



JAPAN TESTREPORT

Applicant:	Dogness Intelligent Technology (Dongguan) Co., Ltd.
Address:	3F, Building#1, Tongsha New Industrial Park, Dongcheng District, Dongguan City, Guangdong Province, China, 523127
Product Name:	Dogness Cube App Feeder
Brand Name:	DOGNESS
Model Name:	F11
Series Model:	F13
Standard:	Article 2 Paragraph 1 of Item 19, annex 43 and annex 1



TEST RESULT CERTIFICATION

Applicant's name.....: Dogness Intelligent Technology (Dongguan) Co., Ltd.
Address.....: 3F, Building#1, Tongsha New Industrial Park, Dongcheng District,
Dongguan City, Guangdong Province, China, 523127

Manufacture's Name.....: Dongguan Jiasheng EnterpriseCo., Ltd
Address.....: Tongsha NewIndustrial Park, Tongsha Community, Dongcheng
District, Dongguan

Test specification:

Standard.....: Article 2 Paragraph 1 of Item 19, annex 43 and annex 1

Product description

Product name.....: Dogness Cube App Feeder

Trade mark.....: DOGNESS

Test model name.....: F11

Series model.....: F13

This device described above has been tested by FCS, the test results show that the equipment under test (EUT) is in compliance with Article 2 Paragraph 1 of Item 19, annex 43 and annex 1 requirements. And it is applicable only to the tested sample identified in the report.

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Testing.....:

Date (s) of performance of tests.....: May, 25 2022 ~ Jun, 29 2022

Date of Issue.....: Jun, 29 2022

Test Result.....: **Pass**

Tested by

:

Scott Shen

(Scott Shen)

Reviewed by

:

Duke Qian

(Duke Qian)

Approved by

:

Jack Wang

(Jack Wang)

**Revision History**

Rev.	Issue Date	Report NO.	Effect Page	Contents
00	Jun, 29 2022	FCS202205080W01	ALL	Initial Issue

SUMMARY OF TEST RESULTS

Test procedures according to the technical standards:

Part	Rule Section	Description of Test	Judgement
4.1	3.2	Frequency Error	PASS
4.2	3.2	Occupied Bandwidth (99%) Spread-spectrum Bandwidth (90%)	PASS
4.3	3.2	Unwanted Emission Intensity	PASS
4.4	3.2	Power Error	PASS
4.5	3.3	Limitation of Collateral Emission of Receiver	PASS
4.6	3.6	Transmission Radiation power	N/A
4.7	3.2	Transmission Radiation Angle Width (3dB Beamwidth)	N/A
4.8	3.4	Radio Interference Prevention Capability	PASS
4.9	3.2	Spreading Factor	PASS
4.10	Note(2)	Carrier Sense Capability	PASS
4.11	3.7	Construction Protection Confirmation	PASS

NOTE:

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

(2) Article 2 Paragraph 1 of Item 19, annex 43 and annex 1

TEST FACTORY

Company Name:	Flux Compliance Service Laboratory
Address:	Room 105 Floor Bao hao Technology Building 1 NO.15 Gong ye West Road Hi-Tech Industrial, Song shan lake Dongguan
Telephone:	+86-769-27280901
Fax:	+86-769-27280901
FCC Test Firm Registration Number: 514908 Designation number: CN0127 A2LA accreditation number: 5545.01	

MEASUREMENT UNCERTAINTY

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

No.	Item	Uncertainty
1	RF output power, conducted	$\pm 0.71 \text{ dB}$
2	Unwanted Emissions, conducted	$\pm 2.98 \text{ dB}$
3	Conducted Emission (9KHz-150KHz)	$\pm 4.13 \text{ dB}$
4	Conducted Emission (150KHz-30MHz)	$\pm 4.74 \text{ dB}$
5	All emissions, radiated (<1G) 30MHz-1000MHz	$\pm 3.2 \text{ dB}$
6	All emissions, radiated (1GHz -18GHz)	$\pm 3.66 \text{ dB}$
7	All emissions, radiated (18GHz -40GHz)	$\pm 4.31 \text{ dB}$

2. GENERAL INFORMATION

Equipment	Dogness Cube App Feeder	
Brand Name	DOGNES	
Model Name	F11	
Series Model	F13	
Model Difference	The above product with same circuit, PCB layout, electrical parts, materials and wiring structures, Appearance shape, the materials of decorative accessories is same, only different color.	
Product Description	The EUT is a Dogness Cube App Feeder	
	Operation Frequency:	802.11b/g/n 20: 2412~2472 MHz 802.11n(40MHz):2422~2462MHz
	Modulation Type:	802.11b(DSSS):CCK,DQPSK,DBPSK 802.11g(OFDM):BPSK,QPSK,16-QAM,64-QAM 802.11n(OFDM):BPSK,QPSK,16-QAM,64-QAM
	Bit Rate of Transmitter:	802.11b:11/5.5/2/1 Mbps 802.11g:54/48/36/24/18/12/9/6Mbps 802.11n(20MHz): MCS7~MCS0:65/58.5/52/39/26/19.5/13/6.5Mbps 802.11n(40MHz): MCS7~MCS0:135/121.5/108/81/54/40.5/27/13.5Mbps
	Number Of Channel:	802.11b/g/n20: 13CH 802.11n 40: 11CH
	Antenna Designation:	Please see Note 4.
	Declare power:	802.11b: 5.300mW/MHz 802.11g: 5.300 mW/MHz 802.11n(20MHz): 5.300 mW/MHz 802.11n(40MHz): 4.000 mW/MHz
	Duty Cycle:	>98%
	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 supply	DC 5V	
Hardware version	V1.0	
Software version	V1.0	

Note:

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

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Operation Frequency of channel			
802.11b/g/n(20MHz)		Channel List for 802.11n(40MHz)	
Channel	Frequency	Channel	Frequency
01	2412	03	2422
02	2417	04	2427
03	2422	05	2432
04	2427	06	2437
05	2432	07	2442
06	2437	08	2447
07	2442	09	2452
08	2447	10	2457
09	2452	11	2462
10	2457		
11	2462		
12	2467		
13	2472		

3 Note:

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:

Carrier Frequency Channel

2.4GHz Test Frequency:

For 802.11b/g/n (HT20)		For 802.11n (HT40)	
Channel	Freq.(MHz)	Channel	Freq.(MHz)
01	2412	03	2422
07	2442	07	2442
13	2472	11	2462

4

Ant.	Antenna Brand	Antenna Model Name	Antenna Type	Connector	Gain (dBi)	NOTE
1	NA	FTSZ	PCB Antenna	N/A	-0.58	WIFI Antenna

2.2 DESCRIPTION OF THE TEST MODES

To investigate the maximum EMI emission characteristics generates from EUT, the test system was pre-scanning tested base on the consideration of following EUT operation mode or test configuration mode which possible have effect on EMI emission level. Each of these EUT operation mode(s) or test configuration mode(s) mentioned above was evaluated respectively.

