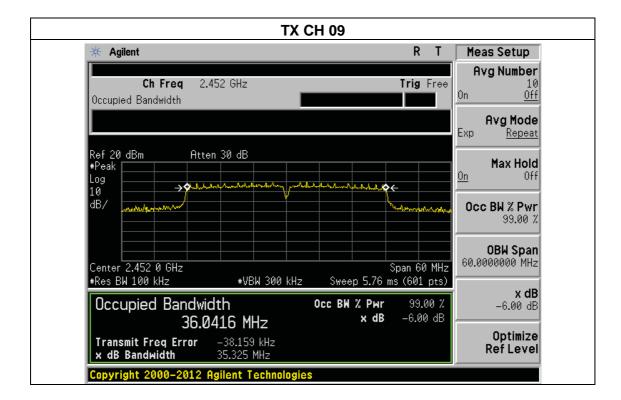














#### **6. PEAK OUTPUT POWER TEST**

#### **6.1 APPLIED PROCEDURES / LIMIT**

FCC Part15 (15.247) , Subpart C						
Section	Test Item Limit		Frequency Range (MHz)	Result		
15.247(b)(3)	Peak Output Power	1 watt or 30dBm	2400-2483.5	PASS		

Report No.: BCTC-FY161004260E

#### **6.1.1 TEST PROCEDURE**

a. The EUT was directly connected to the Power meter

#### **6.1.2 DEVIATION FROM STANDARD**

No deviation.

#### 6.1.3 TEST SETUP



#### **6.1.4 EUT OPERATION CONDITIONS**

The EUT tested system was configured as the statements of 2.4 Unless otherwise a special operating condition is specified in the follows during the testing.



#### **6.1.5 TEST RESULTS**

Temperature :	<b>25</b> ℃	Relative Humidity:	60%
Pressure :	1012 hPa	Test Voltage :	AC120V 60Hz

	Frequency	Antenna port	Maximum Conducted Output Power(PK)	Maximum Conducted Output Power(PK)	Total Conducted Output Power(PK)	Total Conducted Output Power(PK)	LIMIT
	(MHz)		(dBm)	(mW)	(mW)	(dBm)	dBm
	2412	Ant.1	13.82	24.10	N/A	N/A	30
		Ant.2	13.55	22.65	,, .		
802.11b	2437	Ant.1	13.61	22.96	N/A	N1/0	30
002.116	2407	Ant.2	13.46	22.18	IN/A	N/A	
	2462	Ant.1	13.40	21.88	N/A	N1/A	00
	2402	Ant.2	13.52	22.49	IN/A	N/A	30
	2412	Ant.1	12.97	19.82	N/A	N/A	30
	2412	Ant.2	12.49	17.74	IN/A		
802.11g	2437	Ant.1	12.79	19.01	N/A	N/A	30
802.11g	2437	Ant.2	12.21	16.63	IN/A		
	2462	Ant.1	12.33	17.10	N/A	N/A	30
		Ant.2	12.00	15.85			
	2412	Ant.1	10.61	11.51	22.78	13.58	30
		Ant.2	10.52	11.27	22.70		
802.11n20	2437	Ant.1	10.36	10.86	22.00	13.22	30
002.111120		Ant.2	10.47	11.14	22.00		
	2462	Ant.1	10.66	11.64	22.22	13.68	30
		Ant.2	10.75	11.89	23.33		
	2422	Ant.1	9.38	8.67	47.40	12.43	30
802.11n40		Ant.2	9.45	8.81	17.48		
	2437	Ant.1	9.59	9.10	10.07	12.64	30
		Ant.2	9.67	9.27	18.37		
	2452	Ant.1	9.73	9.40	10.24	12.86	30
		Ant.2	9.96	9.91	19.31		



