



# RADIO TEST REPORT

# (FCC Part 15 Subpart C / IC RSS-247)

Applicant:	Honeywell International Inc
Address:	Honeywell Safety and Productivity Solutions 9680 Old Bailes Road, Fort Mill, SC 29707 United States

Manufacturer:	Honeywell International Inc			
Manufacturer:	Honeywell Safety and Productivity Se	Honeywell Safety and Productivity Solutions		
Address:	9680 Old Bailes Road, Fort Mill, SC	9680 Old Bailes Road, Fort Mill, SC 29707 United States		
Product:	Mobile Computer			
Brand Name:	Honeywell			
Model Name:	CT45-L0N	CT45-L0N		
FCC ID:	HD5-CT45L0N	HD5-CT45L0N		
Date of tests:	2021-06-11 to 2021-07-01	2021-06-11 to 2021-07-01		
The tests ha	ave been carried out according to the rec	uirements of the following standard:		
🛛 Part 15 Sub	part C §15. 247 / IC RSS-247 issue 2			
CONCLUSION:	The submitted sample was found to <u>COI</u>	MPLY with the test requirement		
Pre	Prepared by Simon Wang Approved by Luke Lu			
Engi	Engineer / Mobile Department Manager / Mobile Department			
	Simon	luke lu		

upe th

Date: Jul. 02, 2021

This report is governed by, and incorporates by reference, CPS Conditions of Service as posted at the date of issuance of this report at <a href="http://www.bureauveritas.com/home/about-us/our-business/cps/about-us/terms-conditions">http://www.bureauveritas.com/home/about-us/our-business/cps/about-us/terms-conditions</a> and is intended for your exclusive use. Any copying or replication of this report to or for any other person or entity, or use of our name or trademark, is permitted only with our prior written permission. This report sets forth our findings solely with respect to the test samples identified herein. The results set forth in this report are not indicative or representative of the quality or characteristics of the lot from which a test sample was taken or any similar or identical product unless specifically and expressly noted. Our report includes all of the tests requested by you and the results thereof based upon the information that you provided to us. Measurement uncertainty is only provided upon request for accredited tests. You have 60 days from date of issuance of this report or or omission caused by your negligence or if you require measurement uncertainty; provided, however, that such notice shall be in writing and shall specifically address the issue you wish to raise. A failure to raise such issue within the prescribed time shall constitute you unqualified acceptance of the completeness of this report, the tests conducted and the correctness of the report contents.

BV 7Layers Communications Technology (Shenzhen) Co. Ltd

Date: Jul. 02, 2021

No.B102, Dazu Chuangxin Mansion, North of Beihuan Avenue, North Area, Hi-Tech Industrial Park, Nanshan District, Shenzhen, Guangdong, China



## **Report Revise Record**

Report Version	Revise Time	Issued Date	Valid Version	Notes
V1.0	/	2021.07.02	Valid	Original Report



Test Report No.: RFBGDJ-W7L-P21060011-3

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## Summary Of Test Result

FCC Rule	IC Rule	Description	Limit	Result	Remark
15.247(a)(2)	RSS-247 5.2(a)	6dB Bandwidth	≥ 0.5MHz	Pass	-
-	RSS-Gen 6.7	99% Bandwidth	-	Pass	-
15.247(b)(3)	RSS-247 A5.4(d)	Output Power	≤ 30dBm	Pass	-
15.247(e)	RSS-247 5.2(b)	Power Spectral Density	≤ 8dBm/3kHz	Pass	-
15.247(d)	RSS-247 5.5	Conducted Band Edges and Spurious Emission	≤ 30dBc	Pass	-
15.247(d)	RSS-247 5.5	Radiated Band Edges and Spurious Emission	15.209(a) & 15.247(d)	Pass	Under limit 3.76 dB at 2390 MHz
15.207	RSS-GEN 8.8	AC Conducted Emission	15.207(a)	Pass	Under limit 17.16 dB at 0.497 MHz
15.203 & 15.247(b)	RSS-GEN 6.8	Antenna Requirement	15.203 & 15.247(b) RSS-GEN 6.8	Pass	-



# 1 General Description

## 1.1 Applicant

Honeywell International Inc Honeywell Safety and Productivity Solutions 9680 Old Bailes Road, Fort Mill, SC 29707 United States

## 1.2 Manufacturer

XHoneywell International Inc Honeywell Safety and Productivity Solutions 9680 Old Bailes Road, Fort Mill, SC 29707 United States

## 1.3 General Description Of EUT

Product	Mobile Computer
Model No.	CT45-L0N
Additional No.	N/A
Difference Description	N/A
Power Supply	3.85Vdc for EUT
Modulation Technology	CCK, DQPSK, DBPSK for DSSS 64QAM, 16QAM, QPSK, BPSK for OFDM
Madulation Type	802.11b : DSSS
Modulation Type	802.11g/n : OFDM
Operating Frequency	2412-2462MHz
Number Of Channel	11
Max. Output Power	802.11b : 15.12 dBm (0.0325 W) 802.11g : 14.38 dBm (0.0274 W) 802.11n HT20 : 14.21 dBm (0.0264 W) 802.11n HT40 : 15.69 dBm (0.0371 W)
Max. e.i.r.p.	16.52 dBm (0.0449W)
Antenna Type	LDS type Antenna with 1.4dBi gain
HW Version	V1.0
SW Version	OS.11.001
I/O Ports	Refer to user's manual

#### NOTE:

- 1. For a more detailed features description, please refer to the manufacturer's specifications or the user's manual.
- 2. For the test results, the EUT had been tested with all conditions. But only the worst case was shown in test report.



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## 1.4 Modification of EUT

No modifications are made to the EUT during all test items.

## 1.5 Applicable Standards

According to the specifications of the manufacturer, the EUT must comply with the requirements of the following standards:

- FCC Part 15 Subpart C §15.247
- ANSI C63.10-2013
- IC RSS-247 Issue 2
- IC RSS-Gen Issue 5
- KDB 558074 D01 15.247 Meas Guidance v05r02

#### Remark:

1. This EUT has also been tested and complied with the requirements of FCC Part 15, Subpart B&ICES-003, recorded in a separate test report.



## 2 Test Configuration of Equipment Under Test

## 2.1 Descriptions of Test Mode

11 channels are provided for 802.11b, 802.11g and 802.11n(HT20):

CHANNEL	FREQUENCY	CHANNEL	FREQUENCY
1	2412 MHz	7	2442 MHz
2	2417 MHz	8	2447 MHz
3	2422 MHz	9	2452 MHz
4	2427 MHz	10	2457 MHz
5	2432 MHz	11	2462 MHz
6	2437 MHz		

7 channels are provided for 802.11n(HT40):

CHANNEL	FREQUENCY	CHANNEL	FREQUENCY
		7	2442 MHz
		8	2447 MHz
3	2422 MHz	9	2452 MHz
4	2427 MHz		
5	2432 MHz		
6	2437 MHz		

The transmitter has a maximum conducted output power as follows:

Frequency Range(MHz)	Mode	Rate	Output Power(dBm)
2412~2462	802.11b	1Mbps	15.12
2412~2462	802.11g	6Mbps	14.38
2412~2462	802.11n HT20	MCS0	14.21
2422~2452	802.11n HT40	MCS0	15.69

a. Radiated emission and power line conducted emission were performed with the EUT set to transmit at the channel with highest output power as worst-case scenario.

## 2.2 Test Mode

## 2.2.1 Antenna Port Conducted Measurement

Summary table of Test Cases				
Toot Itom		Modulation		
Test Item	802.11 b	802.11 g	802.11n HT20	802.11n HT40
Conducted	Mode 1: CH01	Mode 1: CH01	Mode 1: CH01	Mode 1: CH03

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Test Cases	Mode 2: CH06	Mode 2: CH06	Mode 2: CH06	Mode 2: CH06
	Mode 3: CH011	Mode 3: CH011	Mode 3: CH011	Mode 3: CH09

## 2.2.2 Radiated Emission Test (Below 1GHz)

Radiated	802.11 b
Test Cases	Mode 1: CH01

Note : 1. Pre-Scan has been conducted to determine the worst-case mode from all possible

combinations between available modulations, XYZ axis, antenna ports (if EUT with antenna diversity architecture) and packet type. Z orientation was worst-case orientation; therefore, all final radiated testing was performed with the EUT in Z orientation.

2. Following channel(s) was (were) selected for the final test as listed above

## 2.2.3 Radiated Emission Test (Above 1GHz)

Test Item	Modulation					
	802.11 b	802.11 g	802.11n HT20	802.11n HT40		
Dedicted	Mode 1: CH01	Mode 1: CH01	Mode 1: CH01	Mode 1: CH03		
Radiated Test Cases	Mode 2: CH06	Mode 2: CH06	Mode 2: CH06	Mode 2: CH06		
	Mode 3: CH11	Mode 3: CH11	Mode 3: CH11	Mode 3: CH09		

Note : 1. The fundamental of the EUT was investigated in three orthogonal orientations X, Y and Z it was determined that Z orientation was worst-case orientation; therefore, all final radiated testing was performed with the EUT in Z orientation.

2. Following channel(s) was (were) selected for the final test as listed above

3. For frequency above 18GHz, the measured value is much lower than the limit, therefore, it is not reflected in the report.

## 2.2.4 Power Line Conducted Emission Test:

AC	
Conducted	Mode 1 : WLAN Linking + Earphone + Adapter
Emission	

## 2.3 Support Equipment

Item	Equipment	Trade Name	Model Name	FCC ID	Data Cable	Power Cord
1.	WLAN AP	NETGEAR	R7800	PY315100319	N/A	shielded, 1.8 m
2.	Notebook	Lenovo	E470C	FCC sDoC	N/A	shielded cable DC O/P 1.8 m unshielded AC

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						I/P cable1.2 m	
3.	Earphone	Honeywell	PTE-300N	FCC sDoC	N/A	N/A	
4.	Adapter	Honeywell	ADS-12B-06	FCC sDoC	N/A	N/A	
			05010E				

## 2.4 Test Setup

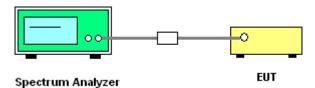
The EUT is continuously communicating to the WIFI tester during the tests.

EUT was set in the Hidden menu mode to enable WIFI communications.

The following picture is a screenshot of the test software

rget: MSM_MDM   Library Mode	Commands	COM: COM 3		Runtime Mode		\$ n
) 📷 🖃 Un-named	TX X					
ategory WLAN -	IX Power(and)	4	DAC	SAIN		
nipset ALL_CHIPSETS -	HT Mode	HT20	PACE	G		
Commands, Logs and Custom APIs	Data Rate	RATE_MCS_0_20	PDAD	C1		
-	Tx Pattern	REPEATING_10	PDAD	C2		
	Short Guard	OFF				
	Aggregate	1		SET TX OFF	$\square 2$	
> NV > RX	Duty Cycle(0-100%)	10				
э ка э тх	# of packets(0 for Cont	0				
	ANI Algorithm	ON				
LEGACY CHIP	Scrambler	ON .	-			
	AIFSN	1				
S MANUAL SELECT CHIP	Packet Size	1500				
Platform Configuration	Antenna	Antenna0				
· 토 타 수 5 년 연	TX Chain	CHAIN_1	11			
	Broadcast/Unicast	Unicast	-			
	LDPC	0				
	STBC	D				
	DPDMode					
	HeavyClip					
	Gain Index	11				
	DAC Gain	-8				
	PACFG	0				

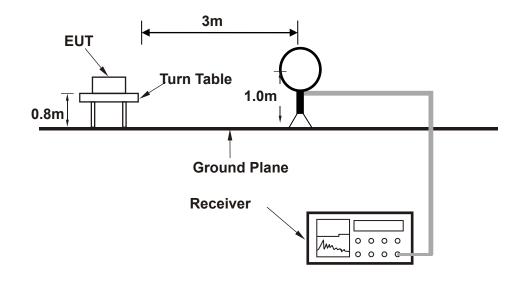
#### Setup diagram for Conducted Test



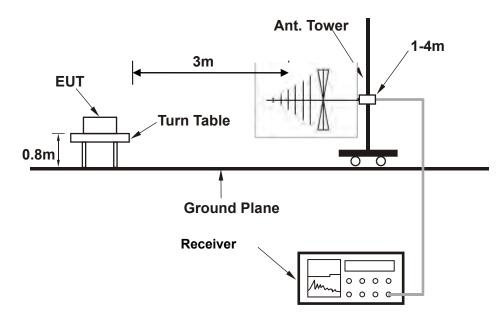
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Setup diagram for Radiation(Below 1G) Test



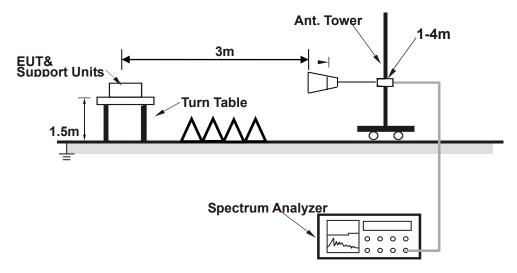
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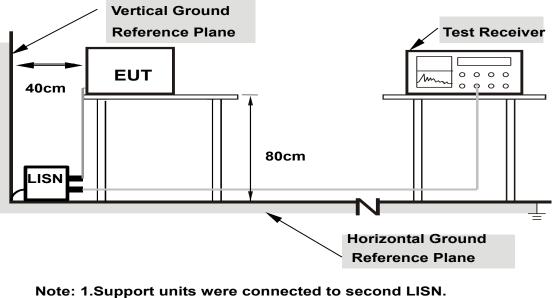


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#### Setup diagram for Radiation(Above1G) Test



Setup diagram for AC Conducted Emission Test



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

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## 2.5 Measurement Results Explanation Example

#### For all conducted test items:

The offset level is set in the spectrum analyzer to compensate the RF cable loss and attenuator factor between EUT conducted output port and spectrum analyzer. With the offset compensation, the spectrum analyzer reading level is exactly the EUT RF output level.

Example:

The spectrum analyzer offset is derived from RF cable loss and attenuator factor.

Offset = RF cable loss + attenuator factor.

Following shows an offset computation example with cable loss 5 dB and 10dB attenuator.

Offset(dB) = RF cable loss(dB) + attenuator factor(dB).

= 5 + 10 = 15 (dB)

#### For all radiated test items:

Corrected Reading: Antenna Factor + Cable Loss + Read Level - Preamp Factor = Level Over Limit (dB  $\mu$  V/m) = Level(dB  $\mu$  V/m) - Limit Level (dB  $\mu$  V/m)





## 3 Test Result

## 3.1 DTS and Occupied Channel Bandwidth Measurement

## 3.1.1 Limit of 6dB Bandwidth

FCC §15.247 (a) (2)

IC RSS-247 5.2(a)

The minimum 6 dB bandwidth shall be at least 500 kHz.

### 3.1.2 Test Procedures

- 1. The testing follows FCC KDB Publication No. 558074 DTS D01 Meas. Guidance v05r02.
- 2. Check the calibration of the measuring instrument using either an internal calibrator or a known signal from an external generator.
- 3. Turn on the EUT and connect it to measurement instrument.
- 4. Set to the maximum power setting and enable Transmitting the EUT transmit continuously
- Make the measurement with the spectrum analyzer's resolution bandwidth (RBW) = 100 kHz. Set the Video bandwidth (VBW) = 300 kHz. In order to make an accurate measurement. The 6 dB bandwidth must be greater than 500 kHz.
- For 99% Bandwidth Measurement, the spectrum analyzer's resolution bandwidth (RBW) setting should be 1%-5% of OBW, please revise and set the Video bandwidth (VBW) ≥3\* RBW.

## 3.1.3 Test Result of 6dB Bandwidth

Refer to Appendix A of this test report.

## 3.1.4 Test Result of 99% Bandwidth

Refer to Appendix B of this test report.



## 3.2 Maximum Conducted Output Power Measurement

### 3.2.1 Limit of Output Power

FCC §15.247 (b)(3)

For systems using digital modulation in the 2400-2483.5 MHz bands: 30dBm. IC RSS-247 A5.4(d) For DTSs employing digital modulation techniques operating in the bands 902-928MHz and 2400-2483.5MHz, the maximum conducted output power shall not exceed 1 W. The e.i.r.p. shall not exceed 4 W, except as provided in section 5.4(e)

## 3.2.2 Test Procedures

- 1. The testing follows the Measurement Procedure of ANSI C63.10-2013 section 11.9.2.2.4 Measurement using a spectrum analyzer.
- 2. Check the calibration of the measuring instrument using either an internal calibrator or a known signal from an external generator.
- 3. Turn on the EUT and connect it to spectrum analyzer.
- 4. Set to the maximum power setting and enaBle Transmitting the EUT transmit continuously
- 5. Measure the duty cycle, x, of the transmitter output signal as described in below:
  - a. Set the center frequency of the instrument to the center frequency of the transmission.
  - b. Set RBW to the largest available Transmitting value.
  - c. Set detector = peak
- Set span to at least 1.5\*OBW.Set RBW=510KHz,VBW=2MHz, Number of points in sweep ≥ 2/3\* span, Sweep time = auto. Detector = RMS
- 7. Allow the sweep to "free run". Trace average 100 traces in RMS mode
- 8. Compute power by integrating the spectrum across the OBW of the signal using the instrument's Channel power measurement function with band limits set equal to the OBW band edges.
- 9. Add 10 log (1/x), where x is the duty cycle. The duty cycle factor has been compensated to the 'offset " of the spectrum analyser.

### 3.2.3 Test Result of Output Power

Refer to Appendix C of this test report.

## 3.2.4 Test Result of Duty Cycle

Refer to Appendix D of this test report.

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## 3.3 Maximum Power Spectral Density Measurement

### 3.3.1 Limits of Power Spectral Density

FCC§15.247(e)

IC RSS-247 5.2(b)

The peak power spectral density shall not be greater than 8dBm in any 3kHz band at any time interval of continuous transmission.

#### 3.3.2 Test Procedure

- 1. The testing follows Measurement Procedure 8.4 DTS maximum power spectral density level in the fundamental emission of ANSI C63.10-2013 section 11.9.2.2.4
- 2. Turn on the EUT and connect it to measurement instrument.
- 3. Measure the duty cycle, x, of the transmitter output signal as described in below:
  - a. Set the center frequency of the instrument to the center frequency of the transmission.
  - b. Set RBW to the largest availaBle Transmitting value.
  - c. Set detector = peak
- Set span to at least 1.5\*OBW.Set RBW= 30 KHz,VBW=100 KHz, Number of points in sweep ≥ 2/3\* span, Sweep time = auto.
- Detector = power averaging (rms), Sweep time = auto couple, Trace mode = averaging (rms) mode over a minimum of 100 traces. Use the peak marker function to determine the maximum power level.
- 6. Add 10 log (1/x), where x is the duty cycle.
- 7. Measure and record the results in the test report.
- 8. The Measured power density (dBm)/ 100kHz is a reference level and used as 30dBc down limit line for Conducted Band Edges and Conducted Spurious Emission.
- 9. Add 10 log(1/x), where x is the duty cycle. The duty cycle factor has been compensated to the 'offset " of the spectrum analyser.

### 3.3.3 Test Result of Power Spectral Density

Refer to Appendix E of this test report.



## 3.4 Band Edges and Spurious Emission Measurement

## 3.4.1 Limit of Conducted Band Edges and Spurious Emission

FCC §15.247 (d)

IC RSS-247 5.5

Maximum conducted (average) output power was used to determine compliance, 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).