Worst Mode	Description	Data Rate
Mode 1	TX IEEE 802.11b CH1	1 Mbps
Mode 2	TX IEEE 802.11b CH7	1 Mbps
Mode 3	TX IEEE 802.11 b CH13	1 Mbps
Mode 4	TX IEEE 802.11g CH1	6 Mbps
Mode 5	TX IEEE 802.11g CH7	6 Mbps
Mode 6	TX IEEE 802.11g CH13	6 Mbps
Mode 7	TX IEEE 802.11n HT20 CH1	MCS 0
Mode 8	TX IEEE 802.11n HT20 CH7	MCS 0
Mode 9	TX IEEE 802.11n HT20 CH13	MCS 0
Mode 10	TX IEEE 802.11n HT40 CH3	MCS 0
Mode 11	TX IEEE 802.11n HT40 CH7	MCS 0
Mode 12	TX IEEE 802.11n HT40 CH11	MCS 0

2.3 TABLE FOR PARAMETERS OF THE TEST SOFTWARE SETTING

During testing,channel &power controlling software provided by the customer was used to control the operating channel as well as the output power level.the RF output power selection is for the setting of RF output power expected by the customer and going to be fixed on the firmware of the final end product.

the name of the test software is : Fcomx

Frequency	2412MHz	2442MHz	2472MHz
IEEE 802.11b(20M)	DEF	DEF	DEF
IEEE 802.11g(20M)	DE6	DE6	DE6
IEEE 802.11n(20M)	DE6	DE6	DE6
Frequency	2422MHz	2442MHz	2462MHz
IEEE 802.11n(40M)	DE6	DE6	DE6

2.4 TEST CONDITIONS

The Action Camera was tested while in a continuous transmitter/receiver mode.

The EUT was tuned to a low, middle, and high channel for all tests. For all test case pre/scans were completed in allModes to determine worst case levels.

EUT and Module Power tables				
EUT Setup Value (Vdc)		Normal	Hight(+10%)	Low(-10%)
		5	5.5	4.5
Module Vdd Power Measurement Value (Vdc)		Normal	Hight(+10%)	Low(-10%)
		3.3	3.31	3.31
Voltage error (%)	Result	Ref. level	0.03	0.03
	Limit	---	± 1	
Judgment		---	Pass	Pass

When the input supply voltage to the EUT from the external power source is varied by +/- 10%, the fluctuation of input voltage to the circuit of the radio part of the test equipment (excluding the power supply) has been confirmed is less than +/- 1%.

2.5 BLOCKDIGRAMSHOWINGTHECONFIGURATIONOFSYSTEMTESTED

Mode 1:



2.6 DESCRIPTION OF NECESSARY ACCESSORIES AND SUPPORT UNITS

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.

Necessary accessories

Item	Equipment	Mfr/Brand	Model/Type No.	Serial No.	Note
1	Adapter	HW	HW432489	0302938475	This adapter only used test for this report.

Support units

Item	Equipment	Mfr/Brand	Model/Type No.	Serial No.	Note
N/A	N/A	N/A	N/A	N/A	N/A

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 『Length』 column.
- (3) “YES” is means “shielded”“with core”; “NO” is means “unshielded”“without core”.

2.7 EQUIPMENTS LIST FOR ALL TEST ITEMS

Test equipment

Radiation Test equipment

Kind of Equipment	Manufacturer	Type No.	Company No.	Last calibration	Calibrated until
EMI Test Receiver	R&S	ESRP 3	FCS-E001	2022.02.09	2023.02.10
Signal Analyzer	R&S	FSV40-N	FCS-E012	2022.02.09	2023.02.10
Active loop Antenna	ZHINAN	ZN30900C	FCS-E013	2022.02.09	2023.02.10
Bilog Antenna	SCHWARZBECK	VULB 9168	FCS-E002	2022.02.09	2023.02.10
Horn Antenna	SCHWARZBECK	BBHA 9120D	FCS-E003	2022.02.09	2023.02.10
SHF-EHF Horn Antenna (18G-40GHz)	A-INFO	LB-180400-KF	FCS-E018	2022.02.09	2023.02.10
Pre-Amplifier(0.1M-3G Hz)	EMCI	EM330N	FCS-E004	2022.02.09	2023.02.10
Pre-Amplifier (1G-18GHz)	N/A	TSAMP-0518SE	FCS-E014	2022.02.09	2023.02.10
Pre-Amplifier (18G-40GHz)	TERA-MW	TRLA-0400	FCS-E019	2022.02.09	2023.02.10
Temperature & Humidity	HTC-1	victor	FCS-E005	2022.02.09	2023.02.10

Conduction Test equipment

Kind of Equipment	Manufacturer	Type No.	Company No.	Last calibration	Calibrated until
EMI Test Receiver	R&S	ESPI	FCS-E020	2022.02.09	2023.02.10
LISN	R&S	ENV216	FCS-E007	2022.02.09	2023.02.10
LISN	ETS	3810/2NM	FCS-E009	2022.02.09	2023.02.10
Temperature & Humidity	HTC-1	victor	FCS-E008	2022.02.09	2023.02.10