## 7. 100 KHZ BANDWIDTH OF FREQUENCY BAND EDGE 7.1 APPLICABLE STANDARD

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

Report No.: BCTC-FY161004260E

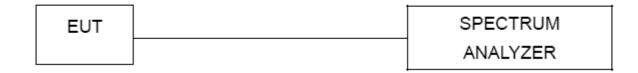
#### 7.2 TEST PROCEDURE

- a) Check the calibration of the measuring instrument using either an internal calibrator or a known signal from an external generator.
- b) Position the EUT without connection to measurement instrument. Turn on the EUT and connect its antenna terminal to measurement instrument via a low loss cable. Then set it to any one measured frequency within its operating range, and make sure the instrument is operated in its linear range.
- c) Set RBW to 100 kHz and VBW of spectrum analyzer to 300 kHz with a convenient frequency span including 100 kHz bandwidth from band edge.
- d) Measure the highest amplitude appearing on spectral display and set it as a reference level. Plot the graph with marking the highest point and edge frequency.
- e) Repeat above procedures until all measured frequencies were complete.

#### 7.3 DEVIATION FROM STANDARD

No deviation.

#### 7.4 TEST SETUP



EMC Report Tel: 400-788-9558 0755-33019988 Web:<u>Http://www.bctc-lab.com.cn</u> Page 68 of 107



#### 7.5 EUT OPERATION CONDITIONS

The EUT tested system was configured as the statements of 2.4 Unless otherwise a special operating condition is specified in the follows during the testing.

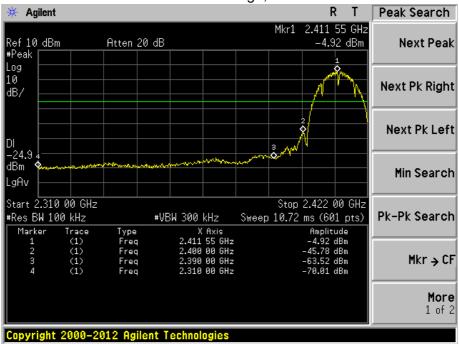
Report No.: BCTC-FY161004260E

#### 7.1 TEST RESULTS

EMC Report Tel: 400-788-9558 0755-33019988 Web: <a href="http://www.bctc-lab.com.cn">Http://www.bctc-lab.com.cn</a> Page 69 of 107