#### 3.4.2 Test Procedures

- 1. Check the calibration of the measuring instrument using either an internal calibrator or a known signal from an external generator.
- 2. Turn on the EUT and connect it to measurement instrument.
- 3. Set RBW = 100 kHz, VBW=300 kHz, Peak Detector. Unwanted Emissions 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 when maximum peak conducted output power procedure is used. If the transmitter complies with the conducted power limits based on the use of RMS averaging over a time interval, the attenuation required under this paragraph shall be 30 dB instead of 20 dB per 15.247(d).
- 4. Measure and record the results in the test report.
- 5. The RF fundamental frequency should be excluded against the limit line in the operating frequency band.

#### 3.4.3 Test Result of Conducted Band Edges

Refer to Appendix F of this test report.

### 3.4.4 Test Result of Conducted Spurious Emission

Refer to Appendix G of this test report.



## 3.5.1 Limit of Radiated Band Edges and Spurious Emission

FCC §15.247 (d)

IC RSS-247 5.5

In any 100 kHz bandwidth outside the intentional radiator frequency band, all harmonics/spurious must be at least 30 dB below the highest emission level within the authorized band. In addition, radiated emissions which fall in the restricted bands must also comply with the FCC section 15.209 limits as below.

Frequency	Field Strength	Measurement Distance
(MHz)	(microvolts/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

#### 3.5.2 Test Procedures

- 1. The EUT was placed on a turntable with 0.8 meter for frequency below 1GHz and 1.5 meter for frequency above 1GHz respectively above ground.
- 2. The measurement distance is 3 meter.
- 3. For each suspected emission, the EUT was arranged to its worst case and then tune the Antenna tower (from 1 m to 4 m) and turntable (from 0 degree to 360 degrees) to find the maximum reading. A pre-amp and a high pass filter are used for the test in order to get better signal level to comply with the guidelines.
- 4. Set to the maximum power setting and enable the EUT transmit continuously.
- 5. Use the following spectrum analyzer settings:
  - (1) Span shall wide enough to fully capture the emission being measured;
  - (2) Set RBW=100 kHz for f < 1 GHz, RBW=1MHz for f>1GHz ; VBW RBW; Sweep = auto; Detector function = peak; Trace = max hold for peak
  - (3) For average measurement:

VBW = 10 Hz, when duty cycle is no less than 98 percent.

VBW  $\ge$  1/T, when duty cycle is less than 98 percent where T is the minimum transmission

duration over which the transmitter is on and is transmitting at its maximum power control

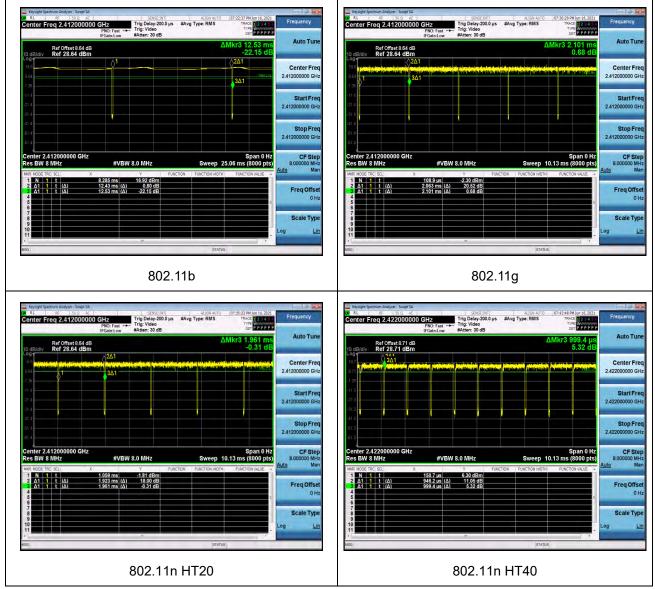
#### level for the tested mode of operation.

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Duty Cycle(%)	T(ms)	1/T(kHz)	VBW Setting
99.20	-	-	10Hz
98.10	-	-	10Hz
97.96	1.92	0.52	1kHz
95.00	0.95	1.05	3kHz
	99.20 98.10 97.96	99.20     -       98.10     -       97.96     1.92	99.20         -         -           98.10         -         -           97.96         1.92         0.52





## 3.5.3 Test Results of Radiated Spurious Emissions (9 kHz ~ 30 MHz)

The low frequency, which started from 9 kHz to 30MHz, was pre-scanned and the result which was 20dB lower than the limit line per 15.31(o) was not reported.

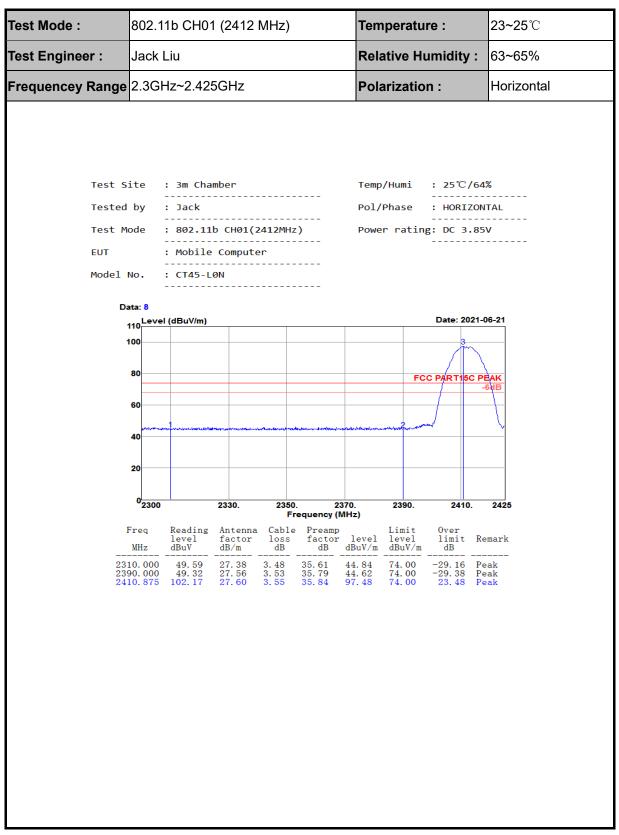
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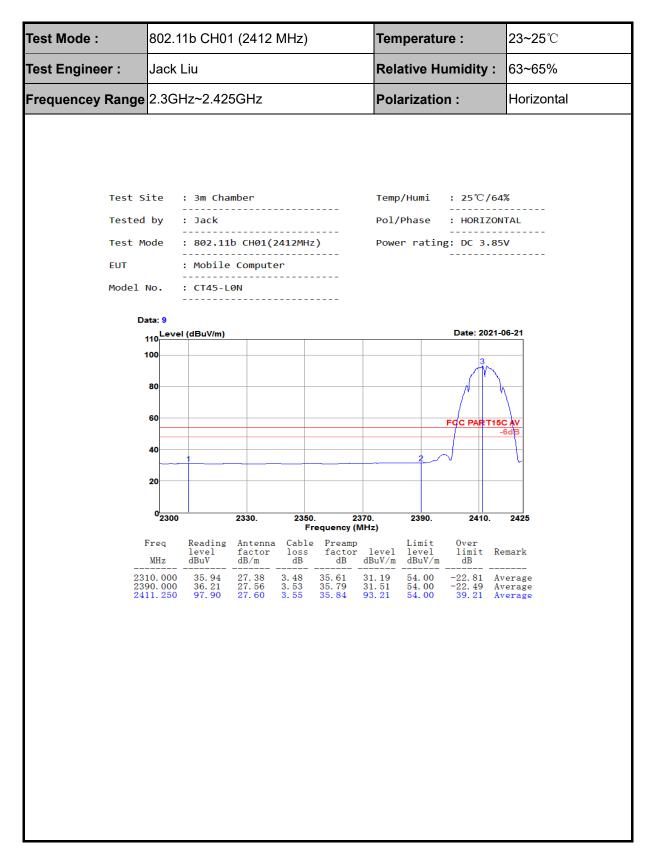
## 3.5.4 Test Result of Radiated Spurious at Band Edges



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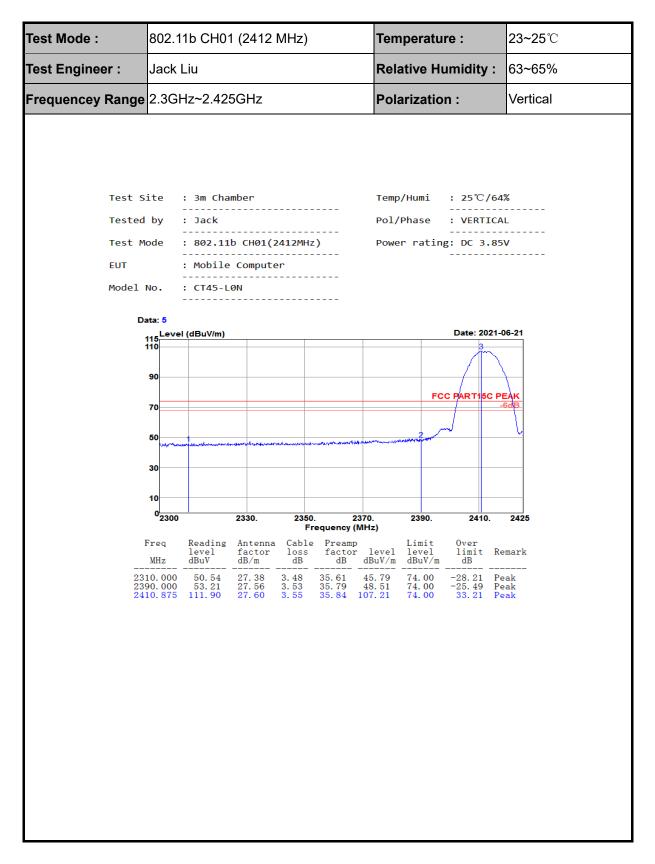




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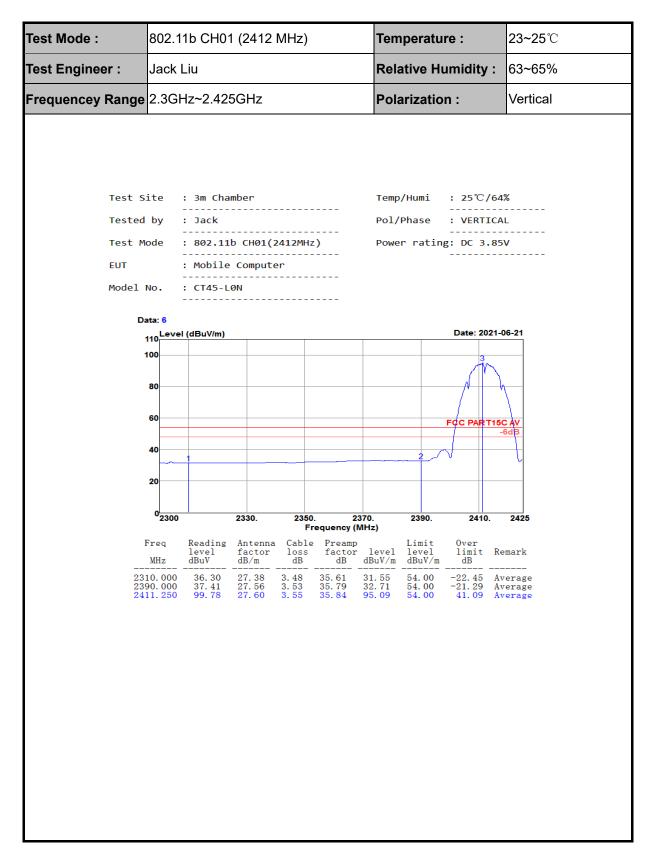
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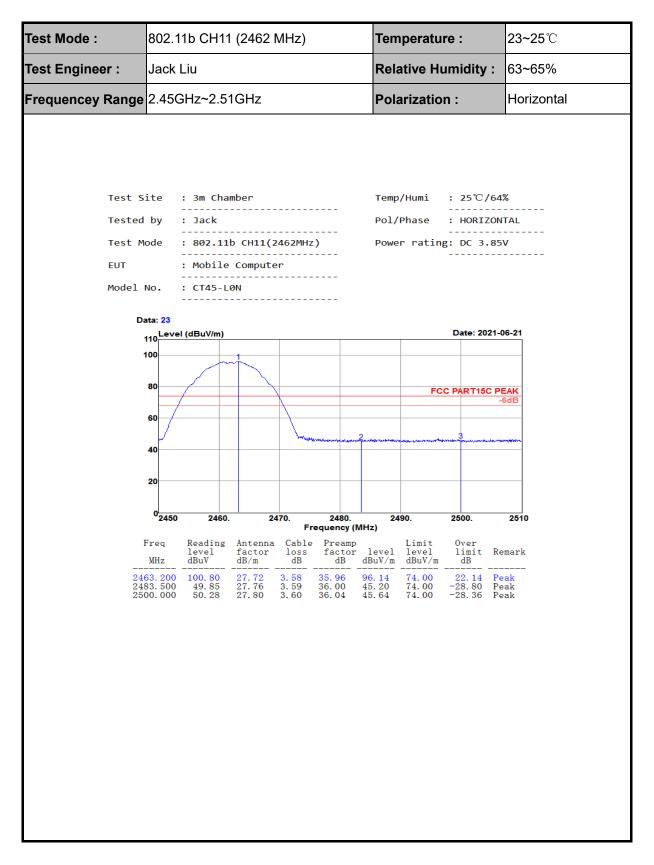
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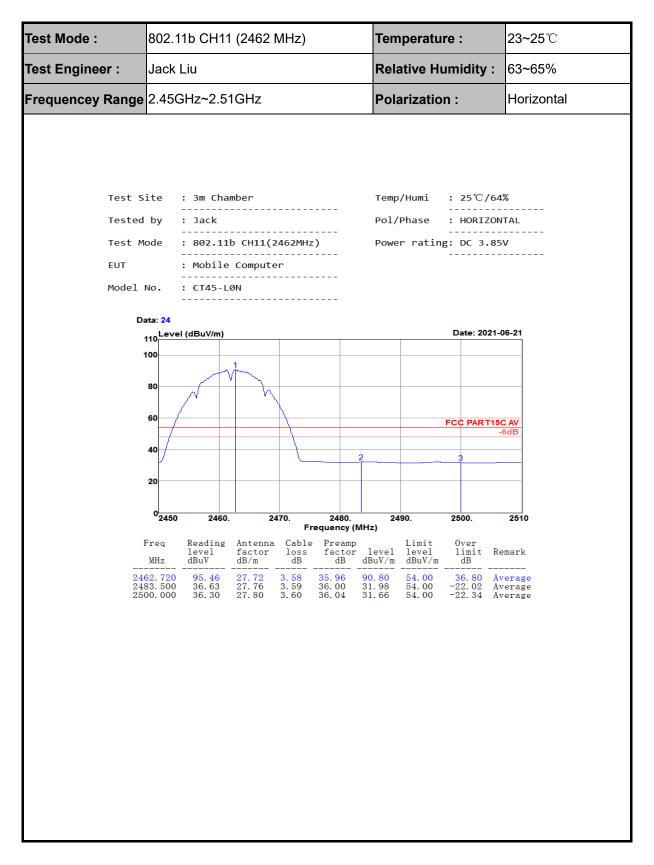


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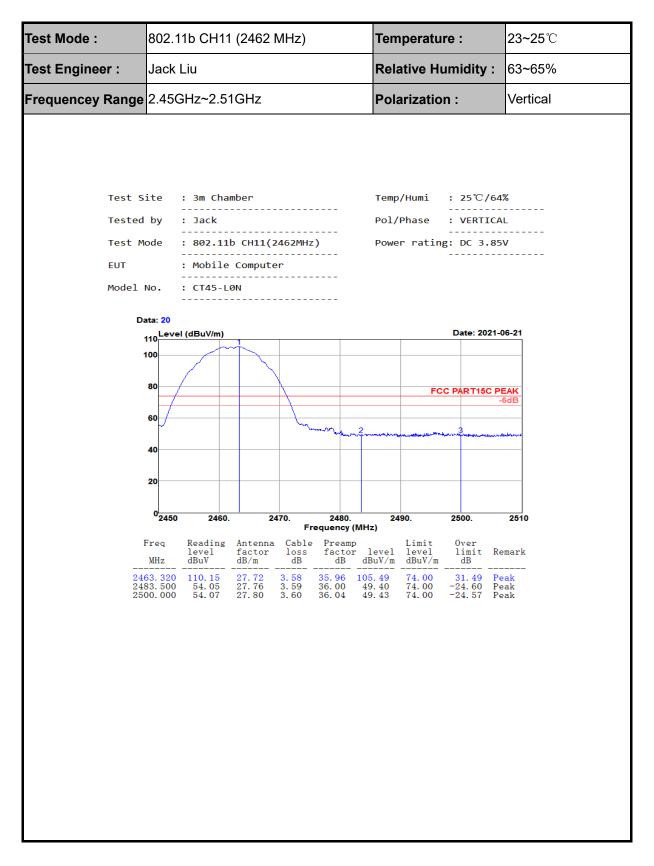




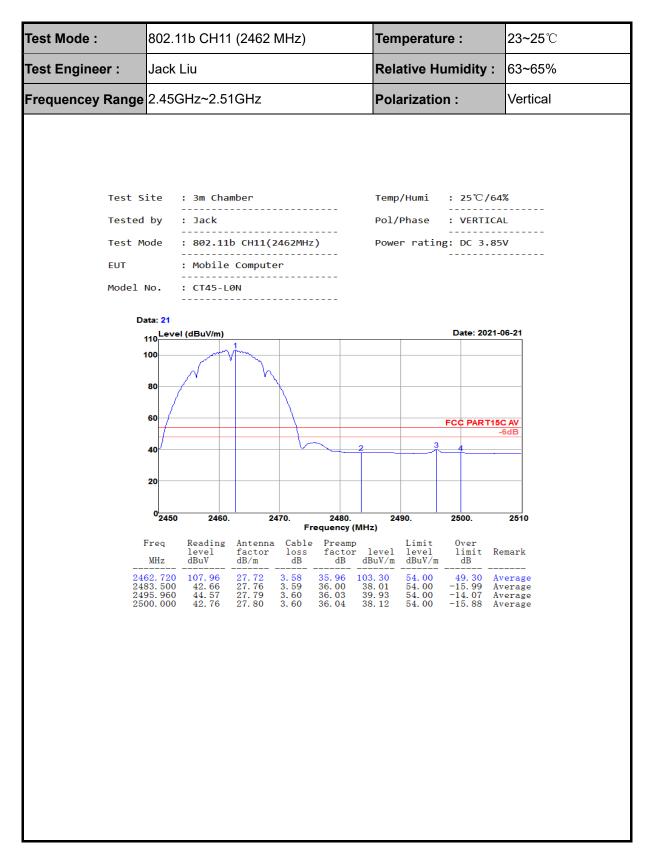






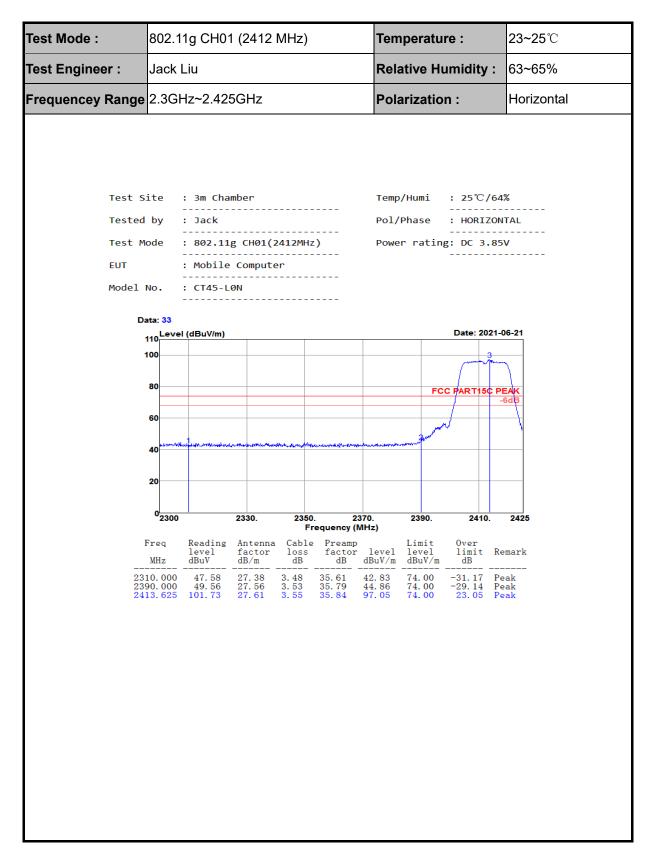






No.B102, Dazu Chuangxin Mansion, North of Beihuan Avenue, North Area, Hi-Tech Industrial Park, Nanshan District, Shenzhen, Guangdong, China