RF Connected Test

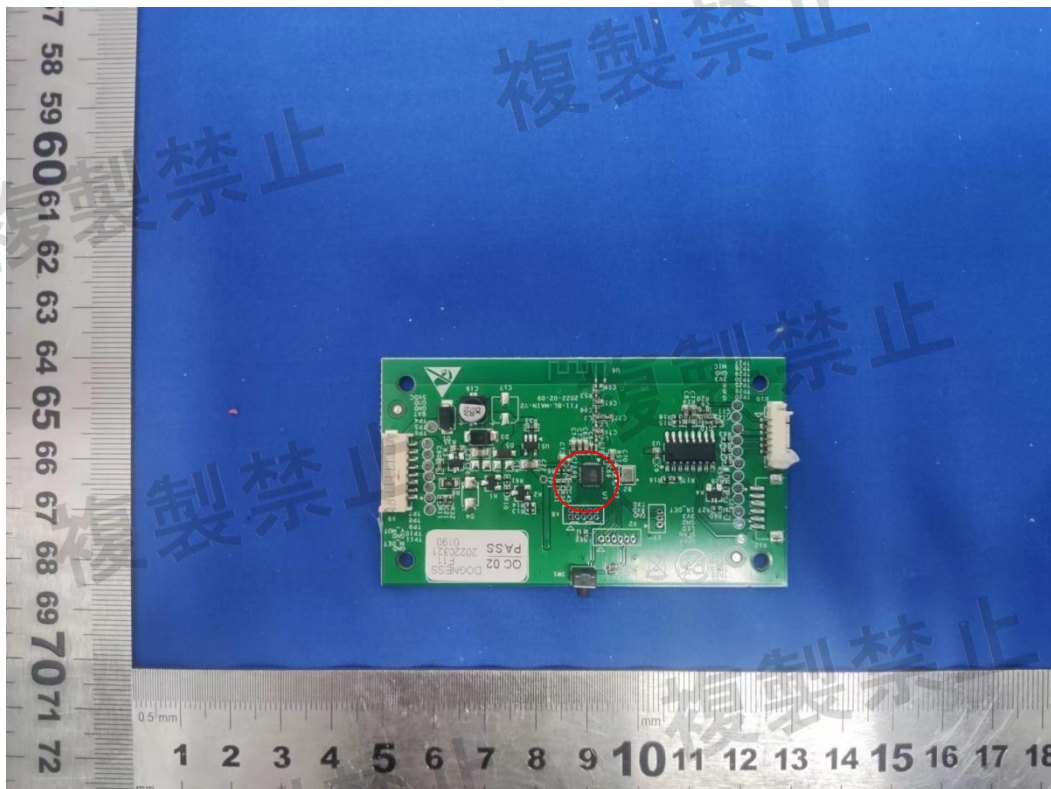
Kind of Equipment	Manufacturer	Type No.	Company No.	Last calibration	Calibrated until
Spectrum Analyzer	Keysight	N9020A	FCS-E015	2022.02.09	2023.02.10
Spectrum Analyzer	Agilent	E4447A	MY50180039	2022.02.09	2023.02.10
Spectrum Analyzer	R&S	FSV-40	101499	2022.02.09	2023.02.10
DC power source	CIAA	305	FCS-E021	2022.02.09	2023.02.10

Test Equipment Calibration

All of the test equipment is effective use and calibration certification institution, GRGT, the address is 163 tianhe district in huangpu road xiping cloud road.Guangzhou, China

3. CONSTRUCTION PROTECTION CONFIRMATION

Our products apply for Japanese radio frequency (rf) certification. The high-frequency section and modulation section use SMT technology, not easy to change. (The chip have more than 10 chip pins, less than 1.5mm pin distance)



4. FREQUENCY ERROR

4.1 LIMIT

Item	Limits
Frequency Error	$\pm 50\text{ppm}$

4.2 TEST PROCEDURES

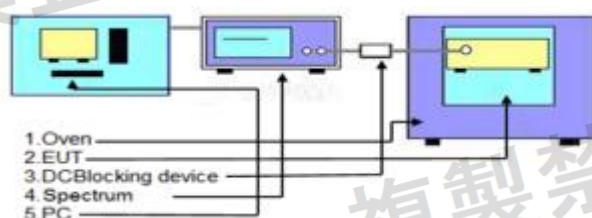
The following table is the setting of Spectrum Analyzer.

Spectrum Parameter	Setting
Attenuation	Auto
RBW / VBW	10KHz
Detector	Peak
Trace	Max Hold
Sweep Time	Auto

- (1) In the case of unmodulated signal (continuous or continuous burst), measure the frequency directly by a frequency meter.
- (2) In the case of burst waves, the measurement shall be done for enough time in order to obtain the enough measuring accuracy, and the average of the measured values becomes the final value.
- (3) In the case of a test mode with a specific frequency spectrum, measure the frequency of the specific spectrum by a spectrum analyzer.
- (4) In the cases above, if the frequency equivalent to the test frequency is not directly measured in principle, it shall be obtained by necessary calculation.

In the case of modulated signal, if there is no specific spectrum measurable by a spectrum analyzer but a specific dip is observed, it is allowed to measure the frequency with the signal generator (synthesized). That is, observe a signal of the signal generator concurrently (or alternately) with the tested signal using the spectrum analyzer while setting the frequency of the signal generator to the position of the dip on the screen of the spectrum analyzer, and determine the frequency of the signal generator at the time as a measured value.

4.3 TEST SETUP



4.4 EUT OPERATION DURING TEST

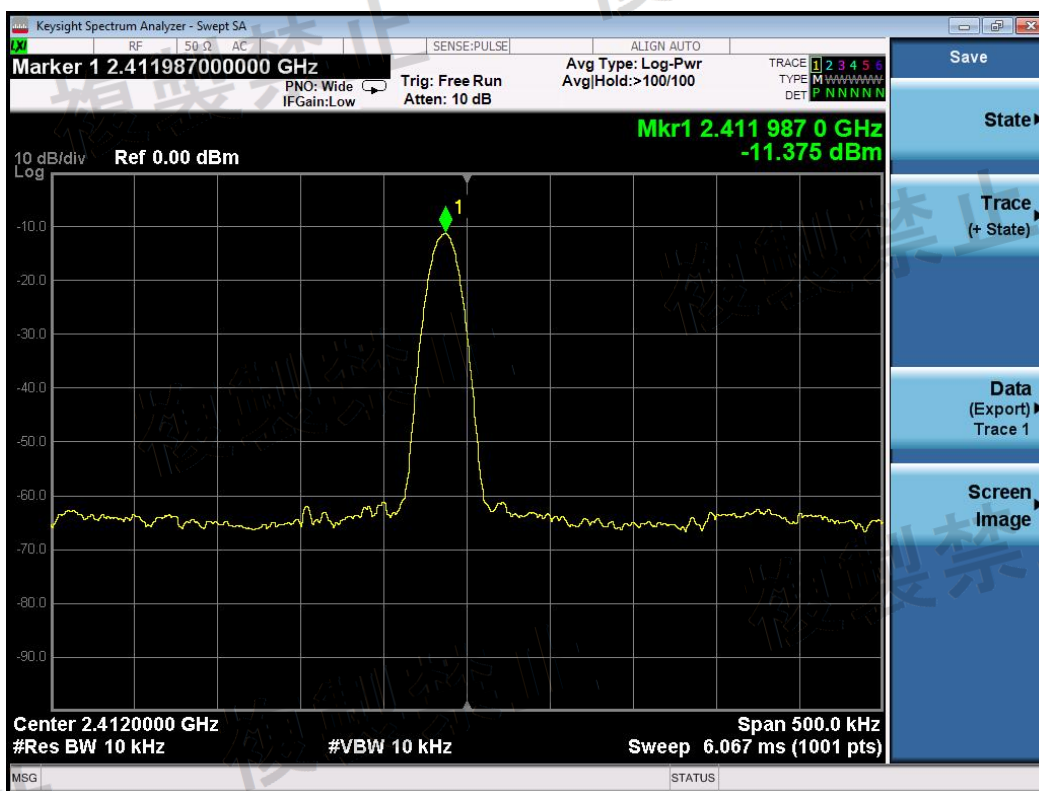
The EUT was placed on the test table and programmed in un-modulation function.