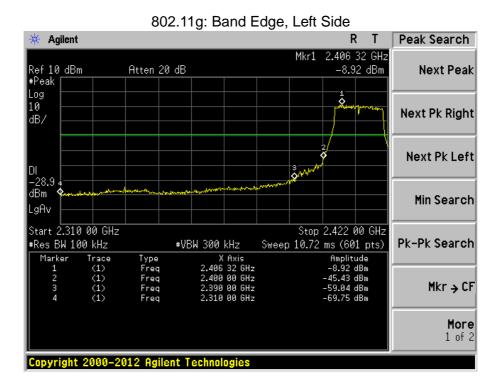


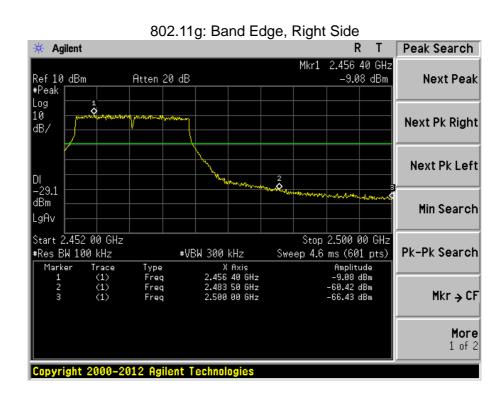






Report No.: BCTC-FY161004260E

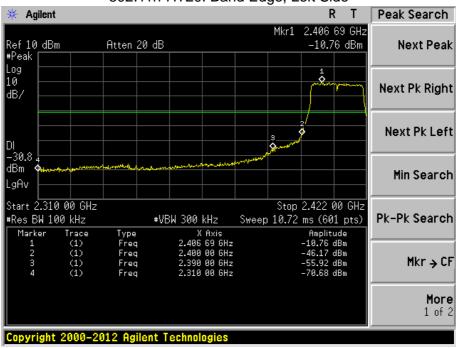




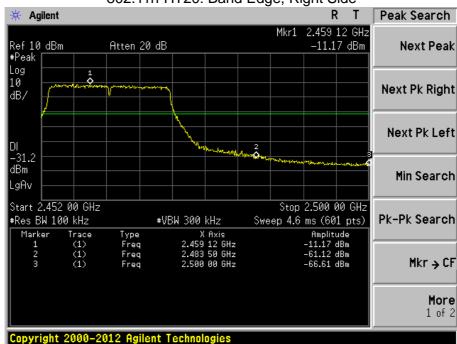




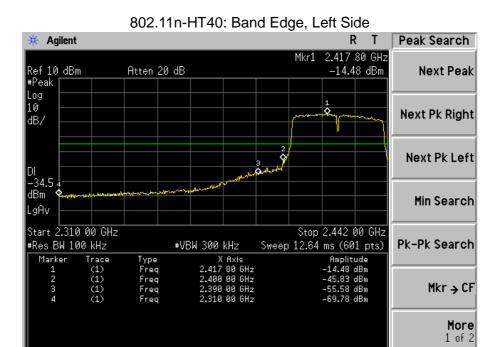
Report No.: BCTC-FY161004260E

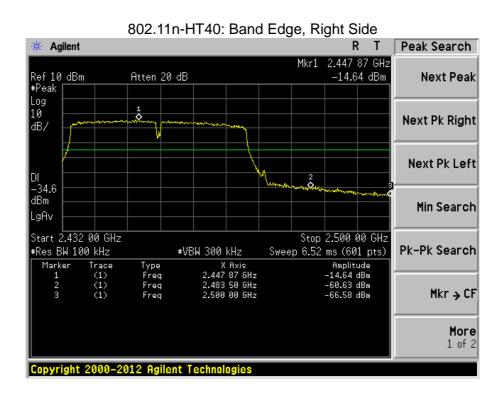


#### 802.11n-HT20: Band Edge, Right Side







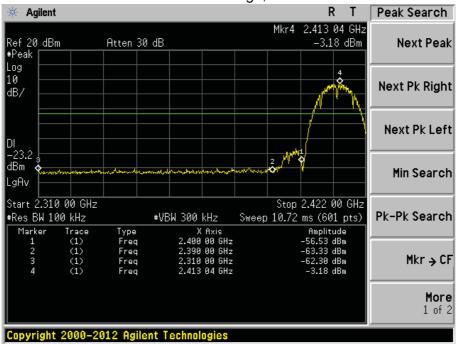


Copyright 2000-2012 Agilent Technologies

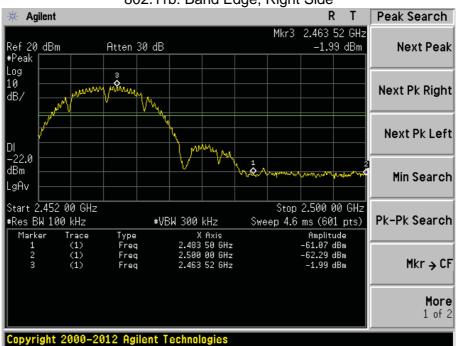


Ant.2



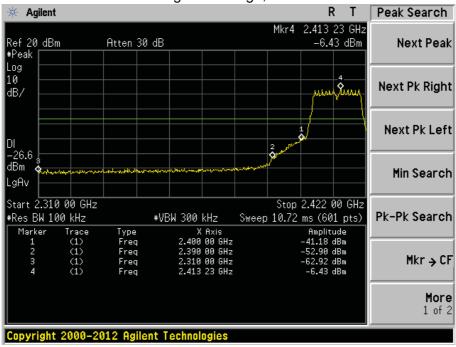




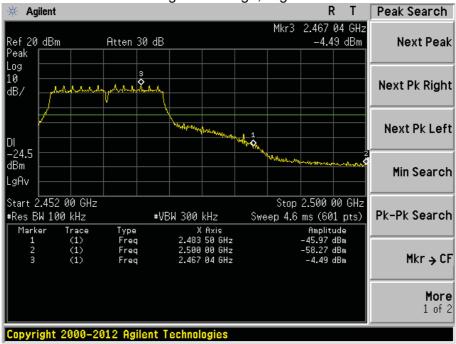


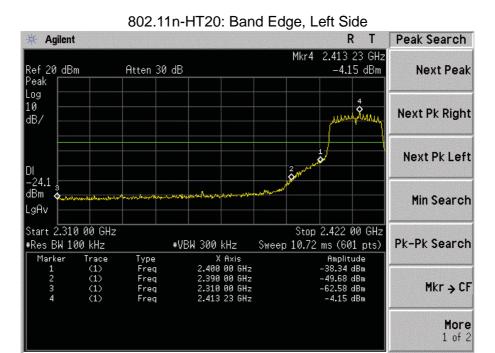


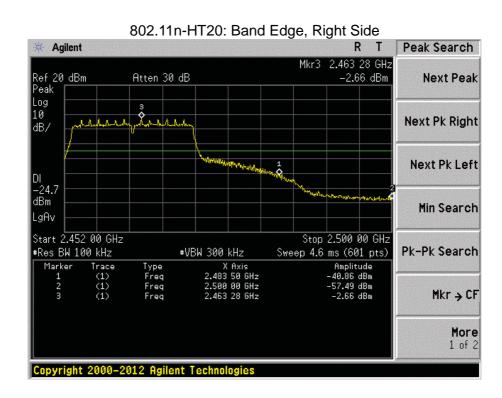




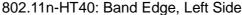
#### 802.11g: Band Edge, Right Side

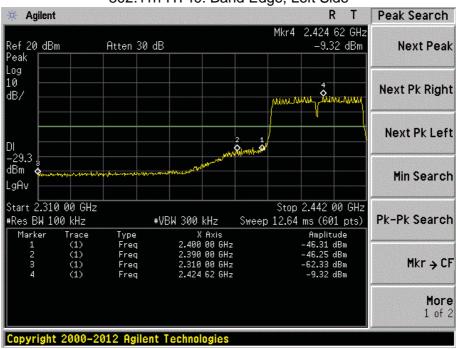


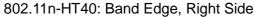


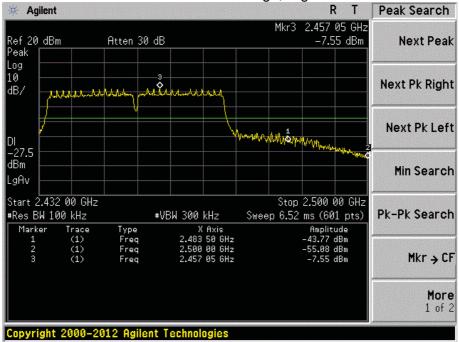














#### 8. CONDUCTED SPURIOUS EMISSIONS

#### 8.1 APPLICABLE STANDARD

According to FCC Part 15.247(d) and KDB 558074 DTS 01 Meas. Guidance v03r05

The DTS rules specify that in any 100 kHz bandwidth outside of the authorized frequency band, the power shall be attenuated according to the following conditions:7

- a) If the maximum peak conducted output power procedure was used to demonstrate compliance as described in
- 9.1, then the peak output power measured in any 100 kHz bandwidth outside of the authorized frequency band shall be attenuated by at least 20 dB relative to the maximum in-band peak PSD level in 100 kHz (i.e., 20 dBc).
- b) If maximum conducted (average) output power was used to demonstrate compliance as described in 9.2, then the peak power in any 100 kHz bandwidth outside of the authorized frequency band shall be attenuated by at least 30 dB relative to the maximum in-band peak PSD level in 100 kHz (i.e., 30 dBc).
- c) In either case, attenuation to levels below the 15.209 general radiated emissions limits is not required.8

  The following procedures shall be used to demonstrate compliance to these limits. Note that these procedures can be used in either an antenna-port conducted or radiated test set-up. Radiated tests must conform to the test site requirements and utilize maximization procedures defined herein.

#### **8.2 MEASURING INSTRUMENTS**

The Measuring equipment is listed in the section 2.5 of this test report.