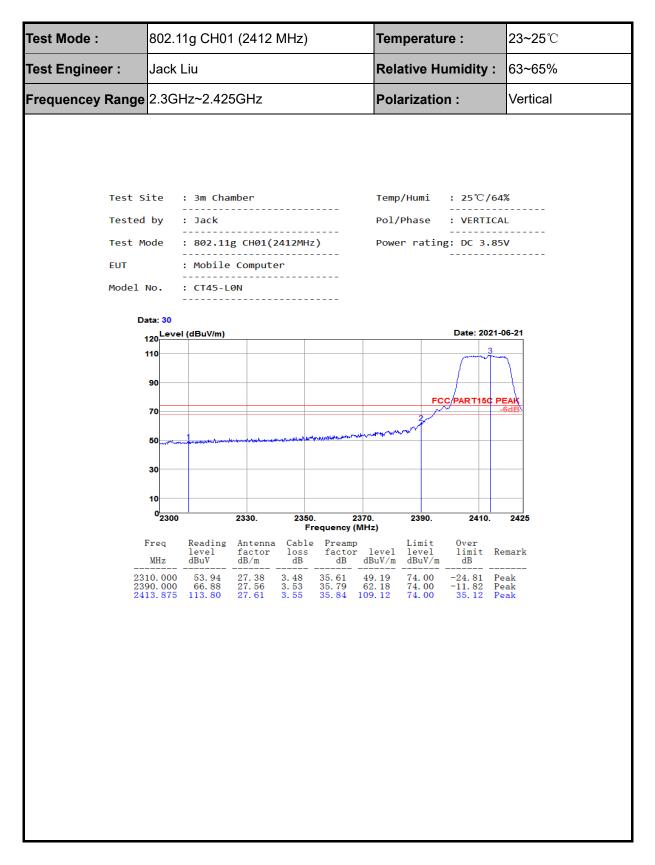
No.B102, Dazu Chuangxin Mansion, North of Beihuan Avenue, North Area, Hi-Tech Industrial Park, Nanshan District, Shenzhen, Guangdong, China



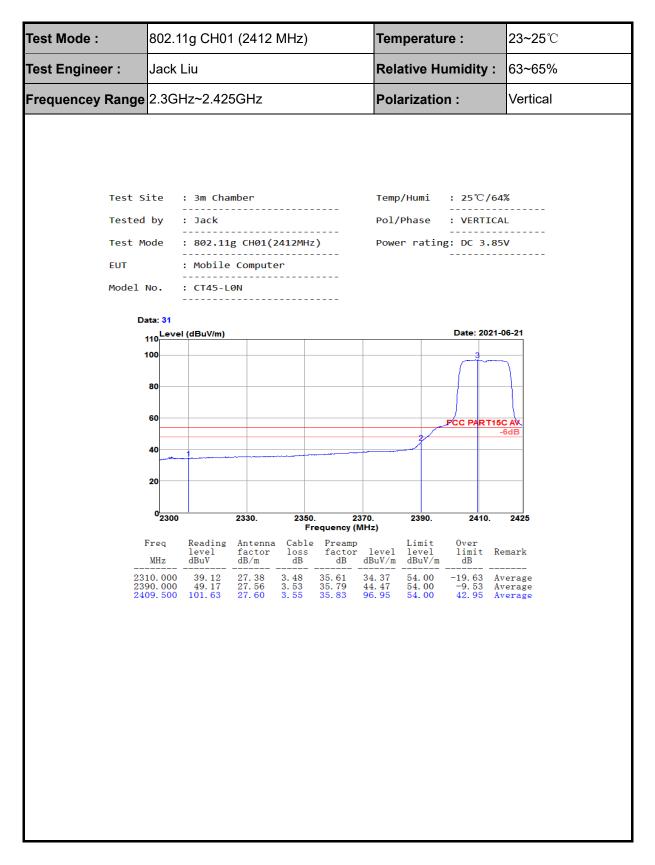


No.B102, Dazu Chuangxin Mansion, North of Beihuan Avenue, North Area, Hi-Tech Industrial Park, Nanshan District, Shenzhen, Guangdong, China





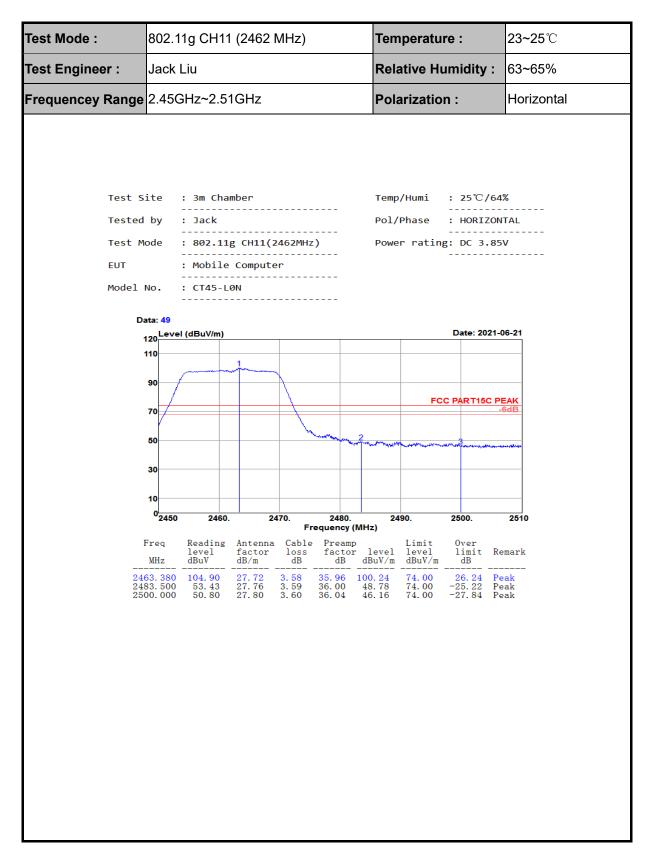




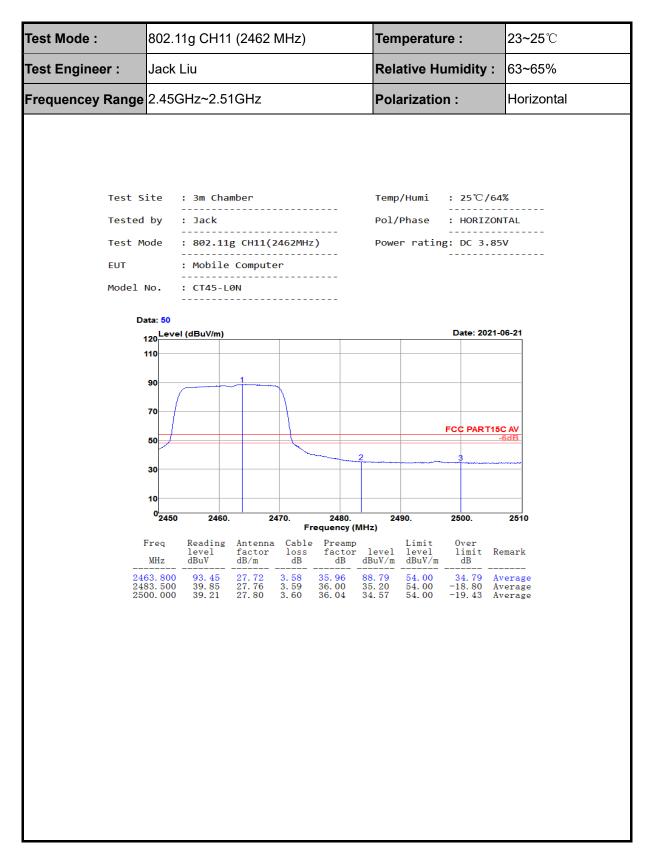
No.B102, Dazu Chuangxin Mansion, North of Beihuan Avenue, North Area, Hi-Tech Industrial Park, Nanshan District, Shenzhen, Guangdong, China

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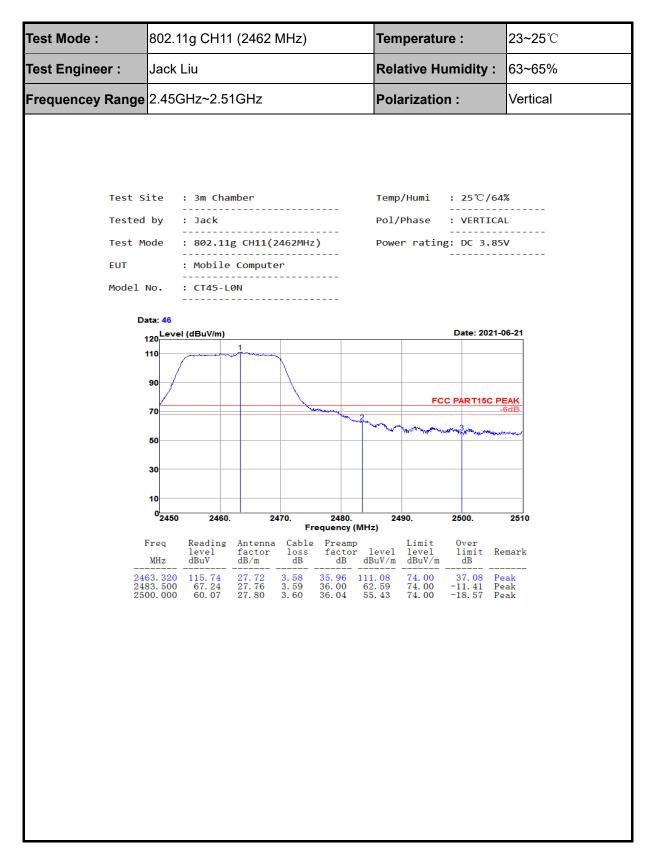




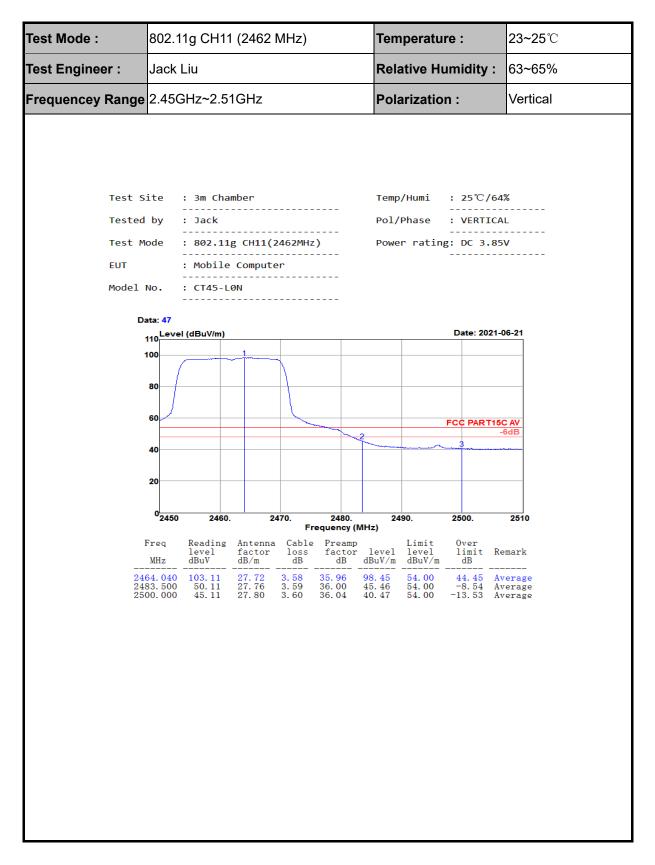






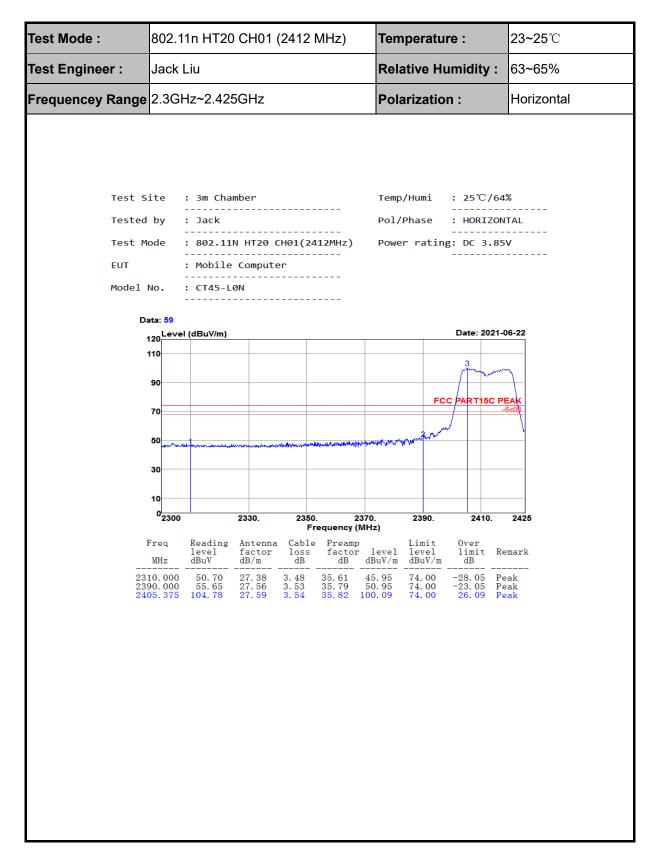






No.B102, Dazu Chuangxin Mansion, North of Beihuan Avenue, North Area, Hi-Tech Industrial Park, Nanshan District, Shenzhen, Guangdong, China