4.5 TEST RESULT

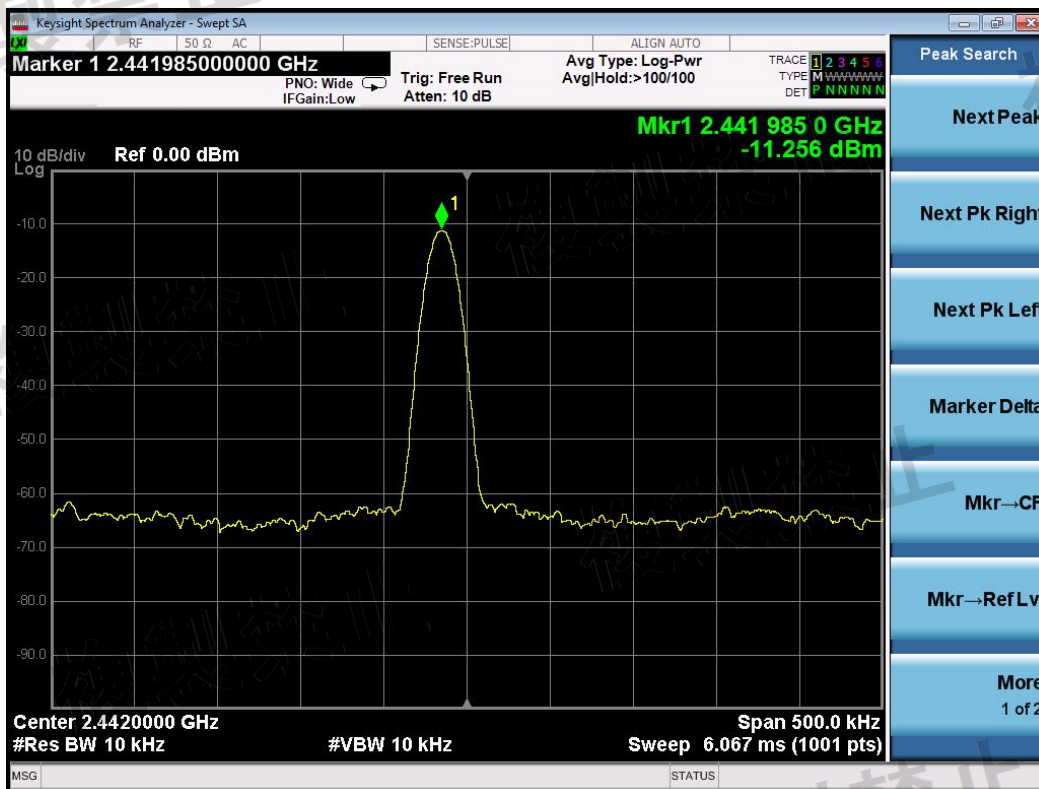
Temperature:	25°C	Humidity:	55 % RH
Operation Mode:	Carrier transmitting mode		

Mode	TEST CONDITIONS	Frequency (MHz)	Result (MHz)	Tolerance (ppm)	Limit(ppm)	Tolerance (kHz)	Limit(kHz)
801.11b	Nom(V) 5V DC	2412	2411.9870	-5.390	±50	-13.0	±120
		2442	2441.9850	-6.143	±50	-15.0	±120
		2472	2471.9855	-5.866	±50	-14.5	±120