#### 8.3 TEST SETUP

Reference level measurement

Establish a reference level by using the following procedure:

- a) Set instrument center frequency to DTS channel center frequency.
- b) Set the span to  $\geq$  1.5 times the DTS bandwidth.
- c) Set the RBW = 100 kHz.
- d) Set the VBW  $\geq$  3 x RBW.
- e) Detector = peak.
- f) Sweep time = auto couple.
- g) Trace mode = max hold.
- h) Allow trace to fully stabilize.
- i) Use the peak marker function to determine the maximum PSD level.

Note that the channel found to contain the maximum PSD level can be used to establish the reference level.

Emission level measurement

- a) Set the center frequency and span to encompass frequency range to be measured.
- b) Set the RBW = 100 kHz.
- c) Set the VBW  $\geq$  3 x RBW.



- d) Detector = peak.
- e) Sweep time = auto couple.
- f) Trace mode = max hold.
- g) Allow trace to fully stabilize.
- h) Use the peak marker function to determine the maximum amplitude level.

Ensure that the amplitude of all unwanted emissions outside of the authorized frequency band (excluding restricted frequency bands) are attenuated by at least the minimum requirements specified in 11.1 a) or 11.1 b). Report the three highest emissions relative to the limit.

Report No.: BCTC-FY161004260E

#### **8.4 TEST RESULTS**

EMC Report Tel: 400-788-9558 0755-33019988 Web:<u>Http://www.bctc-lab.com.cn</u> Page 79 of 107



#### Ant.1

(802.11b) Emission not in Restricted Band plot on channel 1 Reference Level



Configuration IEEE 802.11b / CH 1 / 30MHz~2400MHz (down 30dBc)







(802.11b) Emission not in Restricted Band plot on channel 11
Reference Level



EMC Report

Tel: 400-788-9558 0755-33019988







#### Configuration IEEE 802.11b / CH 11 / 2500MHz~26500MHz (down 30dBc)



**EMC Report** 

Tel: 400-788-9558 0755-33019988



### Configuration IEEE 802.11g Emission not in Restricted Band plot on channel 1 Reference Level



#### Configuration IEEE 802.11g / CH 1 / 30MHz~2400MHz (down 30dBc)



EMC Report

Tel: 400-788-9558 0755-33019988





## Configuration IEEE 802.11g Emission not in Restricted Band plot on channel 11 Reference Level



EMC Report

Tel: 400-788-9558 0755-33019988





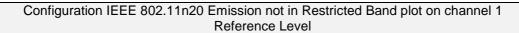
## Configuration IEEE 802.11g Emission not in Restricted Band plot on channel 11 Reference Level



EMC Report

Tel: 400-788-9558 0755-33019988







#### Configuration IEEE 802.11n20 / CH 1 / 30MHz~2400MHz (down 30dBc)



EMC Report

Tel: 400-788-9558 0755-33019988



#### **3,** - - , ...



Configuration IEEE 802.11n20 / CH 1 / 2500MHz~26500MHz (down 30dBc)