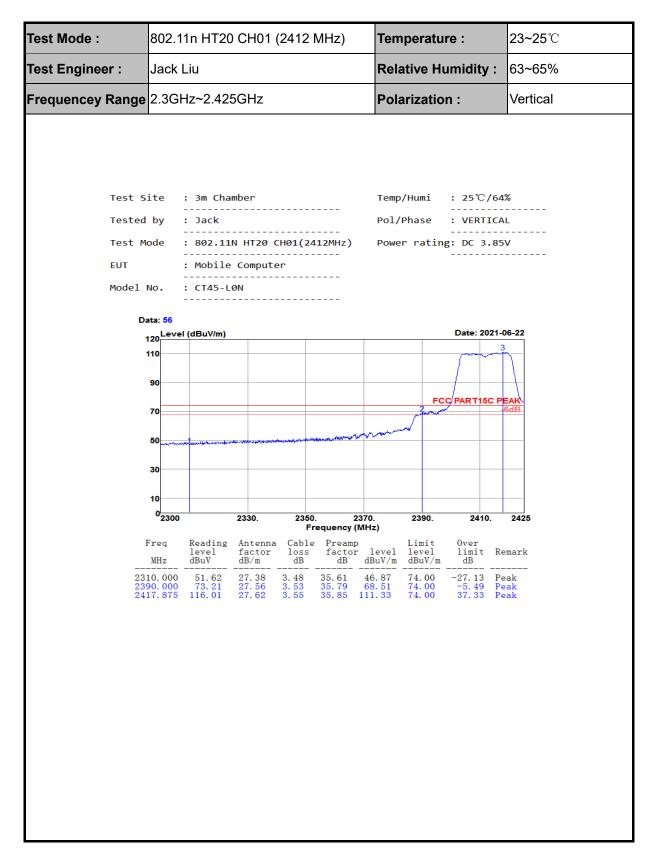




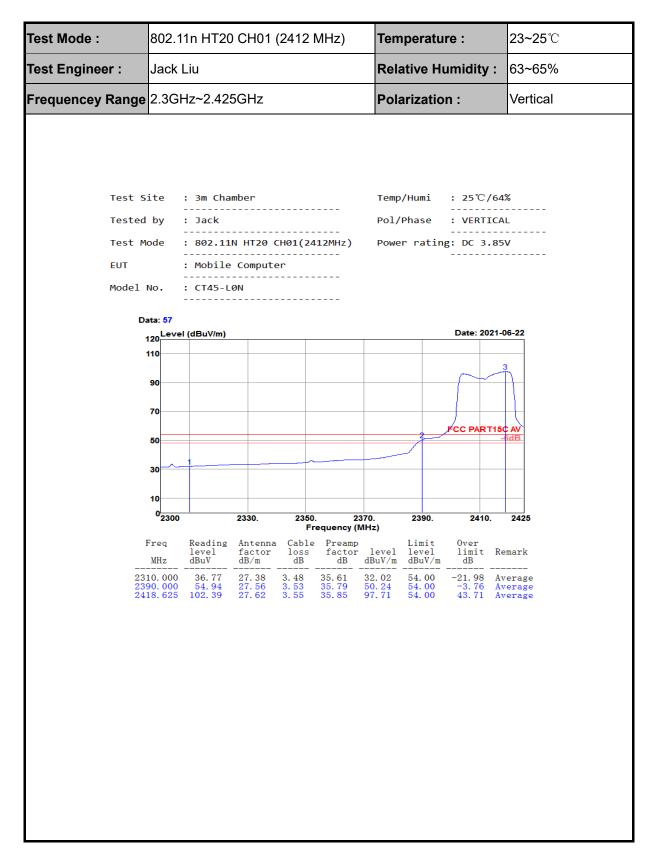




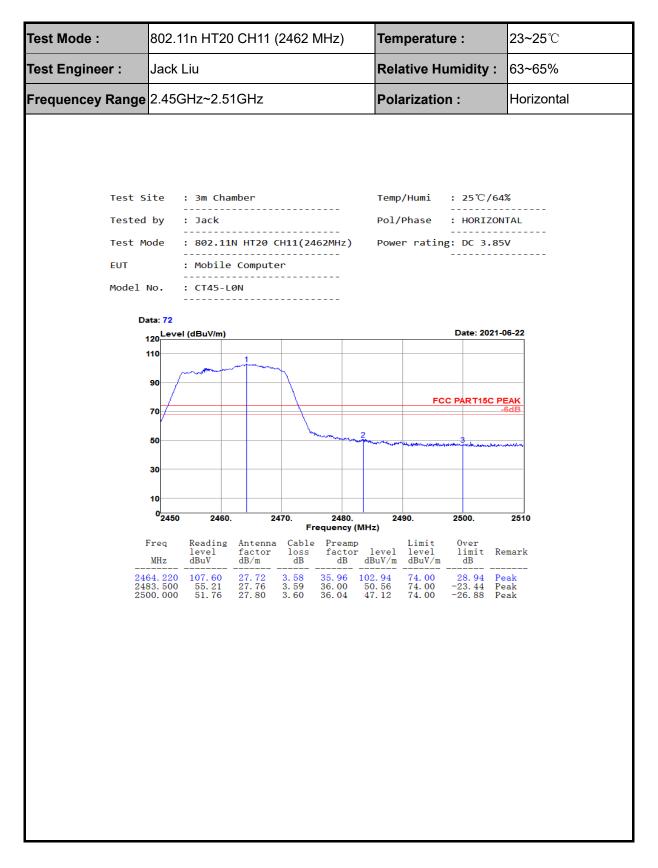




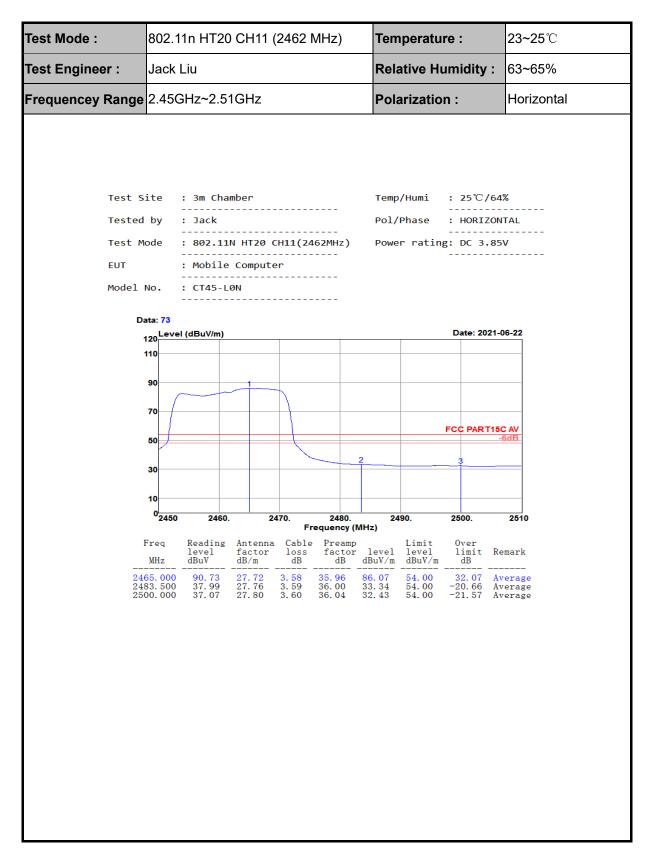






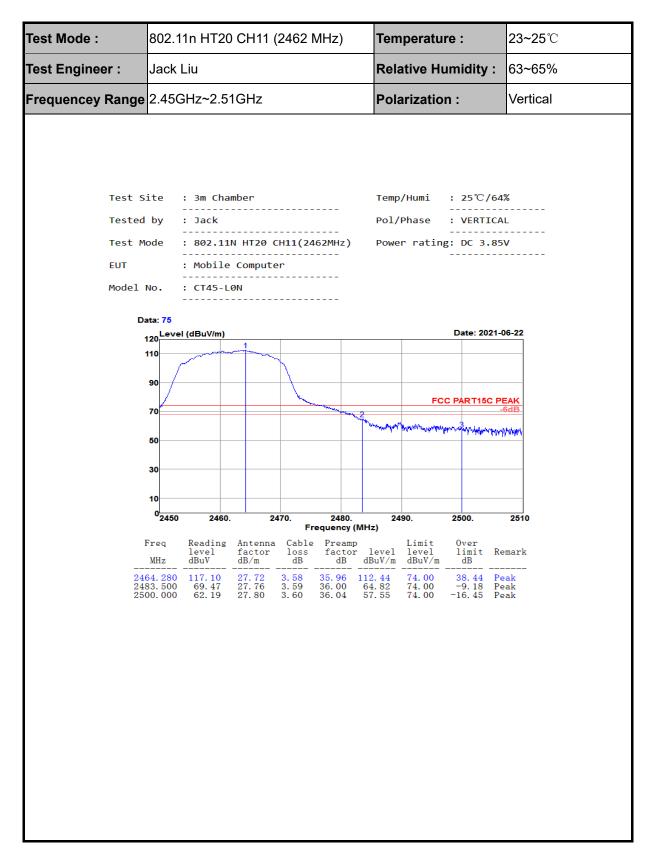




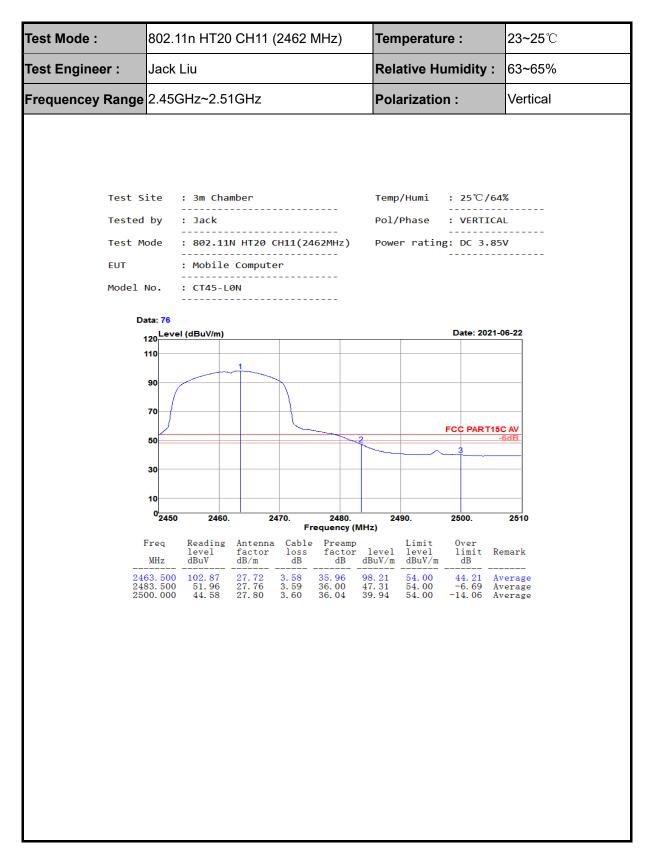


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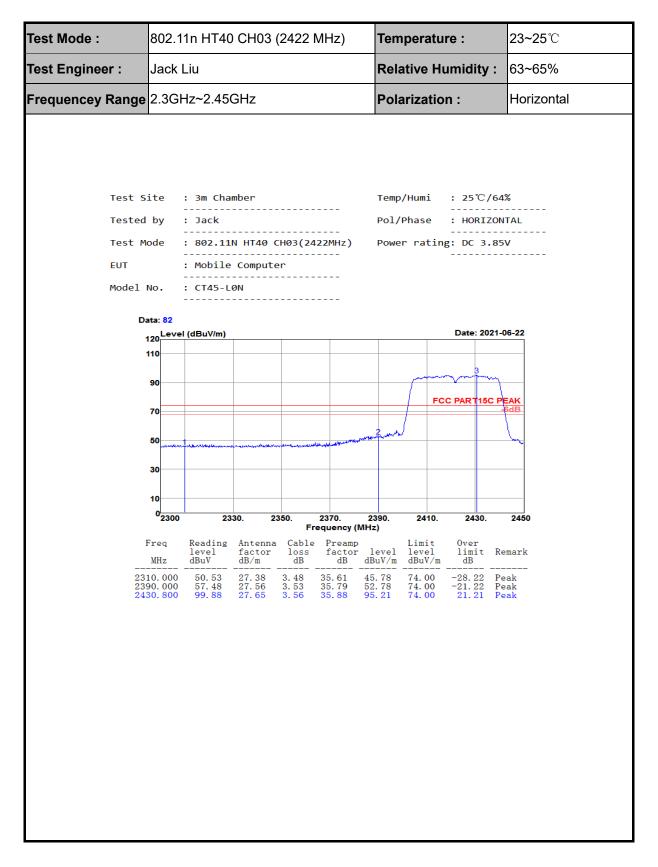




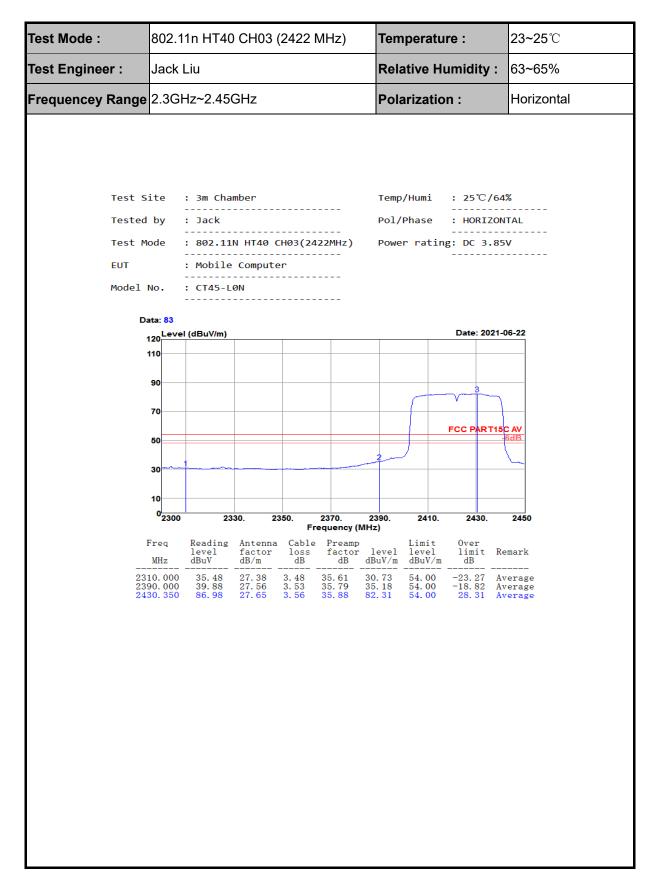






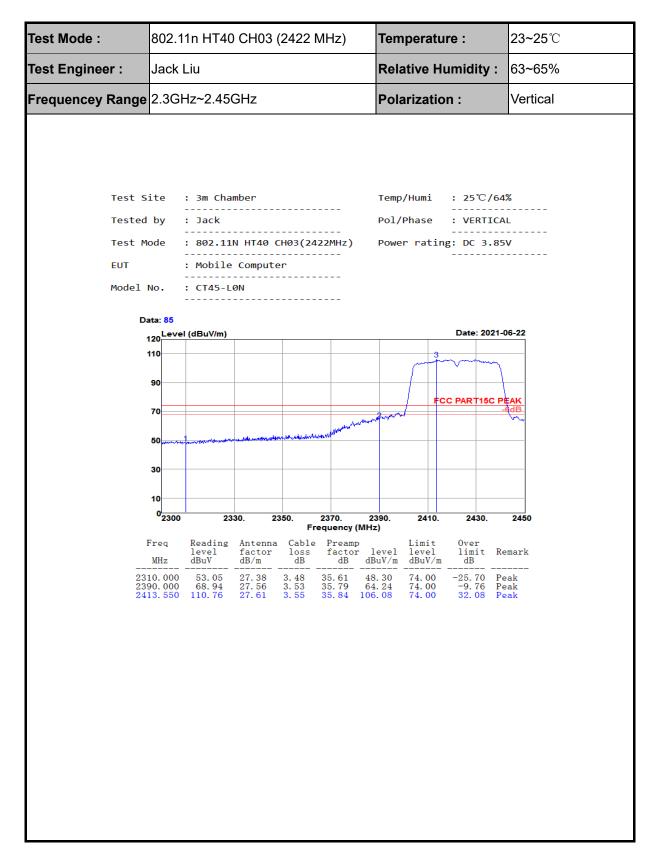




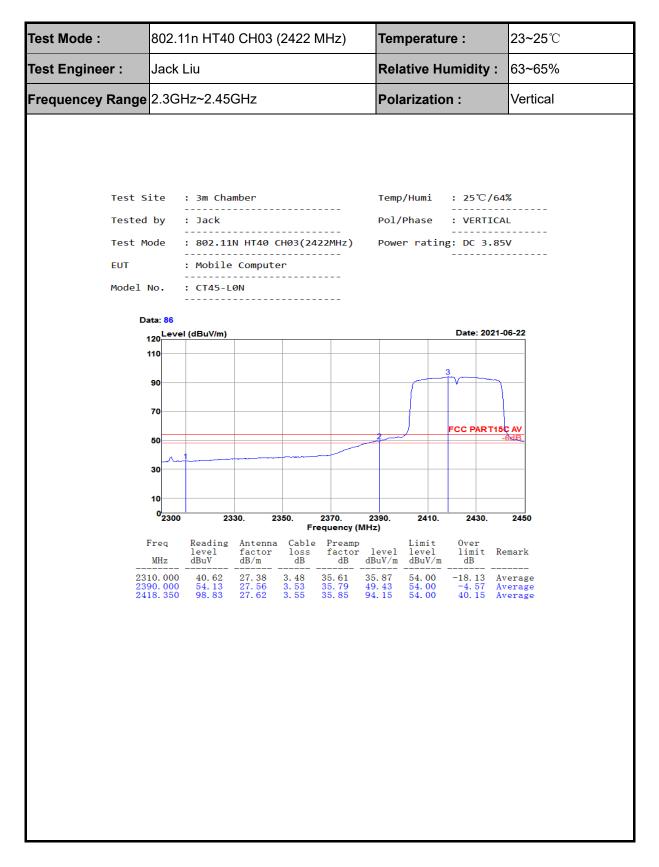


BV 7Layers Communications Technology (Shenzhen) Co. Ltd

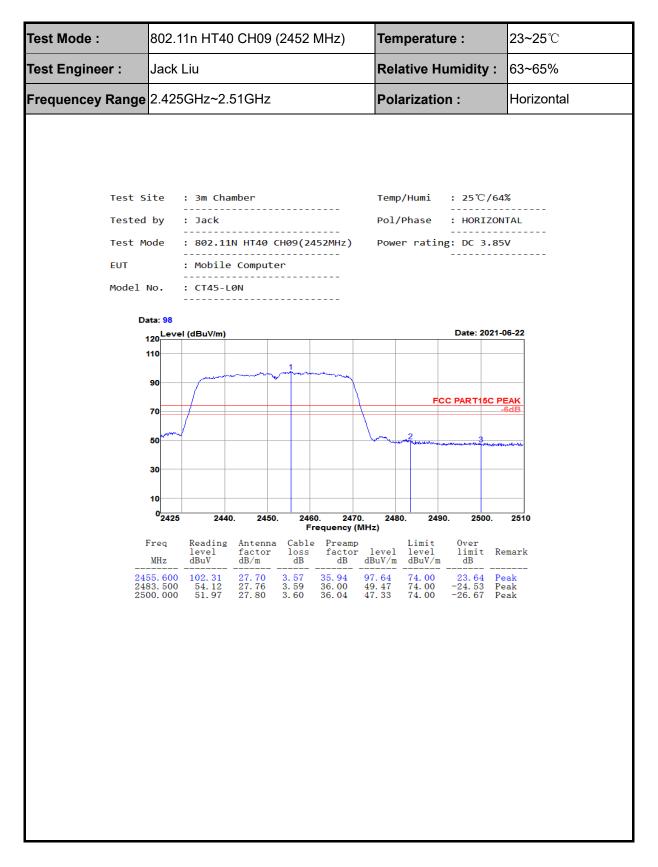




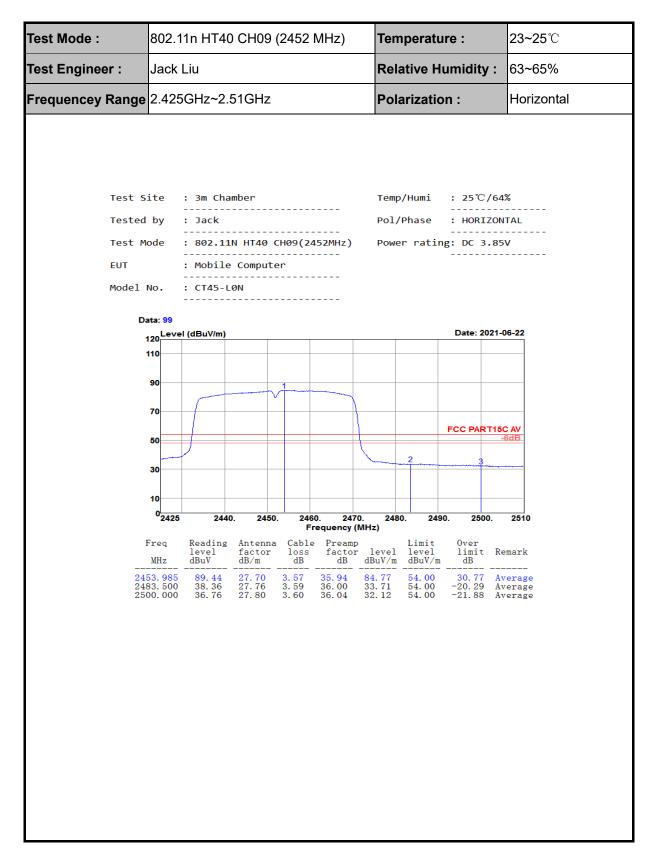




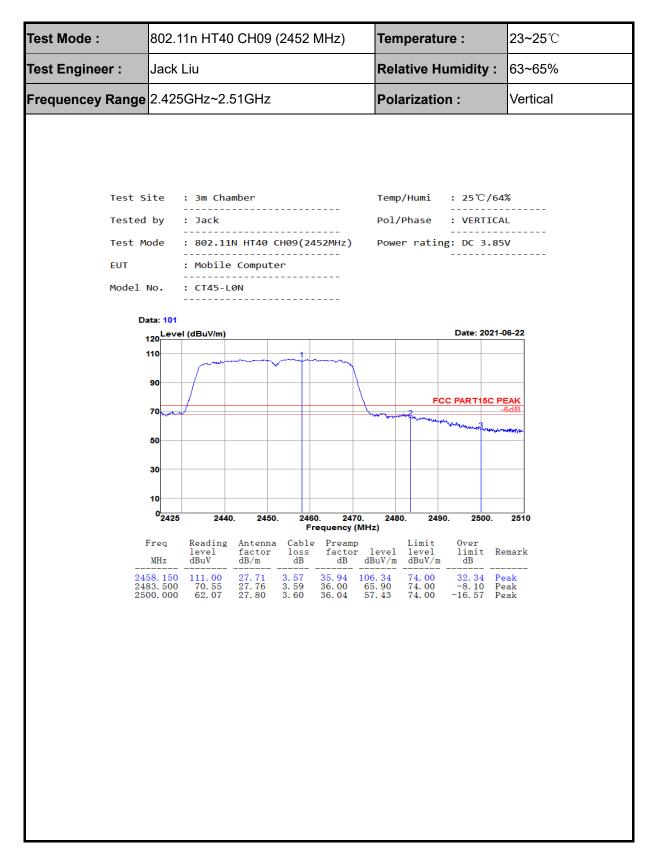








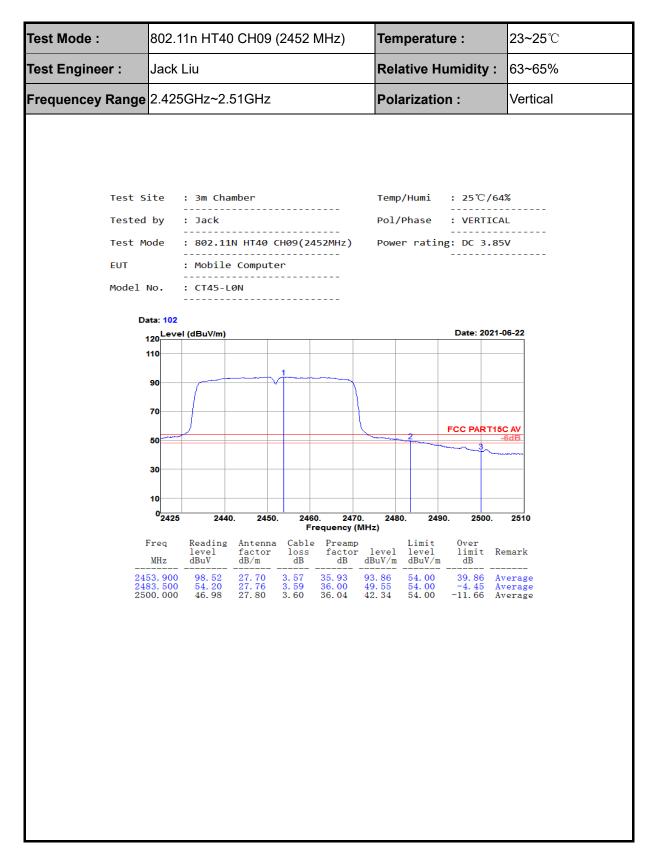




BV 7Layers Communications Technology (Shenzhen) Co. Ltd

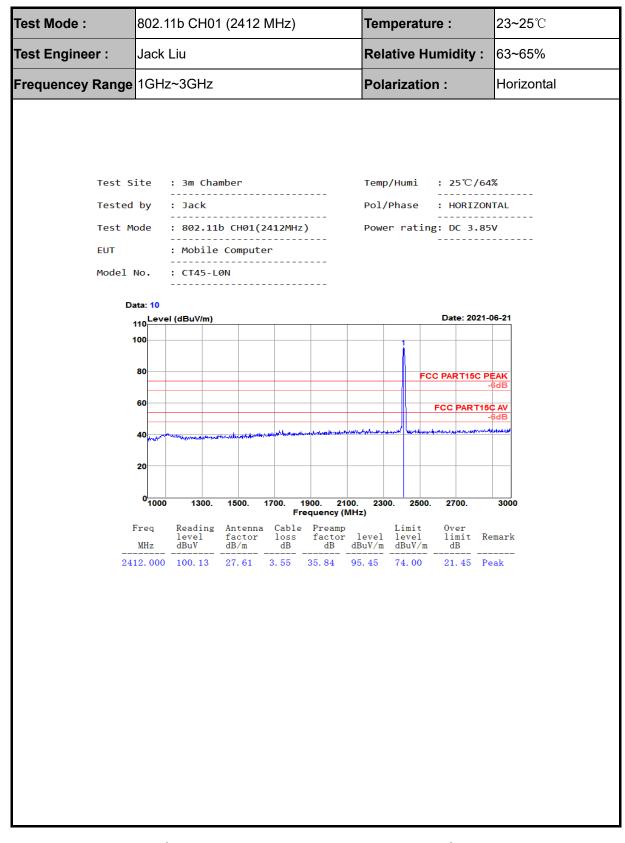
No.B102, Dazu Chuangxin Mansion, North of Beihuan Avenue, North Area, Hi-Tech Industrial Park, Nanshan District, Shenzhen, Guangdong, China