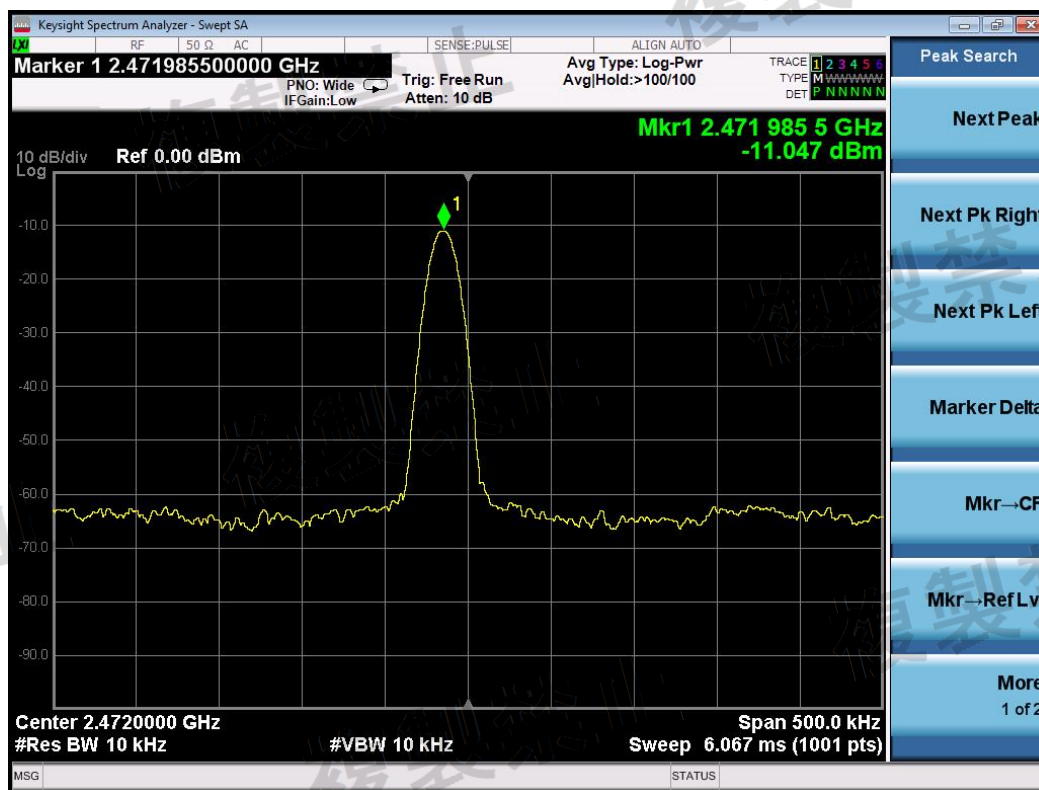
CH01



CH07



CH13

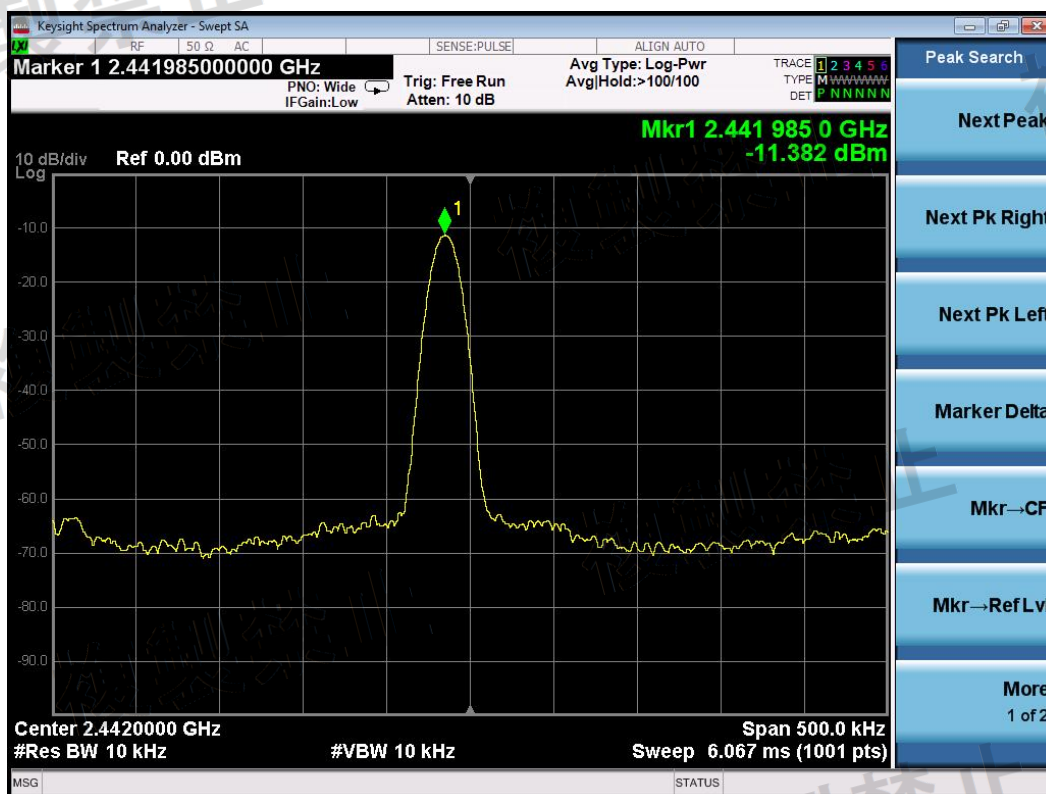




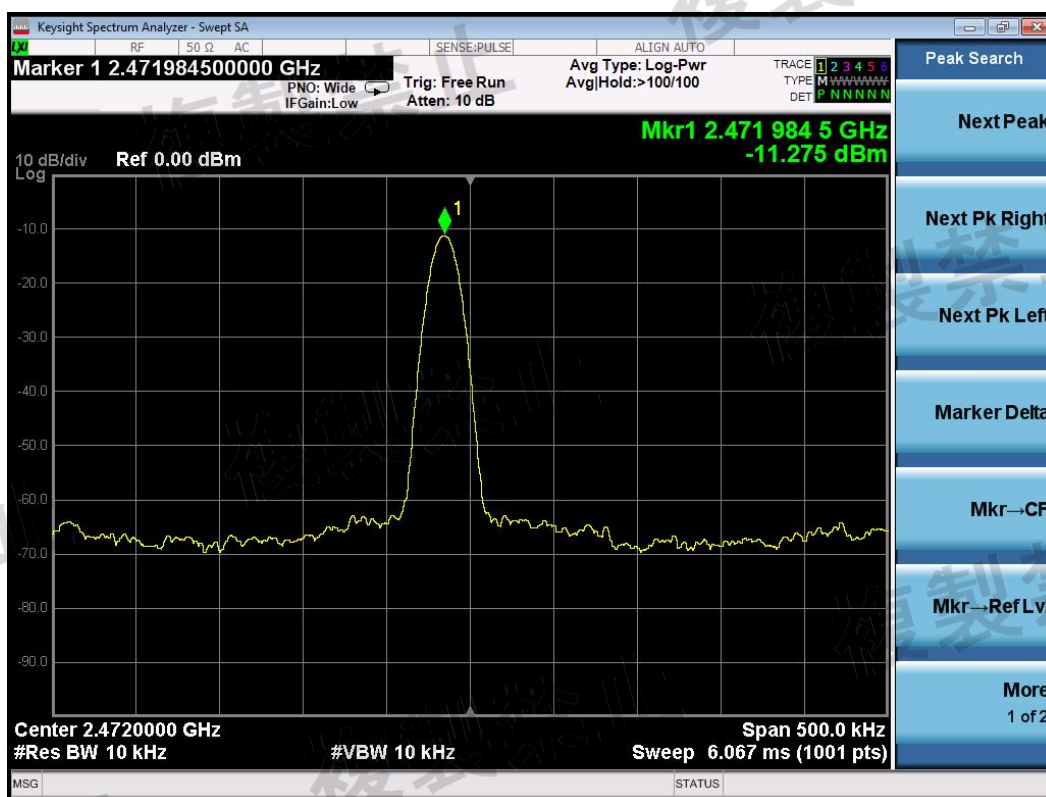
CH01



CH07

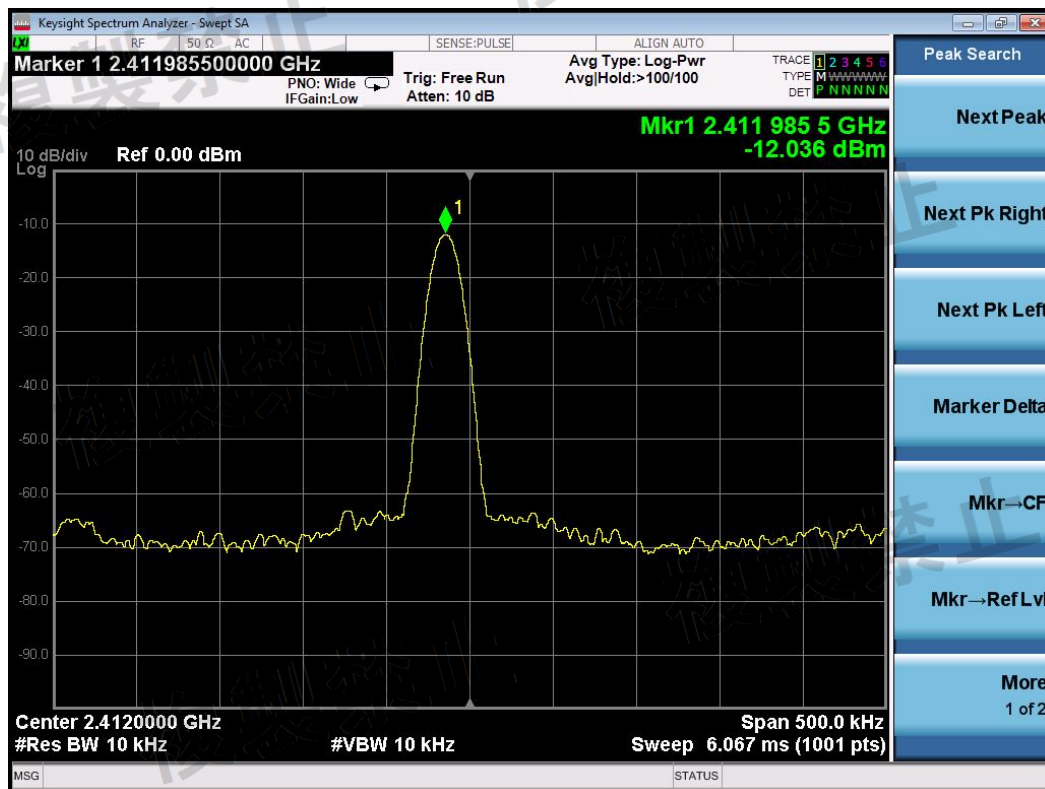


CH13

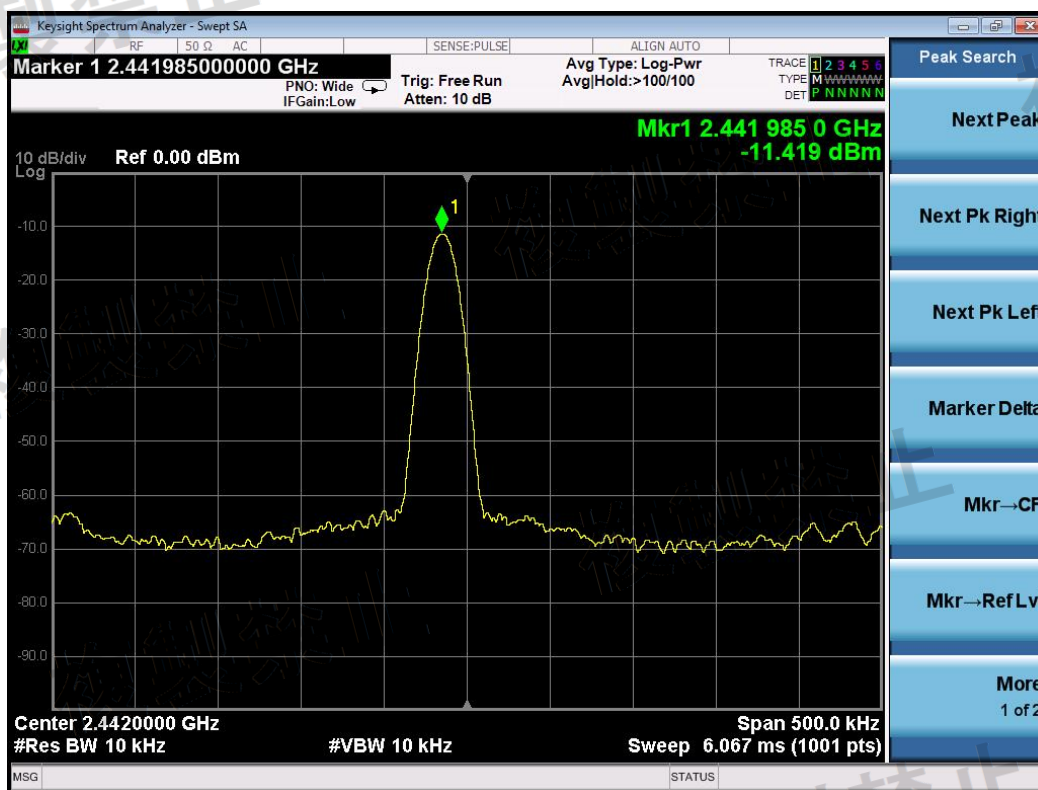


Mode	TEST CONDITIONS	Frequency (MHz)	Result (MHz)	Tolerance (ppm)	Limit (ppm)	Tolerance (kHz)	Limit (kHz)
801.11n-(HT20)	Nom(V) 5V DC	2412	2411.9855	-6.012	±50	-14.5	±120
		2442	2441.9850	-6.143	±50	-15.0	±120
		2472	2471.9870	-5.259	±50	-13.0	±120