## Configuration IEEE 802.11n20 Emission not in Restricted Band plot on channel 11 Reference Level



**EMC Report** 

Tel: 400-788-9558 0755-33019988







#### Configuration IEEE 802.11n20 / CH 11 / 2500MHz~26500MHz (down 30dBc)

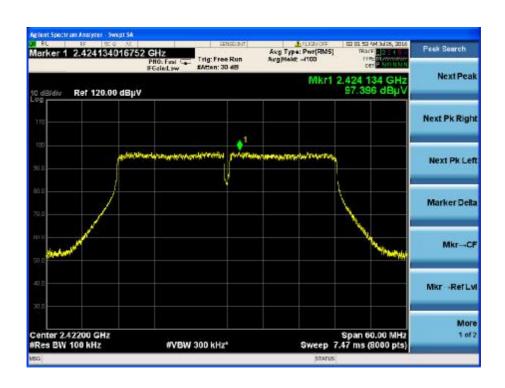


**EMC Report** 

Tel: 400-788-9558 0755-33019988



### Configuration IEEE 802.11n40 Emission not in Restricted Band plot on channel 3 Reference Level



#### Configuration IEEE 802.11n40 / CH 3 / 30MHz~2400MHz (down 30dBc)



EMC Report

Tel: 400-788-9558 0755-33019988





### Configuration IEEE 802.11n40 Emission not in Restricted Band plot on channel 9 Reference Level



**EMC Report** 

Tel: 400-788-9558 0755-33019988







#### Configuration IEEE 802.11n40 / CH 9 / 2500MHz~26500MHz (down 30dBc)



**EMC Report** 

Tel: 400-788-9558 0755-33019988



#### Ant.2

(802.11b) Emission not in Restricted Band plot on channel 1 Reference Level



Configuration IEEE 802.11b / CH 1 / 30MHz~2400MHz (down 30dBc)







(802.11b) Emission not in Restricted Band plot on channel 11
Reference Level

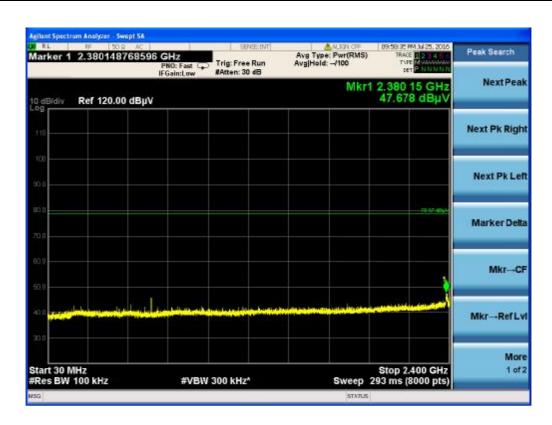


EMC Report

Tel: 400-788-9558 0755-33019988







#### Configuration IEEE 802.11b / CH 11 / 2500MHz~26500MHz (down 30dBc)





### Configuration IEEE 802.11g Emission not in Restricted Band plot on channel 1 Reference Level



#### Configuration IEEE 802.11g / CH 1 / 30MHz~2400MHz (down 30dBc)



EMC Report

Tel: 400-788-9558 0755-33019988





## Configuration IEEE 802.11g Emission not in Restricted Band plot on channel 11 Reference Level



EMC Report

Tel: 400-788-9558 0755-33019988







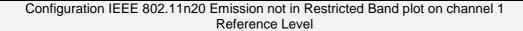
### Configuration IEEE 802.11g / CH 11 / 2500MHz~26500MHz (down 30dBc)