## 3.5.1 Test Result of Radiated Spurious Emission (1GHz ~ 10<sup>th</sup> Harmonic)



BV 7Layers Communications Technology (Shenzhen) Co. Ltd

No.B102, Dazu Chuangxin Mansion, North of Beihuan Avenue, North Area, Hi-Tech Industrial Park, Nanshan District, Shenzhen, Guangdong, China

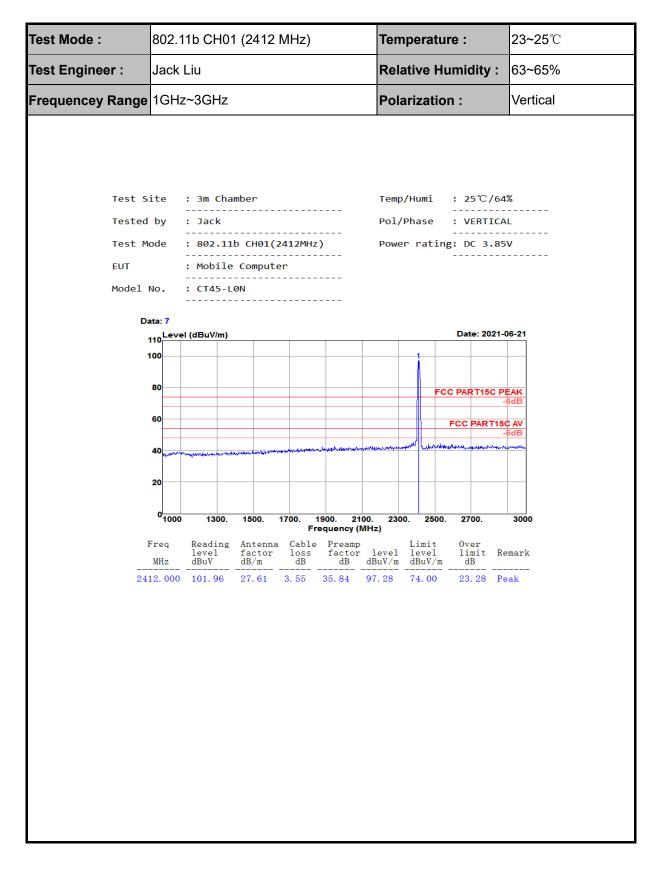


Test Engineer :Jack LiuRelative Humidity : $63~65\%$ Frequencey Range3GHz~18GHzPolarization :HorizontalTest Site ::3nchamberTemp/Humi :: $25\%/64\%$ Tested by ::JackPol/Phase ::HORIZONTALTest Mode ::882.11b CH012412MHz)Power rating: DC 3.85VEur :::Mobile ComputerModel No. ::CT45-L0NDate: 201-06-2110000For a read (dBuV/m)Date: 201-06-2110000For a read (dBuV/m)Eur :Colspan="2">Date: 201-06-2110000For a read (dBuV/m)Colspan="2">Test (dBuV/m)Date: 201-06-210000For a read (dBuV/m)Date: 201-06-2110000For a read (dBuV/m)Colspan="2">Colspan="2">Test Mode (dBuV/m)Date: 201-06-210000Colspan="2">Date: 201-06-210000Test Mode (dBuV/m)Date: 201-06-210000Colspan="2">Colspan="2"0000	Test Mode :	802.1	1b CH01	(2412	MHz)		Tem	peratu	re :	<b>23~25</b> ℃
Test Site : 3m Chamber Tested by : Jack Pol/Phase : HORIZONTAL Test Mode : 802.11b CH01(2412MHz) Power rating: DC 3.85V EUT : Mobile Computer Model No. : CT45-L6N Date: 2021-06-21 $100^{-1}$ Date: 2021-06-21 10	Test Engineer :	Jack Liu					Rela	ative H	63~65%	
Tested by : Jack Pol/Phase : HORIZONTAL Test Mode : 892.11b CH91(2412MHz) Power rating: DC 3.85V EUT : Mobile Computer Model No. : CT45-L0N Date: 2 Date: 2 Date: 2021-06-21 100 000 000 000 000 000 000 0	Frequencey Range	3GHz~18GHz					Pola	arizatio	Horizontal	
$\frac{100}{80} + \frac{1}{6} + \frac$	Tested Test Mo EUT Model N Da	by ode Io. ta: 2	: Jack : 802.111 : Mobile : CT45-L	b CHØ1(2 Compute ØN	2412MHz	)	Pol/	Phase	: HORIZ	DNTAL 35V
$\frac{60}{4}$ $\frac{6}{4}$ $\frac{6}{4}$ $\frac{6}{6}$ $\frac{1}{2}$ $1$			(abaviii)						Dute: 102	
$ \begin{array}{c c c c c c c c c c c c c c c c c c c $		80						FC	C PARTISC	PEAK
40       2       3       -6dB         20       20       -6000.       -6000.       -6000.         20       -6000.       8000.       10000.       12000.       14000.       16000.         20       -6000.       8000.       10000.       12000.       14000.       16000.       18000         20       -6000.       8000.       10000.       12000.       14000.       16000.       18000         20       -6000.       8000.       10000.       12000.       14000.       16000.       18000         20       -6000.       8000.       10000.       12000.       14000.       16000.       18000         20       -6000.       8000.       10000.       12000.       14000.       16000.       18000         20       -7000.       800.       -7000.       1000.       12000.       1000.       1000.         4824.000       32.19       30.95       5.56       36.02       32.68       54.00       -21.32       Average         4824.000       43.16       30.95       5.56       36.02       43.65       74.00       -30.35       Peak         7236.000       38.92       35.47       7.61		60		A		6				-6dB
20       3000       6000.       8000.       10000.       12000.       14000.       16000.       18000         9       3000       6000.       8000.       10000.       12000.       14000.       16000.       18000         Freq       Reading       Antenna       Cable       Preamp       Limit       Over         MHz       dBuV       dB/m       dB       dBuV/m       dBuV/m       dB       dBuV/m         4824.000       32.19       30.95       5.56       36.02       32.68       54.00       -21.32       Average         4824.000       43.16       30.95       5.56       36.02       43.65       74.00       -30.35       Peak         7236.000       38.92       35.47       7.61       34.26       47.74       54.00       -6.26       Average         7236.000       38.92       35.47       7.61       34.26       47.74       54.00       -6.26       Average		40	2	3		5				
Frequency (MHz)           Freq         Reading level         Antenna factor         Cable factor         Preamp factor         Limit         Over level           MHz         dBuV         dB/m         dB         dBuV/m         dBuV/m         dBuV/m         dBuV/m           4824.000         32.19         30.95         5.56         36.02         32.68         54.00         -21.32         Average           4824.000         43.16         30.95         5.56         36.02         43.65         74.00         -30.35         Peak           7236.000         38.92         35.47         7.61         34.26         47.74         54.00         -6.26         Average           7236.000         38.92         35.47         7.61         34.26         53.74         74.00         -20.26         Peak										
Freq         Reading         Antenna         Cable         Preamp         Limit         Over           level         factor         loss         factor         level         limit         Remark           MHz         dBuV         dB/m         dB         dB         dBUV/m         dB         dB           4824.000         32.19         30.95         5.56         36.02         32.68         54.00         -21.32         Average           4824.000         43.16         30.95         5.56         36.02         43.65         74.00         -30.35         Peak           7236.000         38.92         35.47         7.61         34.26         53.74         74.00         -20.26         Peak           7236.000         44.92         35.47         7.61         34.26         53.74         74.00         -20.26         Peak		0 <mark>3000</mark>	60	00. 80				14000.	16000.	18000
MHz         dBuV         dB/m         dB         dB         dB         dBuV/m         dBuV/m         dB           4824.000         32.19         30.95         5.56         36.02         32.68         54.00         -21.32         Average           4824.000         43.16         30.95         5.56         36.02         43.65         74.00         -30.35         Peak           7236.000         38.92         35.47         7.61         34.26         53.74         74.00         -20.26         Peak			level	factor	Cable loss	Preamp factor	level	level	limit	Remark
7236.000 38.92 35.47 7.61 34.26 47.74 54.00 -6.26 Average 7236.000 44.92 35.47 7.61 34.26 53.74 74.00 -20.26 Peak	482	4.000	dBuV 32.19	dB/m 30.95	dB 5. 56	dB 36.02	dBuV/m 32.68	dBuV/m 54.00	dB 	 Average
	723 723 964	6.000 6.000 8.000	38.92 44.92 27.72	35.47 35.47	7.61 7.61	34.26 34.26	47.74 53.74 44.40	$54.00 \\ 74.00 \\ 54.00$	-6.26 -20.26 -9.60	Average Peak Average

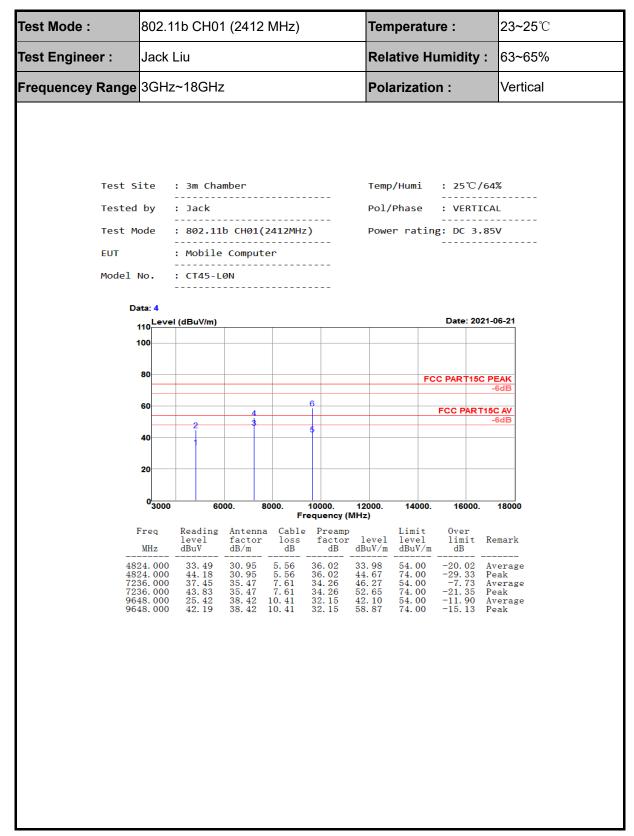
BV 7Layers Communications Technology (Shenzhen) Co. Ltd

No.B102, Dazu Chuangxin Mansion, North of Beihuan Avenue, North Area, Hi-Tech Industrial Park, Nanshan District, Shenzhen, Guangdong, China







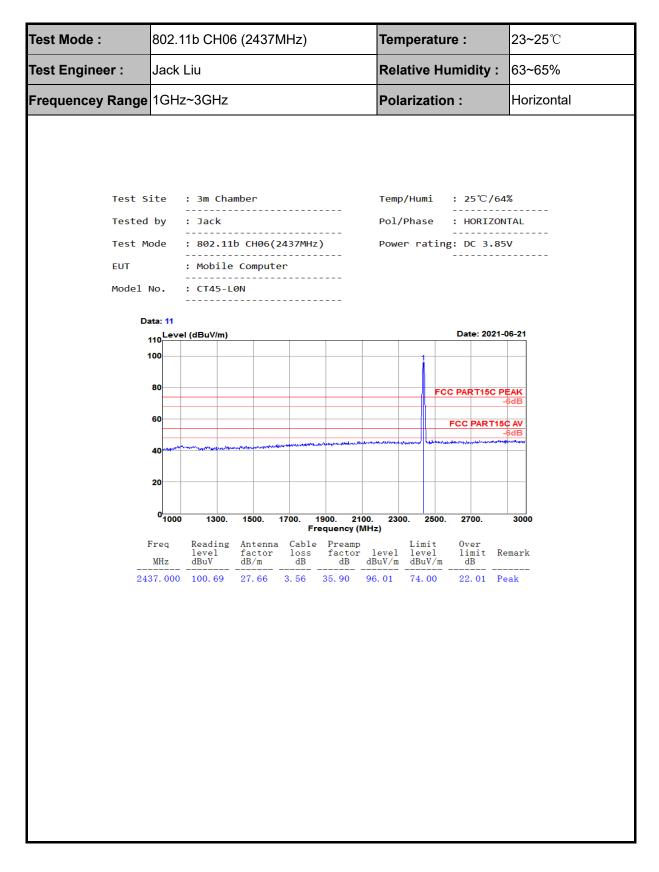


least 20dB below the specification limit.

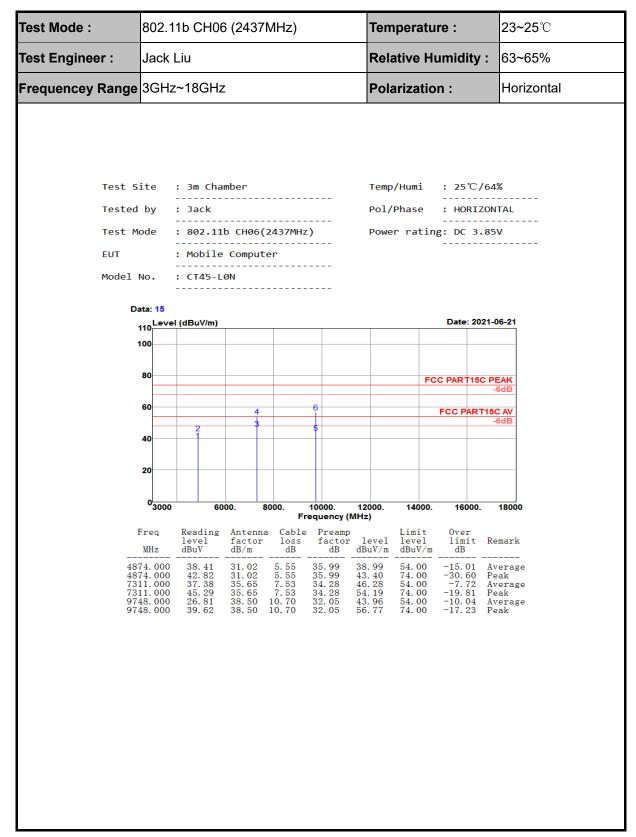
BV 7Layers Communications Technology (Shenzhen) Co. Ltd

No.B102, Dazu Chuangxin Mansion, North of Beihuan Avenue, North Area, Hi-Tech Industrial Park, Nanshan District, Shenzhen, Guangdong, China









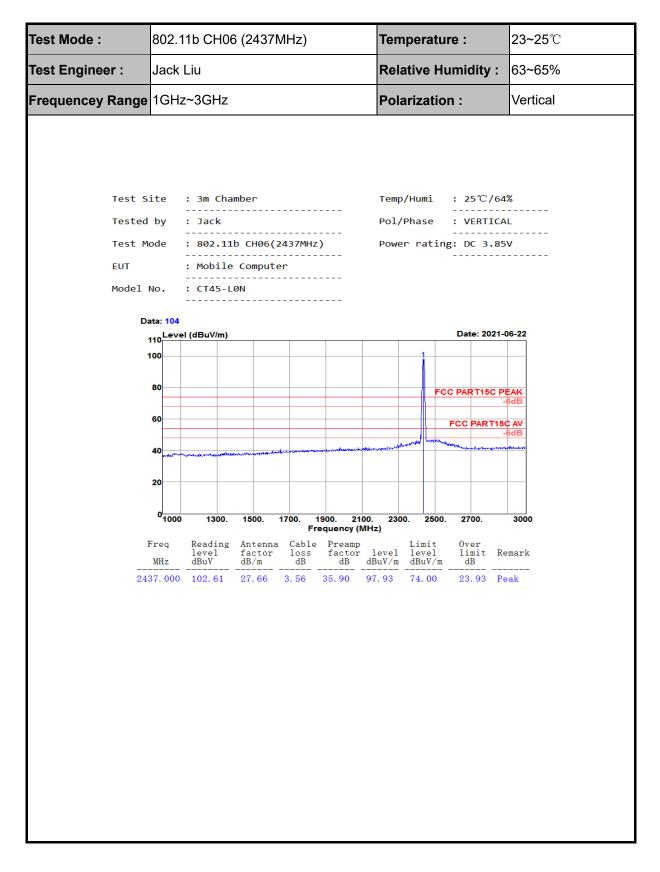
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BV 7Layers Communications Technology (Shenzhen) Co. Ltd

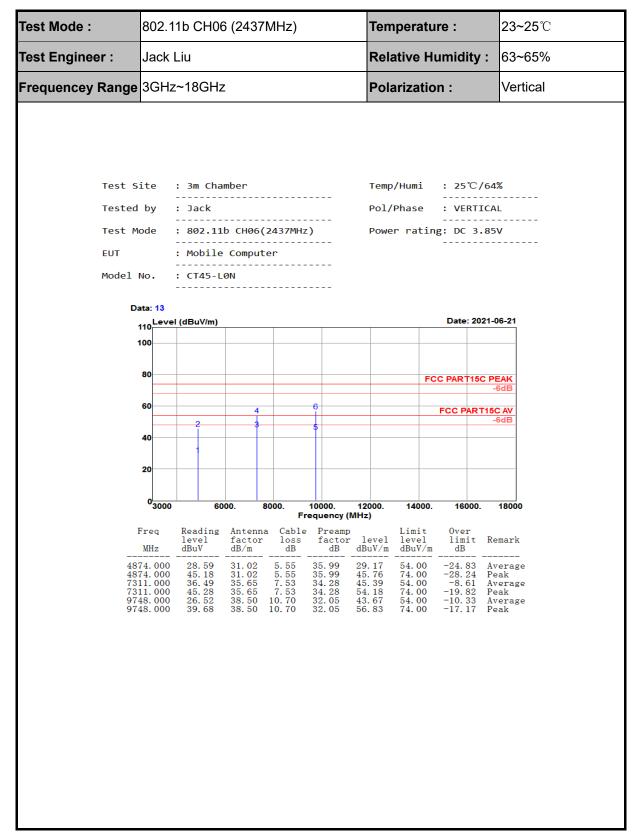
No.B102, Dazu Chuangxin Mansion, North of Beihuan Avenue, North Area, Hi-Tech Industrial Park, Nanshan District, Shenzhen, Guangdong, China