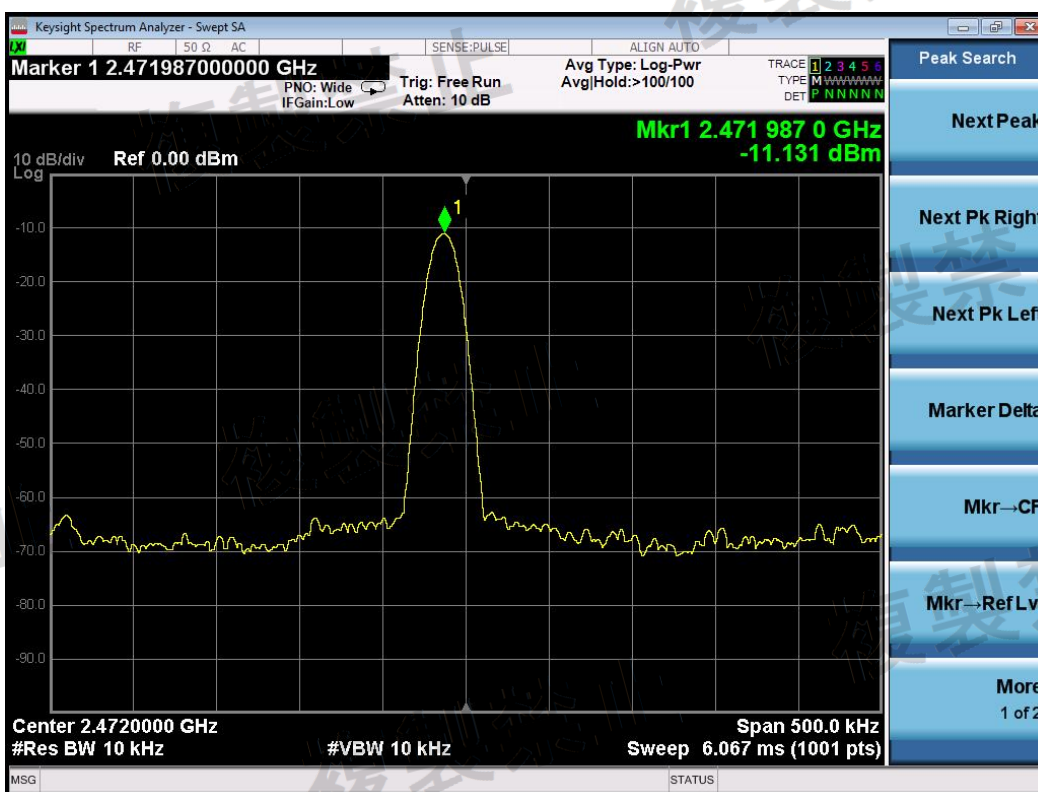
CH01



CH07

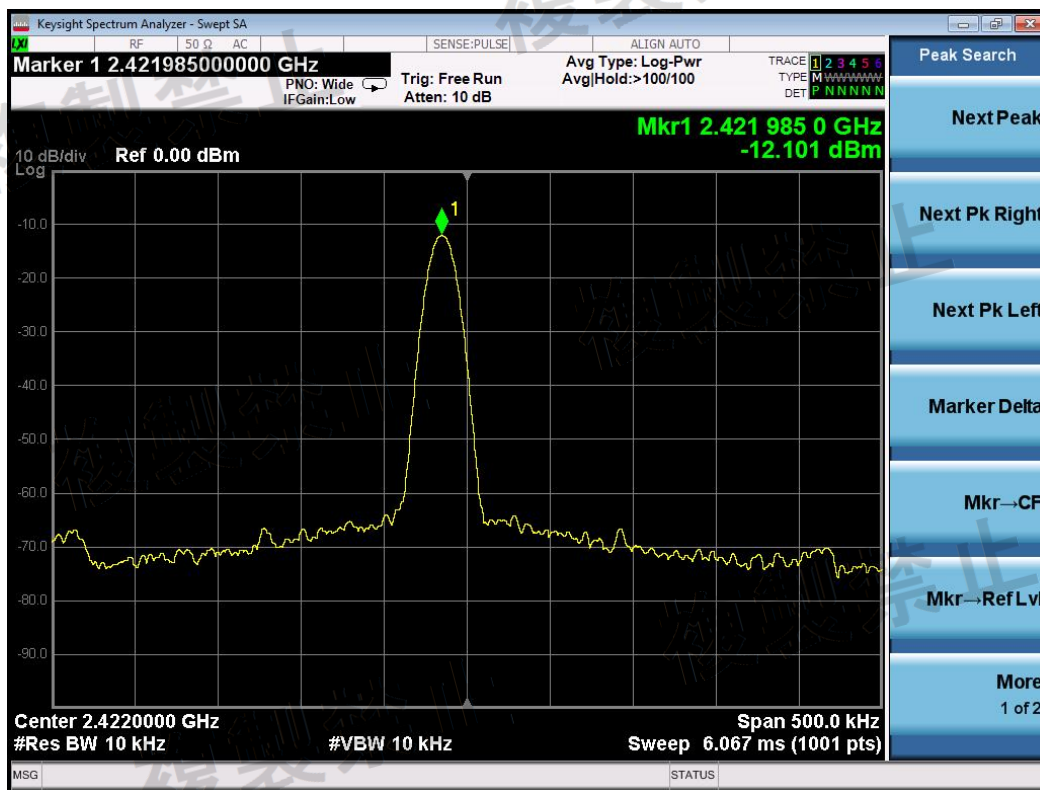


CH13

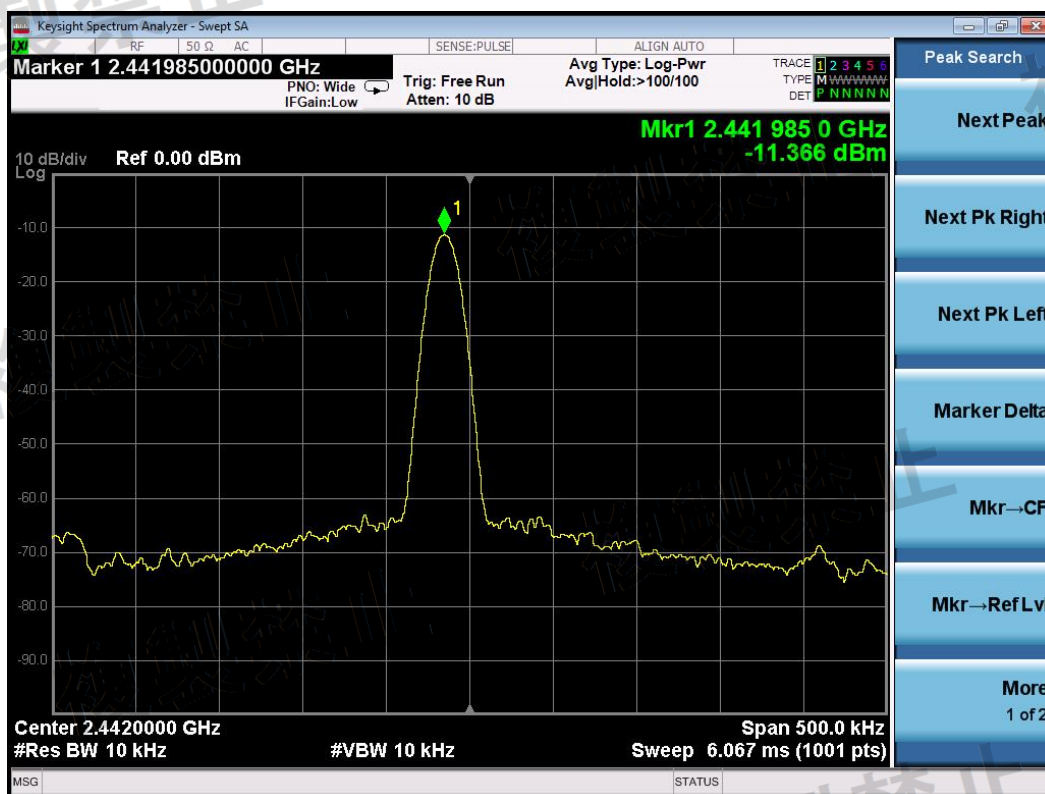


Mode	TEST CONDITIONS	Frequency (MHz)	Result (MHz)	Tolerance (ppm)	Limit (ppm)	Tolerance (kHz)	Limit (kHz)
801.11n- (HT40)	Nom(V) 5V DC	2422	2421.9850	-6.193	±50	-15.0	±120
		2442	2441.9850	-6.143	±50	-15.0	±120
		2462	2461.9850	-6.093	±50	-15.0	±120