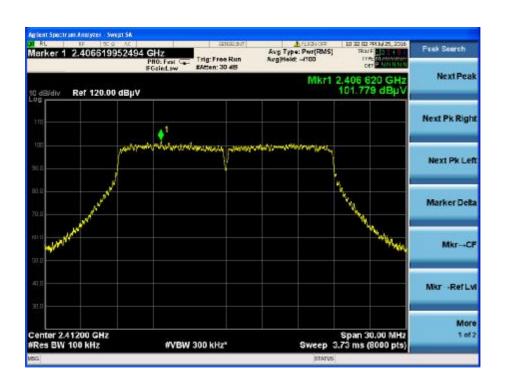


EMC Report

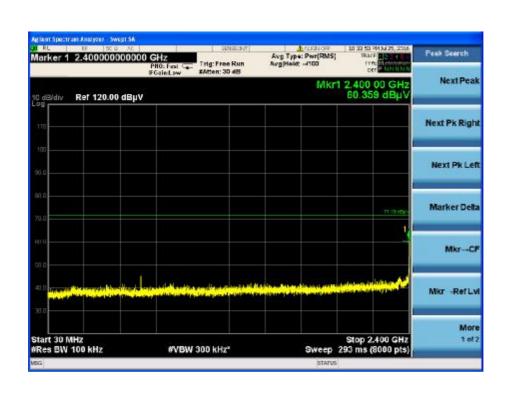
Tel: 400-788-9558 0755-33019988







#### Configuration IEEE 802.11n20 / CH 1 / 30MHz~2400MHz (down 30dBc)



EMC Report

Tel: 400-788-9558 0755-33019988



#### Shenzhen BCTC Technology Co., Ltd. Report No.: BCTC-FY161004260E



### Configuration IEEE 802.11n20 Emission not in Restricted Band plot on channel 11 Reference Level



**EMC Report** 

Tel: 400-788-9558 0755-33019988







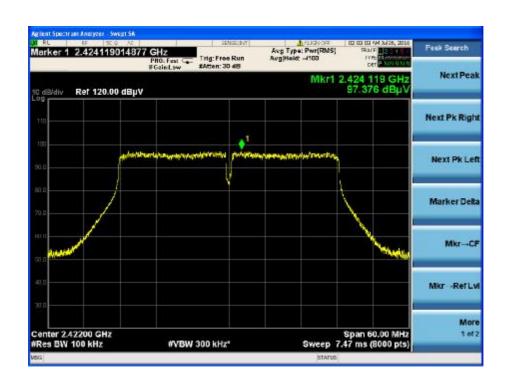
#### Configuration IEEE 802.11n20 / CH 11 / 2500MHz~26500MHz (down 30dBc)



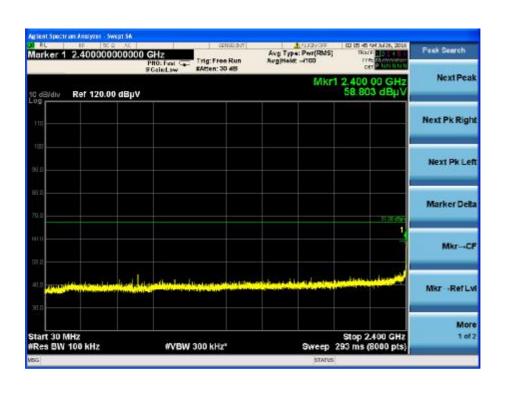
EMC Report 107



### Configuration IEEE 802.11n40 Emission not in Restricted Band plot on channel 3 Reference Level



#### Configuration IEEE 802.11n40 / CH 3 / 30MHz~2400MHz (down 30dBc)



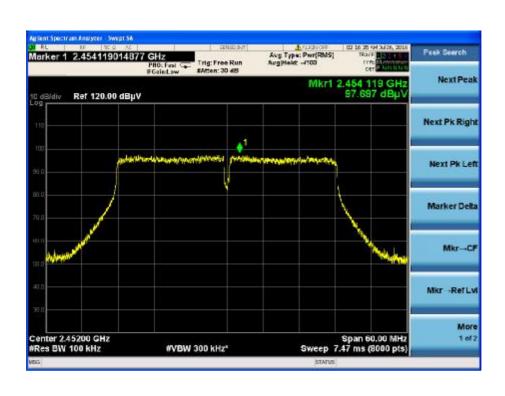
EMC Report 107





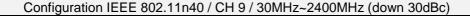


## Configuration IEEE 802.11n40 Emission not in Restricted Band plot on channel 9 Reference Level



EMC Report 107







#### Configuration IEEE 802.11n40 / CH 9 / 2500MHz~26500MHz (down 30dBc)





#### 9. ANTENNA REQUIREMENT

#### 9.1 STANDARD REQUIREMENT

15.203 requirement: For intentional device, according to 15.203: 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.

Report No.: BCTC-FY161004260E

#### 9.2 EUT ANTENNA

The EUT antenna is External antenna. It complies with the standard requirement.



#### **10. EUT TEST PHOTO**



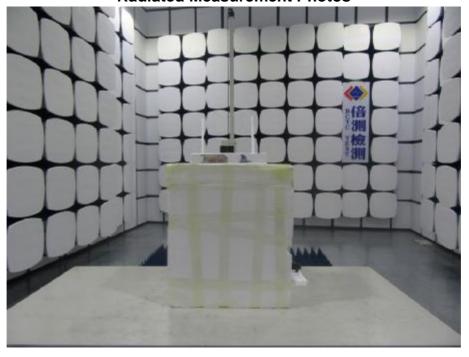








**Radiated Measurement Photos** 





#### 11. EUT PHOTO





**\*\*\*\*\*\* END OF REPORT \*\*\*\*\***