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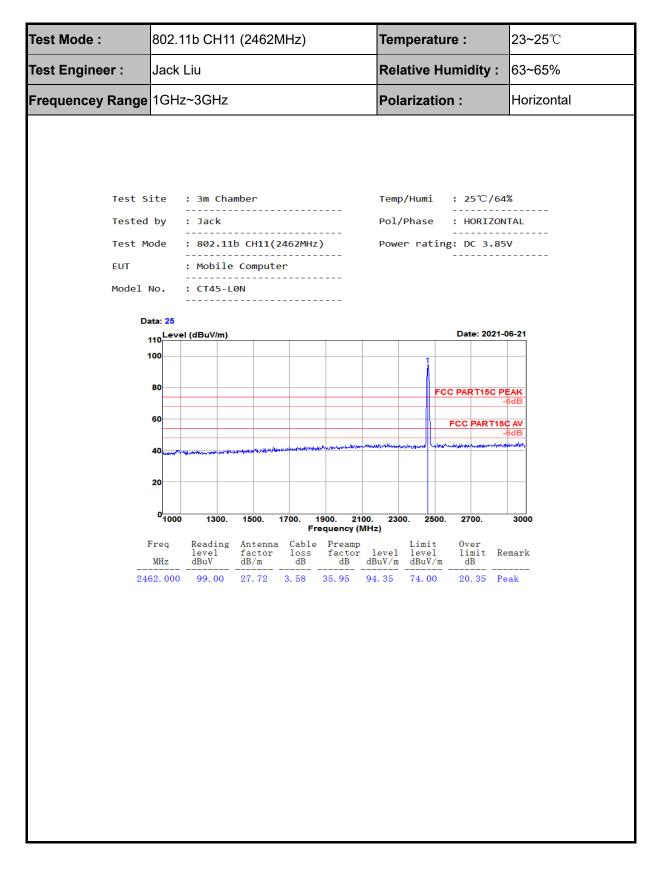


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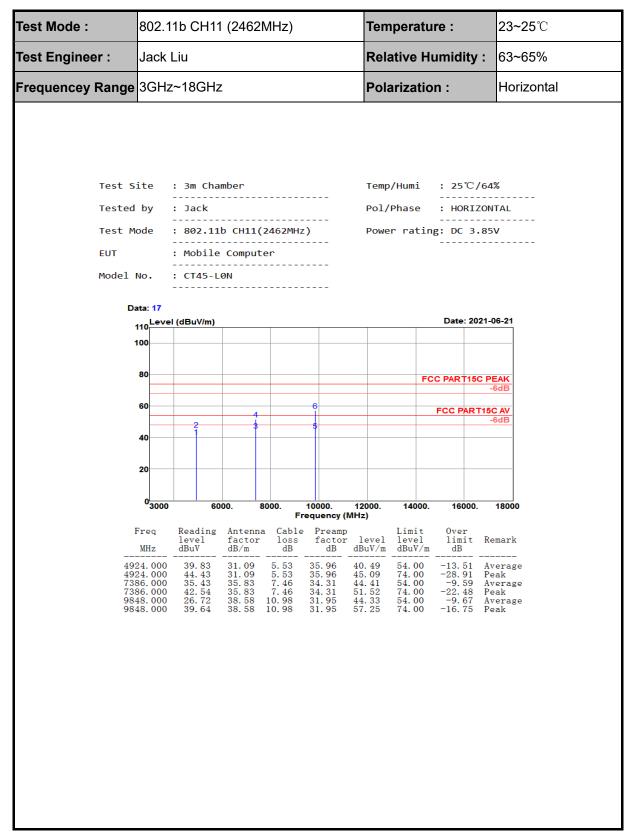
BV 7Layers Communications Technology (Shenzhen) Co. Ltd

No.B102, Dazu Chuangxin Mansion, North of Beihuan Avenue, North Area, Hi-Tech Industrial Park, Nanshan District, Shenzhen, Guangdong, China









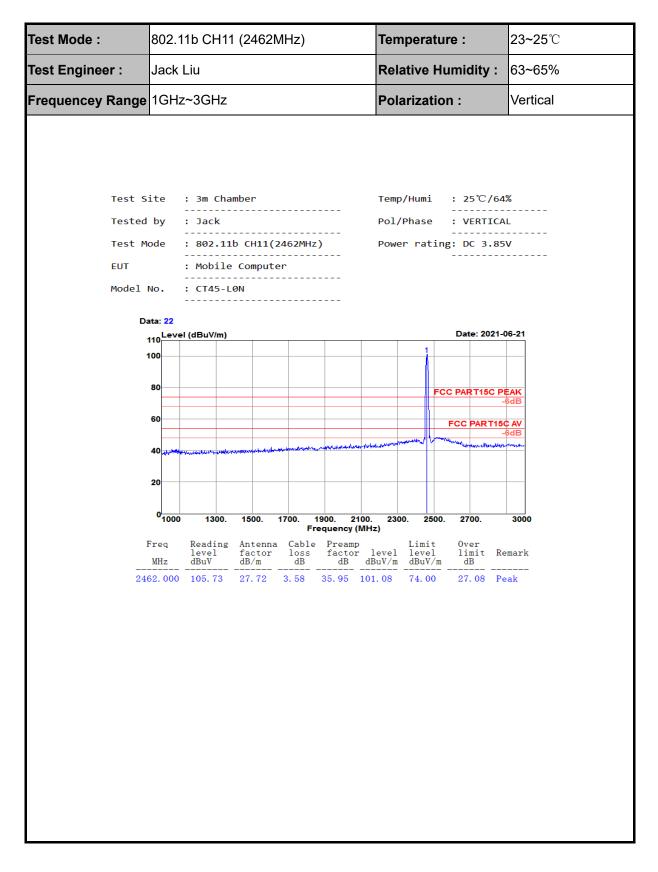
least 20dB below the specification limit.

BV 7Layers Communications Technology (Shenzhen) Co. Ltd

No.B102, Dazu Chuangxin Mansion, North of Beihuan Avenue, North Area, Hi-Tech Industrial Park, Nanshan District, Shenzhen, Guangdong, China

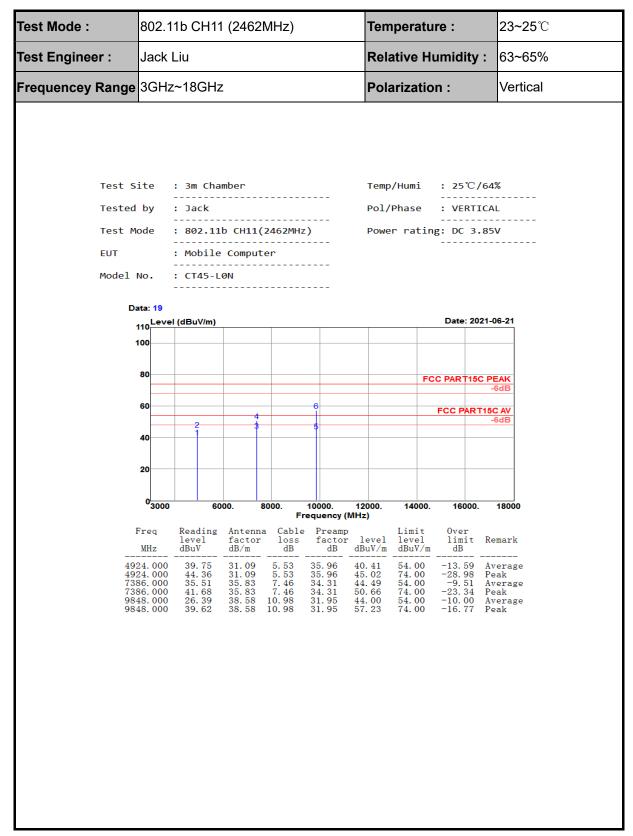
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Tel: +86 755 8869 6566



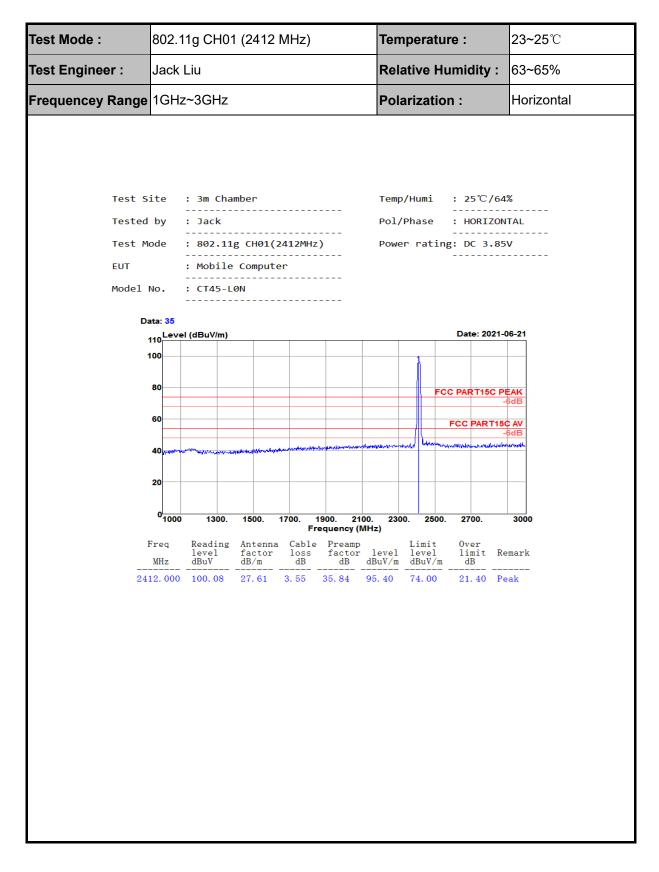


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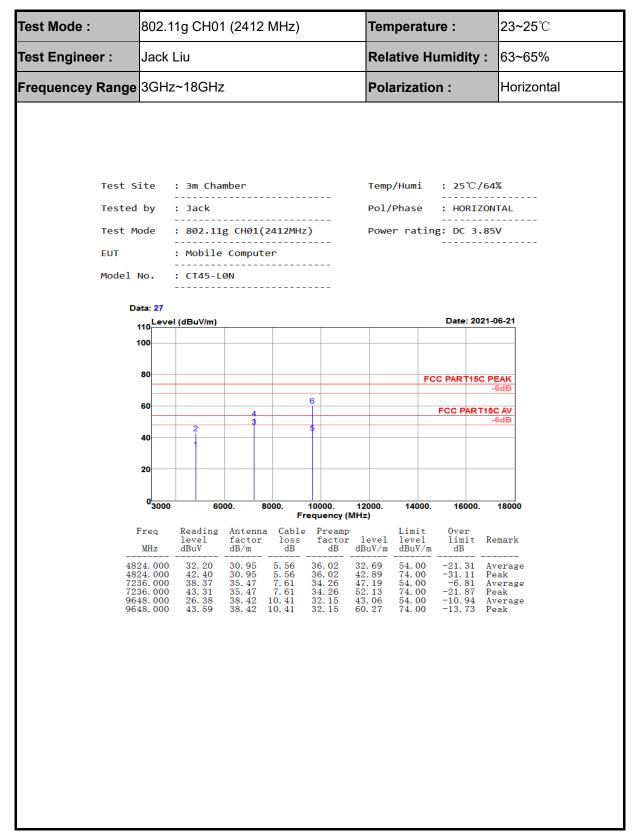
BV 7Layers Communications Technology (Shenzhen) Co. Ltd

No.B102, Dazu Chuangxin Mansion, North of Beihuan Avenue, North Area, Hi-Tech Industrial Park, Nanshan District, Shenzhen, Guangdong, China







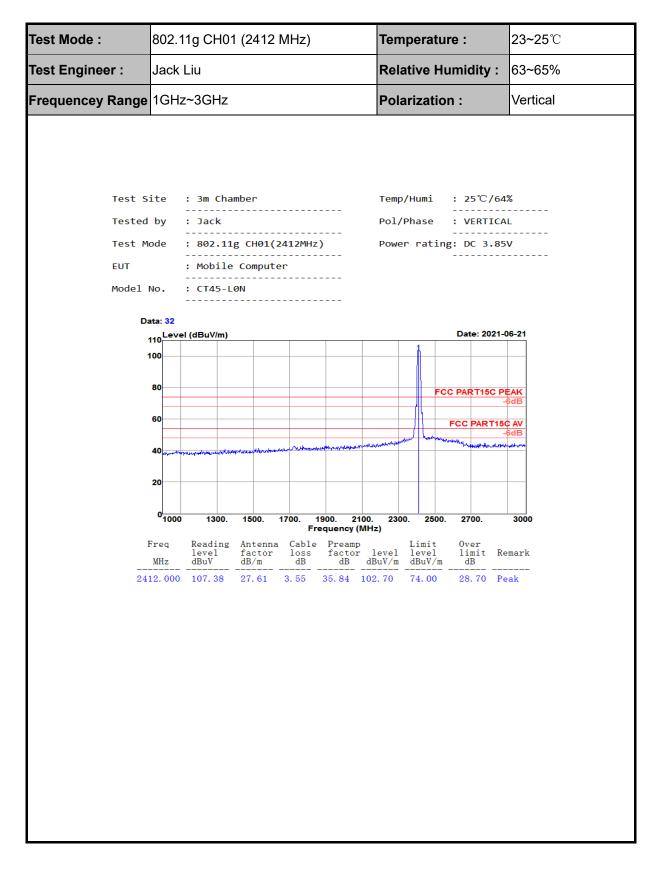


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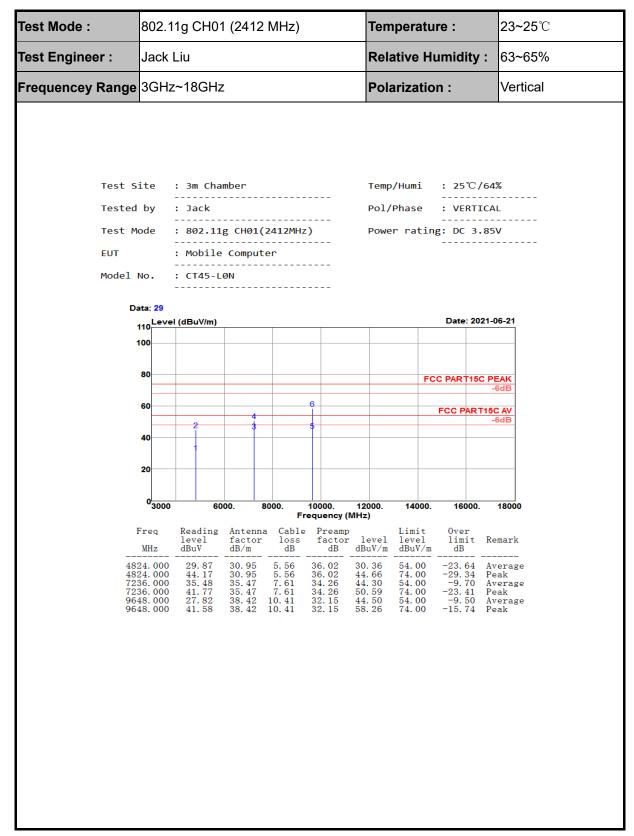
BV 7Layers Communications Technology (Shenzhen) Co. Ltd

No.B102, Dazu Chuangxin Mansion, North of Beihuan Avenue, North Area, Hi-Tech Industrial Park, Nanshan District, Shenzhen, Guangdong, China







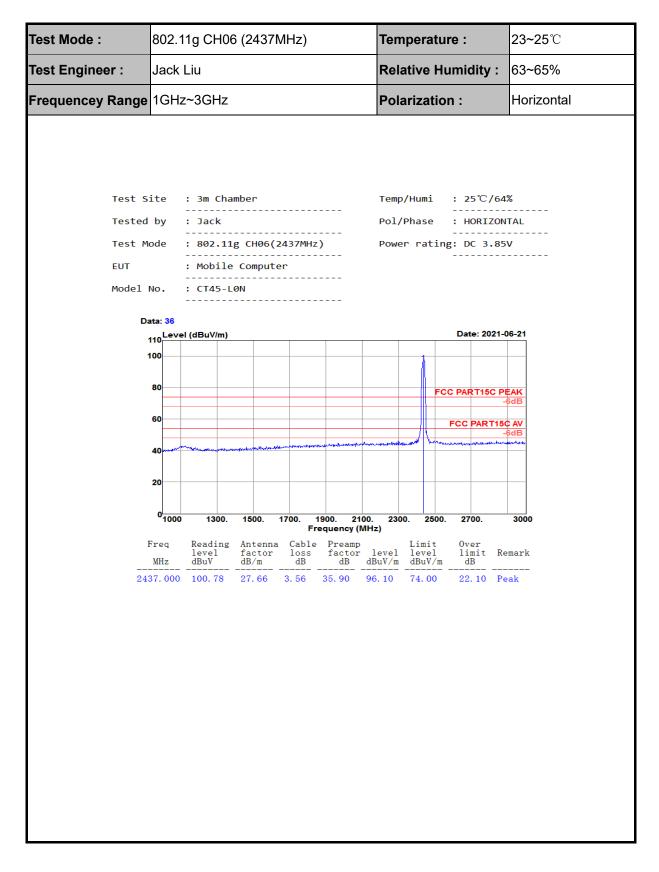


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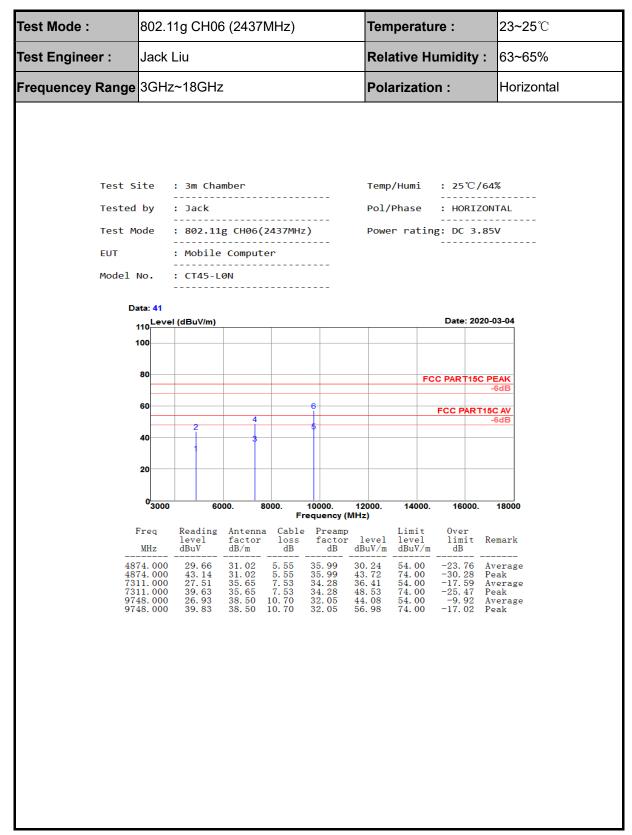
BV 7Layers Communications Technology (Shenzhen) Co. Ltd