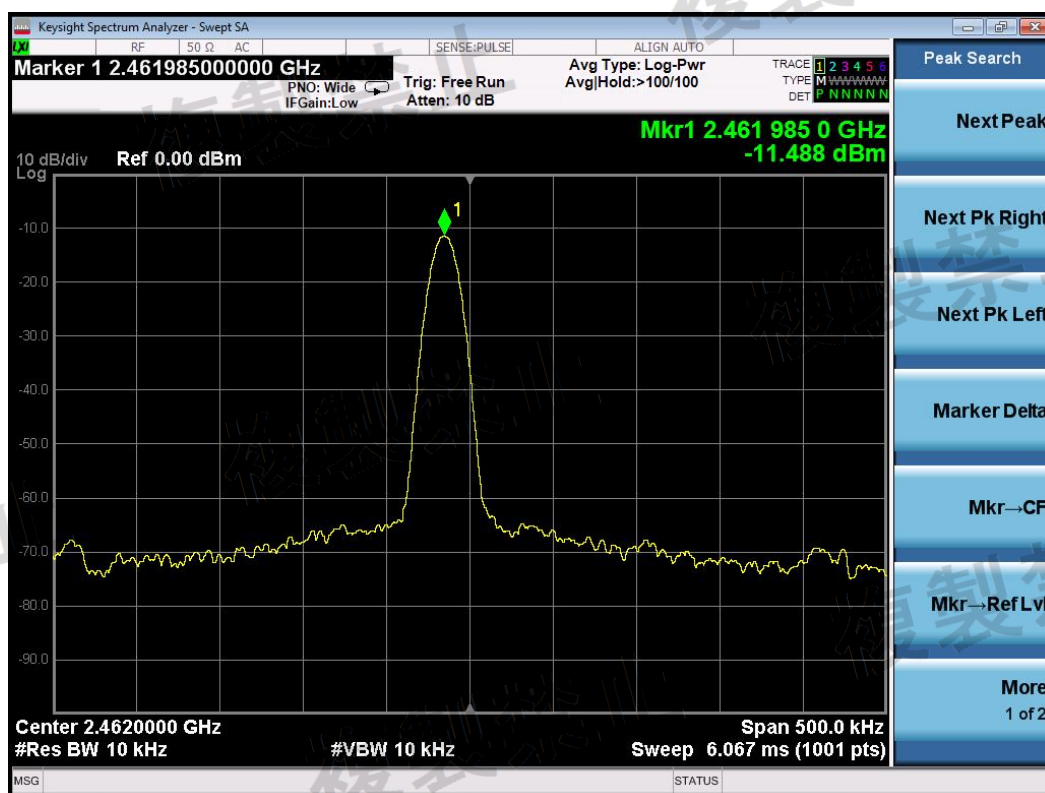
CH03



CH07



CH11



5. ANTENNA POWER

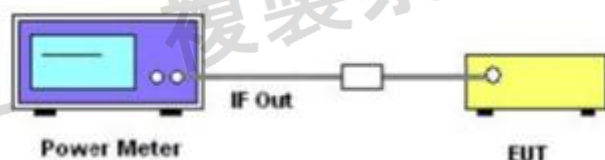
5.1 LIMIT

Item	Limits
Antenna PowerDensity	$\leq 3\text{mW/MHz}$ (FH form 2400 – 2483.5 MHz) $\leq 10\text{mW/MHz}$ (OFDM,DS from2400~2483.5MHz,802.11b/g/n HT20) $\leq 5\text{mW/MHz}$ (OFDM,DS from2400~2483.5MHz,802.11n HT40) $\leq 10\text{mW}$ (Other from 2400~2483.5MHz)
Power Error	+20%, -80% (Base on manufacturer declare power)

5.2 TEST PROCEDURE

1. A power meter is connected on the EUT
2. EUT turn to test frequency channel and keep continuous transmitting
3. Reading the output power from the Power meter as P_{EUT}

5.3 TEST SETUP



5.4 TEST DEVIATION

There is no deviation with the original standard.

5.5 TEST RESULT

Temperature:	25°C	Humidity:	55 % RH
Operation Mode:	Voltage-802.11b mode		

Antenna Power Density

TEST CONDITIONS	Channel	Antenna Burst Power(dBm)	Worst Average Burst Power(mW/MHz)	Declared Antenna Power (mW/MHz)	Tolerance
					(%)
Nom(V) 5V DC	Low	6.365	4.330	5.300	-18.30
	Middle	6.421	4.386	5.300	-17.25
	High	6.373	4.338	5.300	-18.15
Limit :(1) Antenna PowerDensityLimit(10mW/MHz) (2) Tolerance +20%, -80% (Base on manufacturer declare Antenna PowerDensity)					

Temperature:	25°C	Humidity:	55 % RH
Operation Mode:	Voltage-802.11g mode		

Antenna PowerDensity

TEST CONDITIONS	Channel	Antenna Burst Power(dBm)	Worst Average Burst Power(mW/MHz)	Declared Antenna Power (mW/MHz)	Tolerance
					(%)
Nom(V) 5V DC	Low	6.468	4.434	5.300	-16.34
	Middle	6.439	4.405	5.300	-16.89
	High	6.612	4.584	5.300	-13.51
Limit :(1) Antenna PowerDensityLimit(10mW/MHz) (2) Tolerance +20%, -80% (Base on manufacturer declare Antenna PowerDensity)					

Temperature:	25°C	Humidity:	55 % RH
Operation Mode:	Voltage-802.11n20 mode		

Antenna PowerDensity

TEST CONDITIONS	Channel	Antenna Burst Power(dBm)	Worst Average Burst Power(mW/MHz)	Declared Antenna Power (mW/MHz)	Tolerance
					(%)
Nom(V) 5V DC	Low	6.261	4.228	5.300	-20.23
	Middle	6.314	4.280	5.300	-19.25
	High	6.128	4.100	5.300	-22.64
Limit : (1) Antenna PowerDensityLimit(10mW/MHz) (2) Tolerance +20%, -80% (Base on manufacturer declare Antenna PowerDensity)					

Temperature:	25°C	Humidity:	55 % RH
Operation Mode:	Voltage-802.11n40 mode		

Antenna PowerDensity

TEST CONDITIONS	Channel	Antenna Burst Power(dBm)	Worst Average Burst Power(mW/MHz)	Declared Antenna Power (mW/MHz)	Tolerance
					(%)
Nom(V) 5V DC	Low	4.426	2.771	4.000	-30.73
	Middle	4.487	2.810	4.000	-29.75
	High	4.615	2.894	4.000	-27.65
Limit : (1) Antenna PowerDensityLimit(5mW/MHz) (2) Tolerance +20%, -80% (Base on manufacturer declare Antenna PowerDensity)					