No.B102, Dazu Chuangxin Mansion, North of Beihuan Avenue, North Area, Hi-Tech Industrial Park, Nanshan District, Shenzhen, Guangdong, China







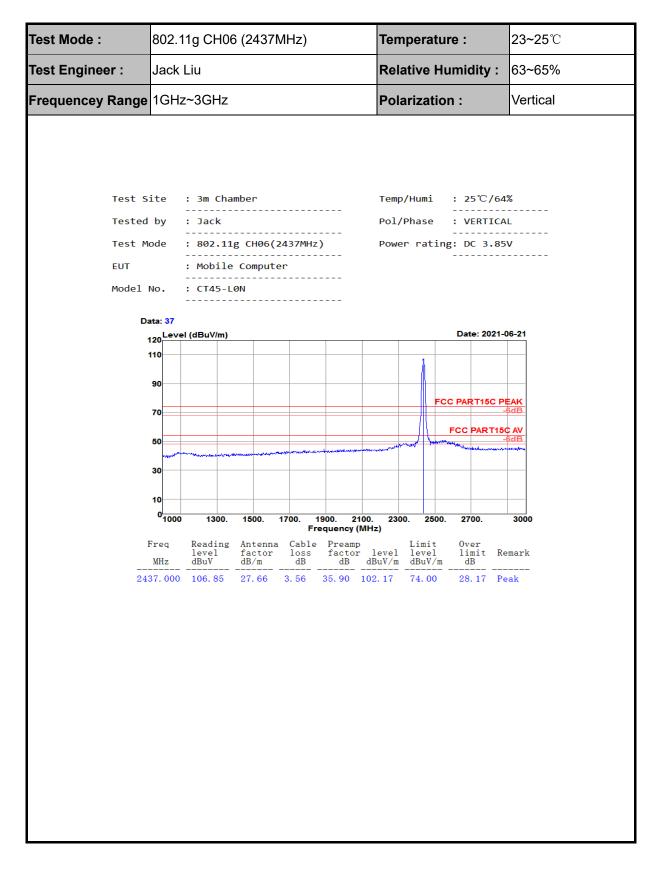


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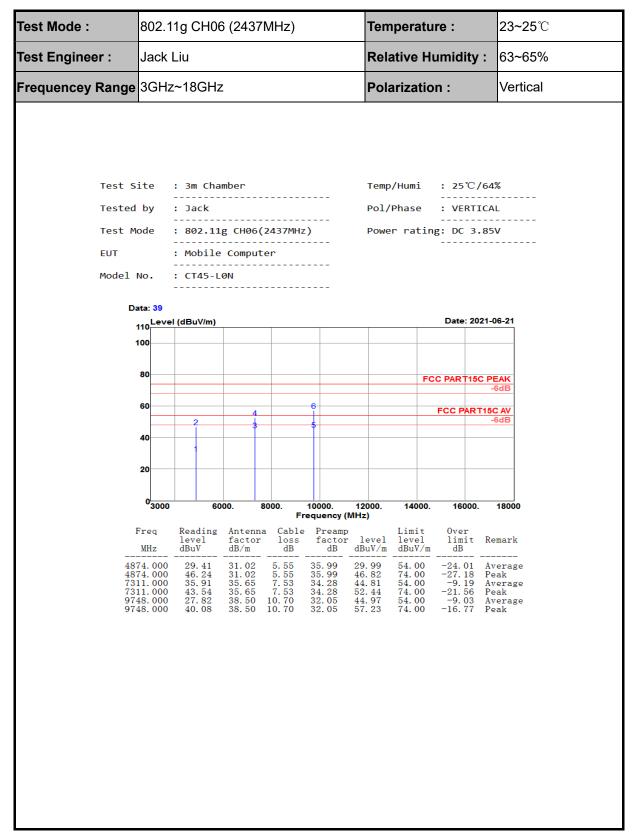
BV 7Layers Communications Technology (Shenzhen) Co. Ltd

No.B102, Dazu Chuangxin Mansion, North of Beihuan Avenue, North Area, Hi-Tech Industrial Park, Nanshan District, Shenzhen, Guangdong, China







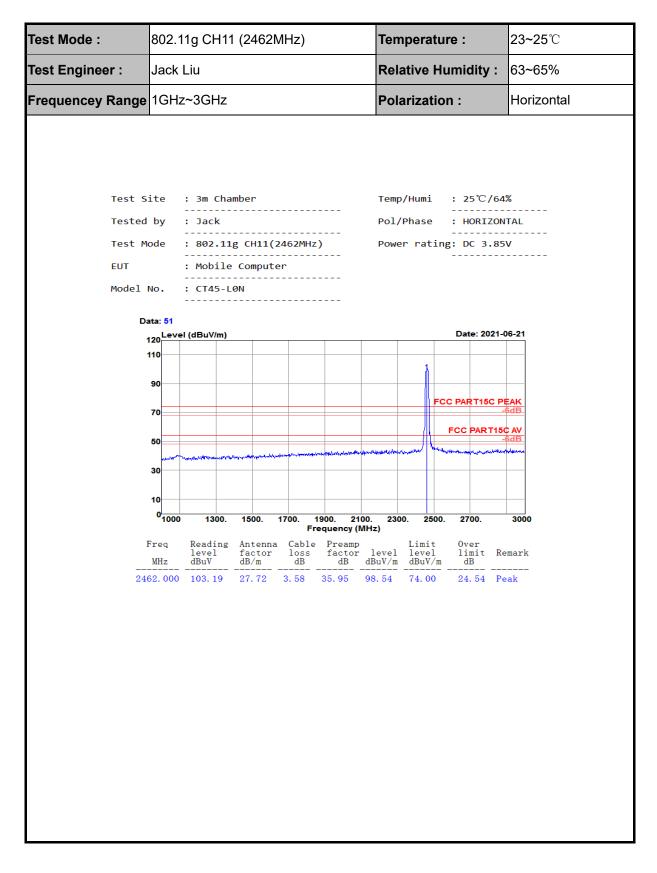


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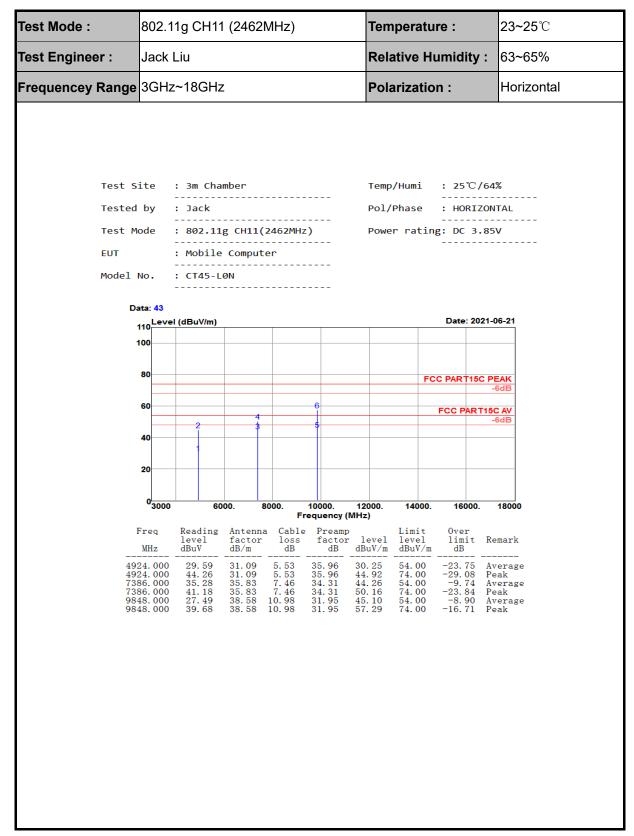
BV 7Layers Communications Technology (Shenzhen) Co. Ltd

No.B102, Dazu Chuangxin Mansion, North of Beihuan Avenue, North Area, Hi-Tech Industrial Park, Nanshan District, Shenzhen, Guangdong, China







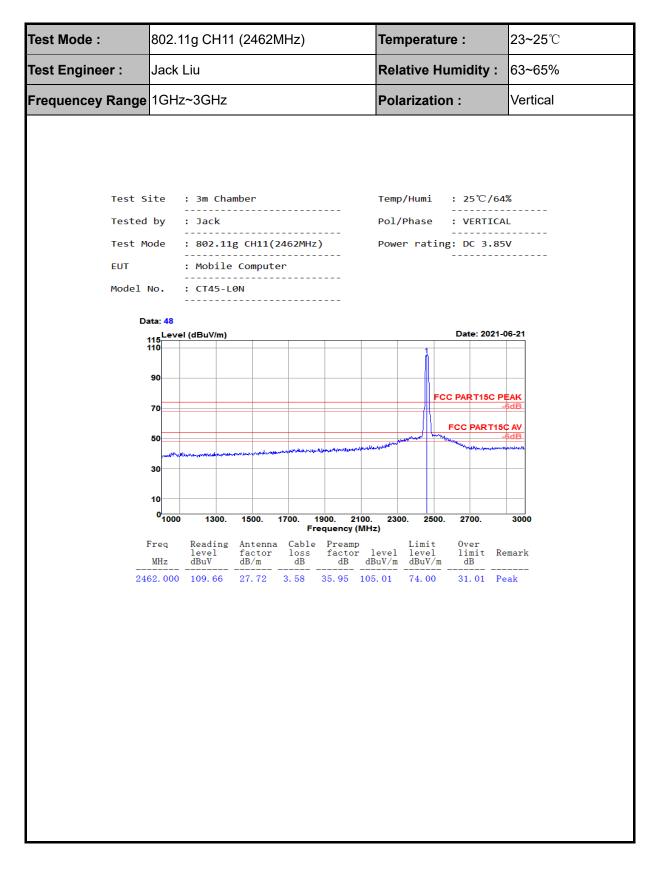


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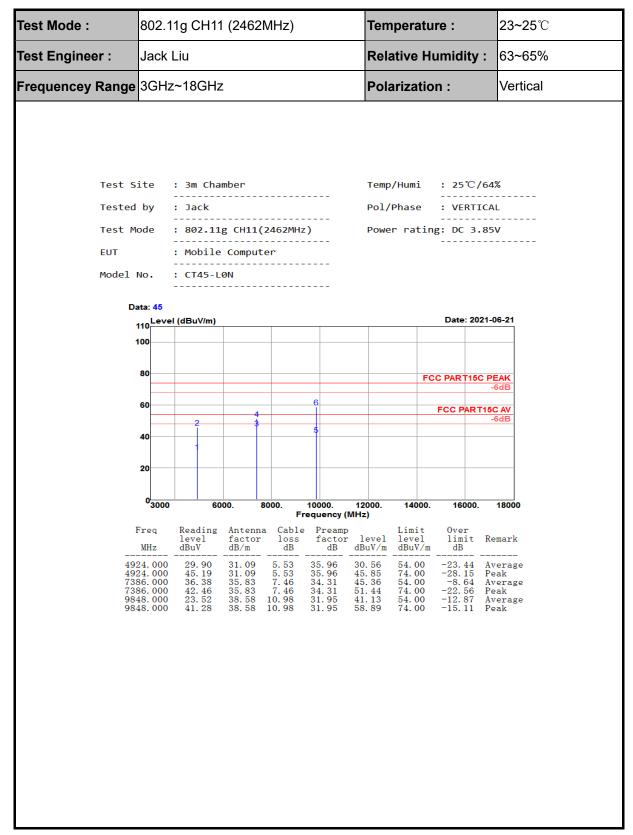
BV 7Layers Communications Technology (Shenzhen) Co. Ltd

No.B102, Dazu Chuangxin Mansion, North of Beihuan Avenue, North Area, Hi-Tech Industrial Park, Nanshan District, Shenzhen, Guangdong, China







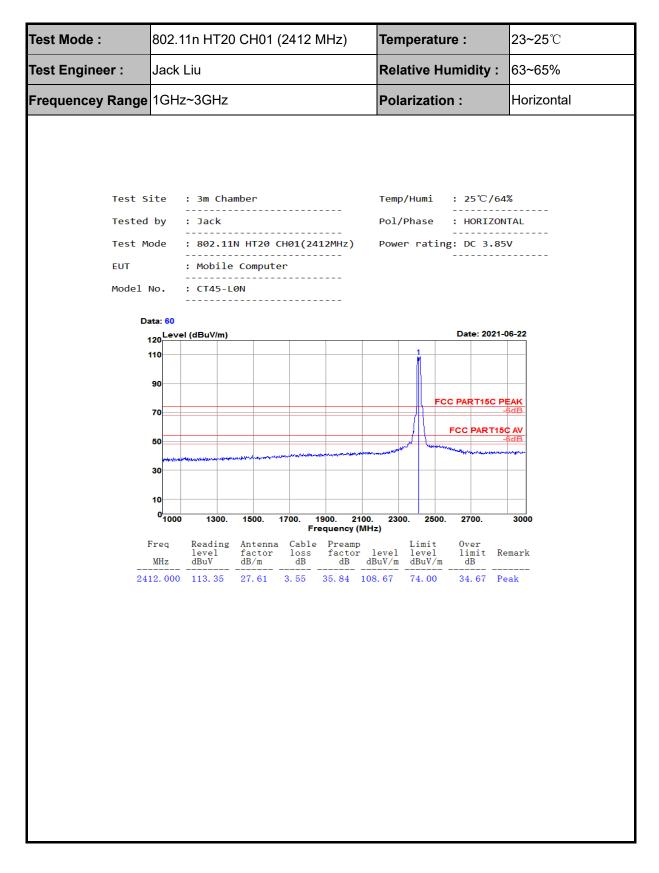


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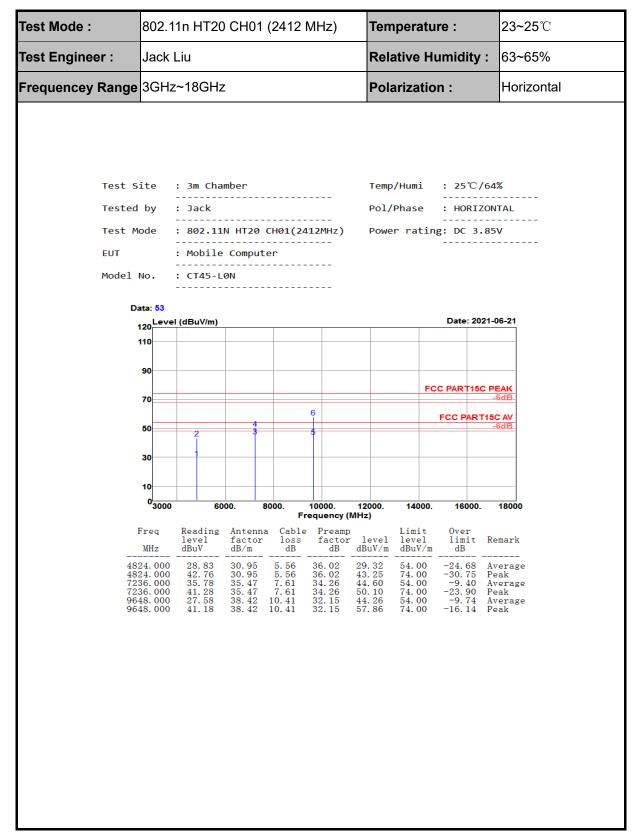
BV 7Layers Communications Technology (Shenzhen) Co. Ltd

No.B102, Dazu Chuangxin Mansion, North of Beihuan Avenue, North Area, Hi-Tech Industrial Park, Nanshan District, Shenzhen, Guangdong, China







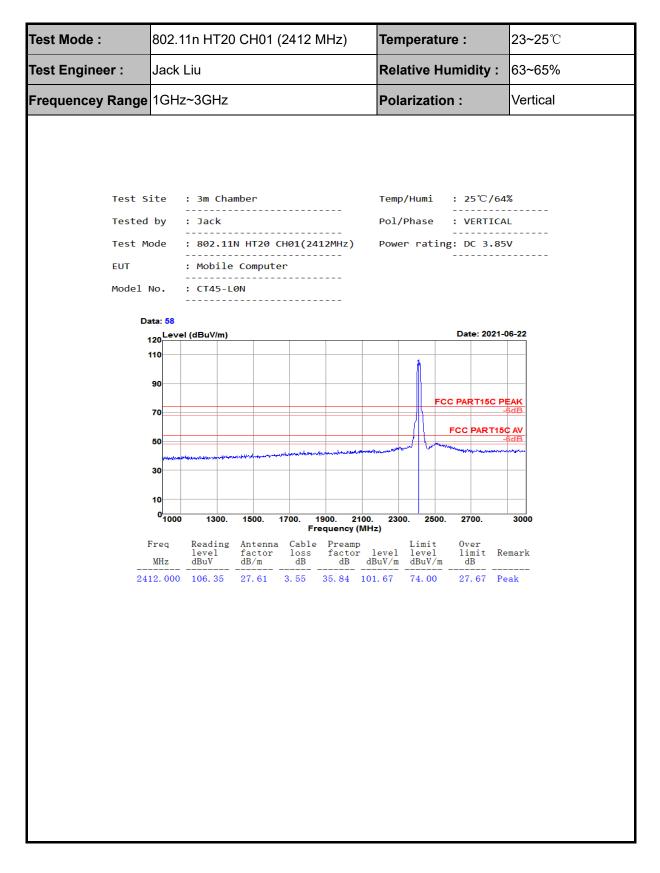


least 20dB below the specification limit.

BV 7Layers Communications Technology (Shenzhen) Co. Ltd

No.B102, Dazu Chuangxin Mansion, North of Beihuan Avenue, North Area, Hi-Tech Industrial Park, Nanshan District, Shenzhen, Guangdong, China







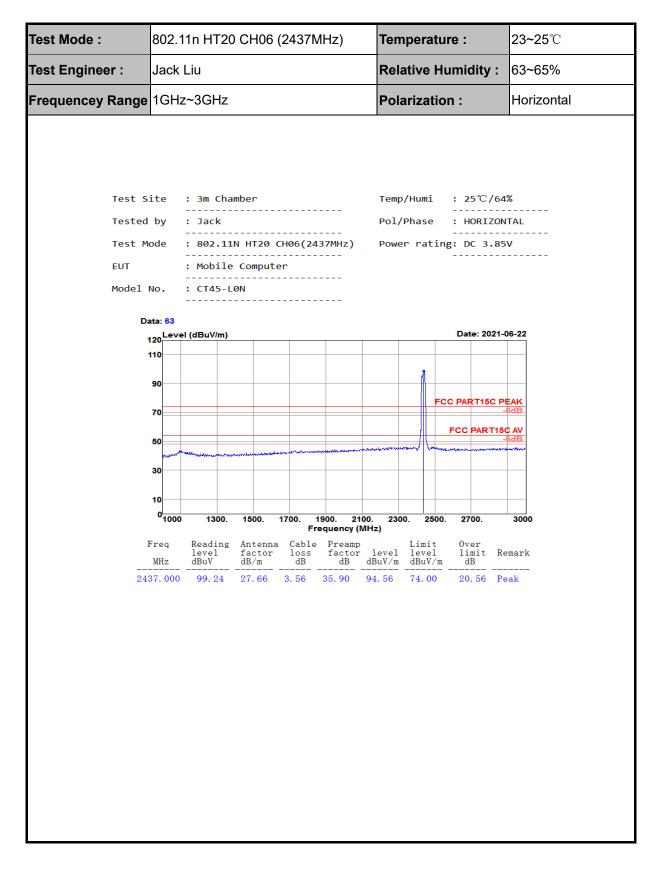
Test Mode :	802.11n HT20 CH01 (2412 MHz)				Tem	Temperature :			<b>23~25</b> ℃	
Test Engineer :	Jack I	_iu				Rela	Relative Humidity :			63~65%
Frequencey Range	3GHz	~18GHz				Pola	rizatio	on :	Ň	/ertical
Test Si Tested Test Mo EUT	by ode	: Jack	N HT20 (	CH01(241	 2MHz)	Pol/	/Humi Phase r ratin	: VER	C/64% TICAL 3.85V	
Model M		: CT45-L								
1	ta: 55 20 Level 10 90 70 50	(dBuV/m)	4				FC	Date:	-60	uK IB.
	30									
-	0 <u>3000</u> Treq	60 Reading			quency (M	12000. Hz)	<b>14000.</b> Limit	<b>1600</b> Over		8000
	MHz 4. 000 6. 000 6. 000 8. 000	level dBuV 29.53 41.44 35.73 42.56 27.71 42.93	factor dB/m 30.95 30.95 35.47 35.47 38.42	loss dB 	factor dB 36.02 36.02 34.26 34.26 32.15	level dBuV/m  30.02 41.93 44.55 51.38 44.39 59.61	level dBuV/m 54.00 74.00 54.00 74.00 54.00 54.00	-23.90 -23.00 -32.00 -9.40 -22.60	t Rem 8 Ave: 7 Peal 5 Ave: 2 Peal 1 Ave:	 rage k rage k rage

least 20dB below the specification limit.

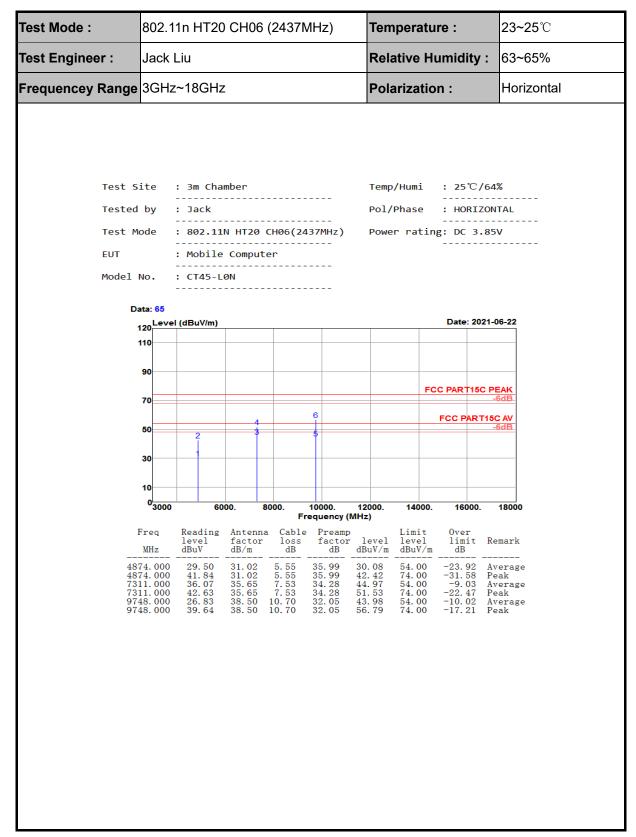
BV 7Layers Communications Technology (Shenzhen) Co. Ltd

No.B102, Dazu Chuangxin Mansion, North of Beihuan Avenue, North Area, Hi-Tech Industrial Park, Nanshan District, Shenzhen, Guangdong, China







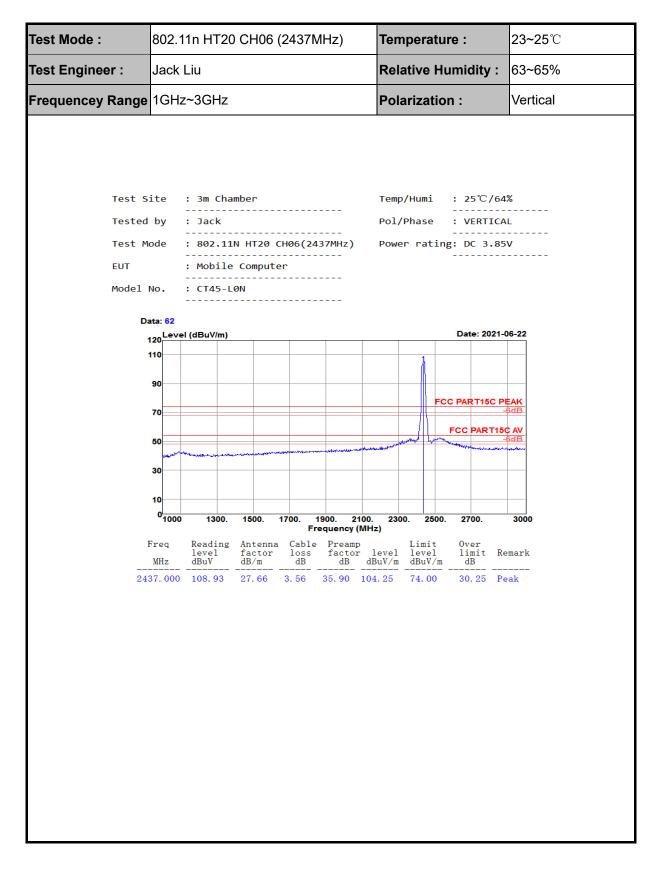


least 20dB below the specification limit.

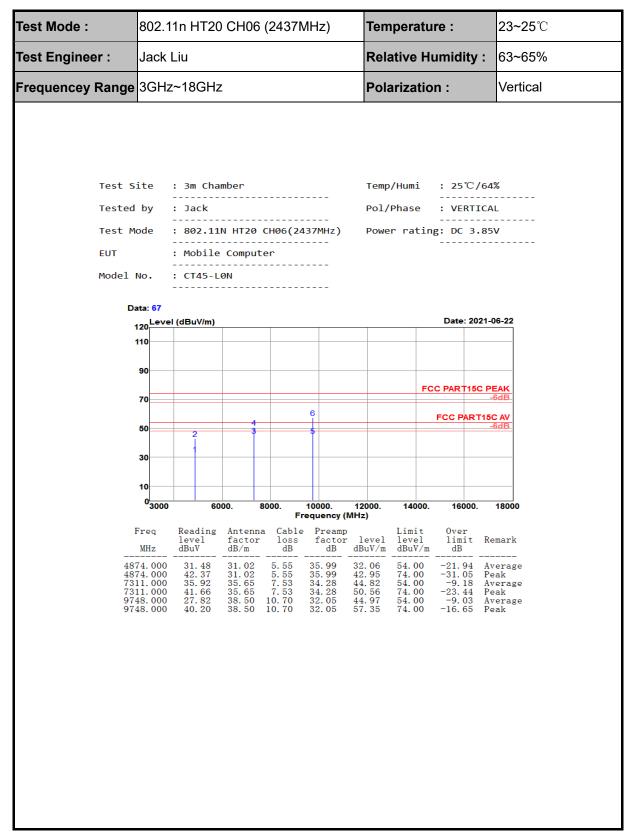
BV 7Layers Communications Technology (Shenzhen) Co. Ltd

No.B102, Dazu Chuangxin Mansion, North of Beihuan Avenue, North Area, Hi-Tech Industrial Park, Nanshan District, Shenzhen, Guangdong, China







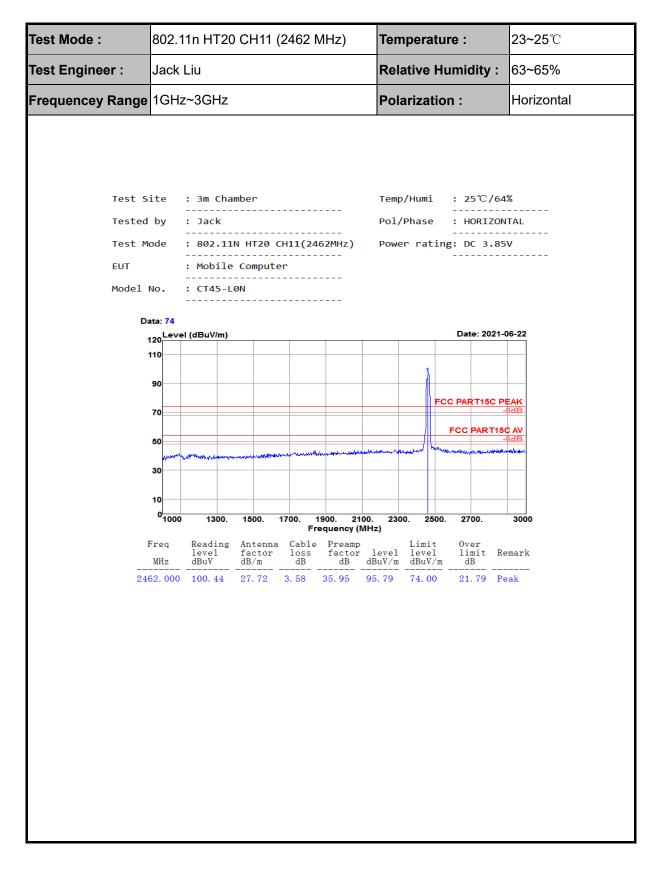


least 20dB below the specification limit.

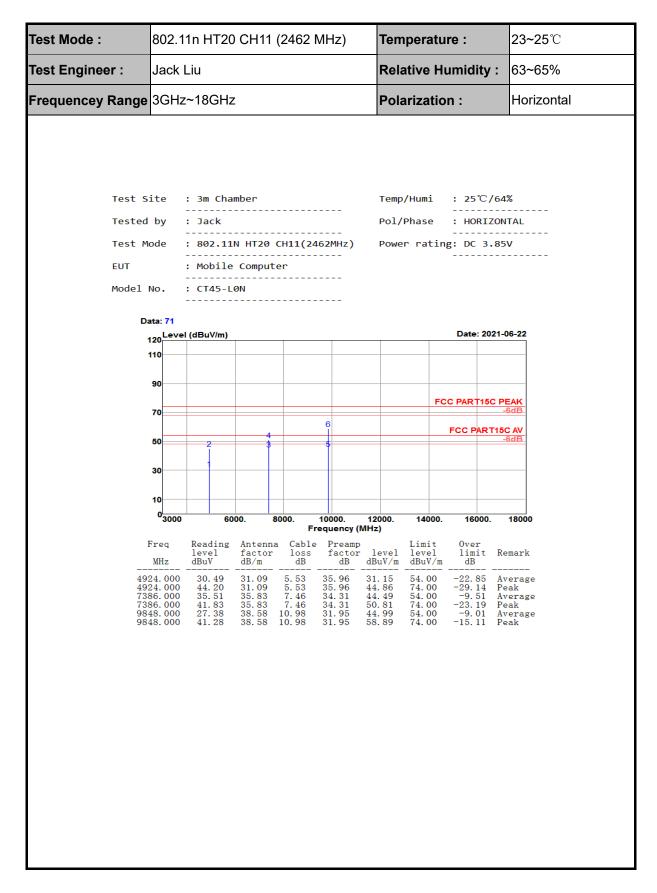
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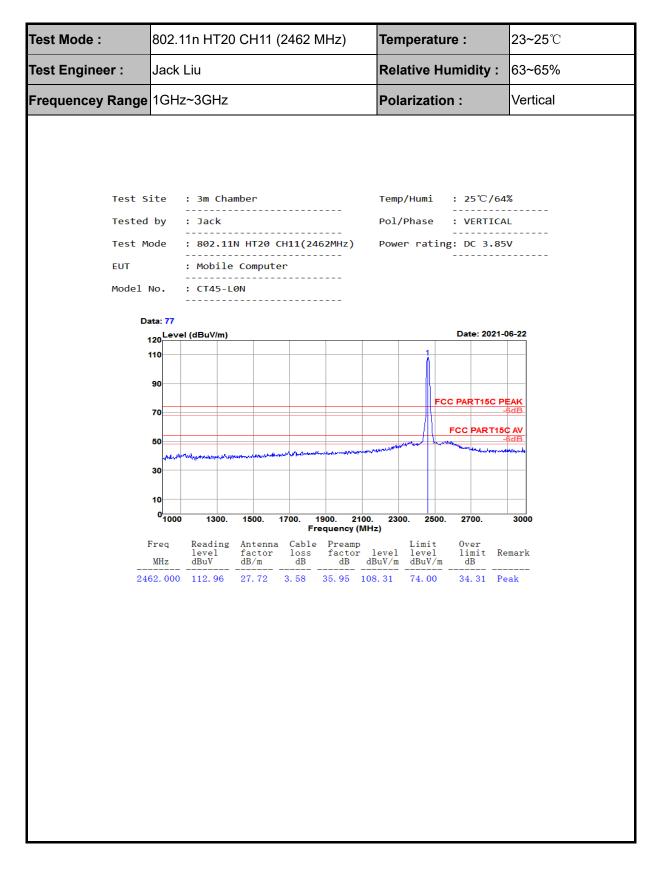




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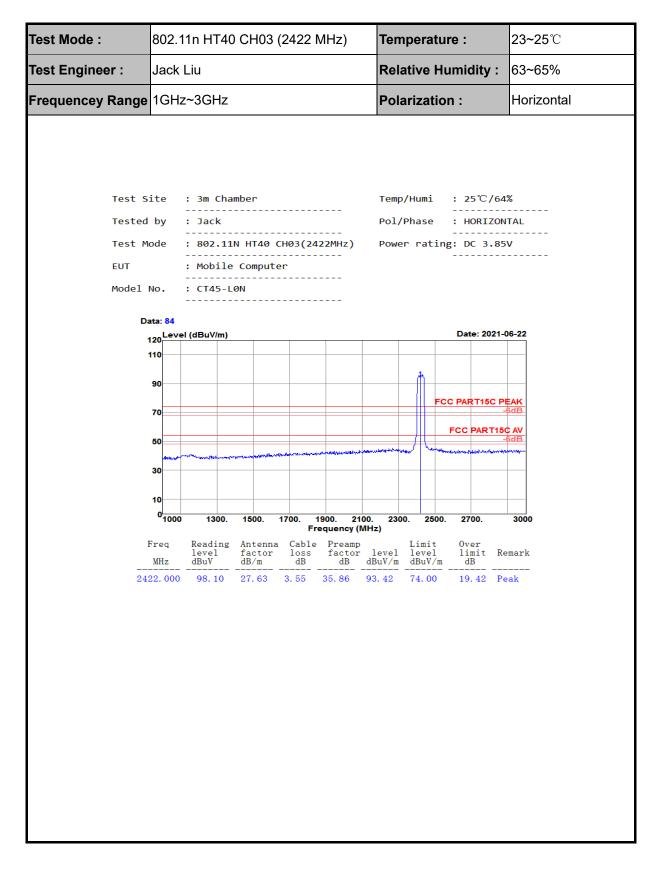
requencey Range       3GHz~18GHz       Polarization :       Vertic         Test Site : 3m Chamber       Temp/Humi : 25°C/64%         Tested by : Jack       Pol/Phase : VERTICAL         Tested by : Jack       Pol/Phase : VERTICAL         Test Mode : 802.11N HT20 CH11(2462PHz)       Power rating: DC 3.85V         EUT : Mobile Computer         Model No. : CT45-L0N       Date: 2021-06-22         10000       Fcc PARTISC PEAK         AddB         Freq Reading Antenna Cable Prequency (MHz)         Freq Reading Antenna Cable Prequency (MHz)         Model Ab/m       db/m         Miz db/m       db/m         Miz db/m       Class Store         Terg       Reading Antenna Cable Prequency (MHz)         Freq Reading Antenna Cable Prequency (MHz)         Miz db/m       db/m         Miz db/m       Class Store         Miz db/m       Class Store         Miz db/m       Class Store         Miz db/m	Test Mode :	802.1	1n HT20	) CH11	(2462	MHz)	Те	emper	atu	re :		23~2	<b>5℃</b>
Test Site       : 3m Chamber       Temp/Humi       : 25°C/64%         Tested by       : Jack       Pol/Phase       : VERTICAL         Test Mode       : 802.11N HT20 CH11(2462Mt2)       Power rating: DC 3.85V         EUT       : Mobile Computer	est Engineer :	Jack I	Jack Liu			R	Relative Humidity :			63~6	63~65%		
Tested by : Jack Pol/Phase : VERTICAL Test Mode : 802.11N HT20 CH11(2462MHz) Power rating: DC 3.85V EUT : Mobile Computer Model No. : CT45-L0N Date: 69 100 100 100 100 100 100 100 10	requencey Rang	e 3GHz	~18GHz	2			P	olariza	atio	n :		Verti	cal
50         2         -6dB           30         -6dB         -6dB           30         -6dB         -6dB           30         -6dB         -6dB           30         -6000.         8000.         10000.         12000.           0	Teste Test EUT Model	ed by Mode No. Data: 69 120 Level 110 90	: Jack : 802.11 : Mobile : CT45-L	N HT20 Comput	CH11(24 er	162MHz )	Ро	1/Phas	se atin	: VEI	RTIC. 3.8 	 5V 	
50         2         -6dB           30         -6000.         -6000.         -6000.           10         -6000.         -6000.         -6000.           10         -6000.         -6000.         -6000.           10         -6000.         -6000.         -6000.           10         -6000.         -6000.         -6000.           10         -6000.         -6000.         -6000.           10         -6000.         -6000.         -6000.           10         -6000.         -6000.         -6000.           10         -6000.         -6000.         -6000.           10         -6000.         -6000.         -6000.           10         -6000.         -6000.         -6000.           10         -6000.         -6000.         -6000.           10         -6000.         -6000.         -6000.           10000.         -6000.         -6000.         -6000.           10         -6000.         -6000.         -6000.         -6000.           10         -6000.         -6000.         -6000.         -6000.         -6000.           10         -6000.         -6000.         -6000. <td< td=""><td></td><td></td><td></td><td></td><td></td><td>6</td><td></td><td></td><td>FC</td><td></td><td></td><td>-6dB</td><td></td></td<>						6			FC			-6dB	
No.         6000.         8000.         10000.         12000.         14000.         16000.         18000.           Frequency (MHz)         Frequency (MHz)         Imit         Over         Imit         Over         Imit         Over           MHz         dBuV         dB/m         dB         dBuV/m         dBuV/m         dB         dBuV/m         dB           4924.000         31.87         31.09         5.53         35.96         32.53         54.00         -21.47         Average           4924.000         45.14         31.09         5.53         35.96         32.53         54.00         -28.20         Peak           7386.000         35.77         35.83         7.46         34.31         44.75         54.00         -9.25         Average			2	3		5				FCC P	AR 11		
Frequency (MHz)           Freq         Reading level         Antenna factor         Cable loss         Preamp factor         Limit         Over level           MHz         dBv         dB/m         dB         dB         dBuV/m         dBuV/m         dBuV/m         dB           4924.000         31.87         31.09         5.53         35.96         32.53         54.00         -21.47         Average           4924.000         45.14         31.09         5.53         35.96         45.80         74.00         -28.20         Peak           7386.000         35.77         35.83         7.46         34.31         44.75         54.00         -9.25         Average		10											
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4924.000 45.14 31.09 5.53 35.96 45.80 74.00 -28.20 Peak 7386.000 35.77 35.83 7.46 34.31 44.75 54.00 -9.25 Average	-		level	factor	loss dB	facto dB	r leve	el lev	rel	limi		lemark	
7386.000 41.89 35.83 7.46 34.31 50.87 74.00 -23.13 Peak 9848.000 25.94 38.58 10.98 31.95 43.55 54.00 -10.45 Average 9848.000 41.82 38.58 10.98 31.95 59.43 74.00 -14.57 Peak	4 7 7 9	924.000 7386.000 7386.000 9848.000	45.14 35.77 41.89 25.94	31.09 35.83 35.83 38.58	5.53 7.46 7.46 10.98	35.96 34.31 34.31 31.95	45.80 44.75 50.87 43.55	) 74. 5 54. 7 74. 5 54.	00 00 00 00	-28.2 -9.2 -23.1 -10.4	20 P 25 A 13 P 45 A	Peak Average Peak Average	

least 20dB below the specification limit.

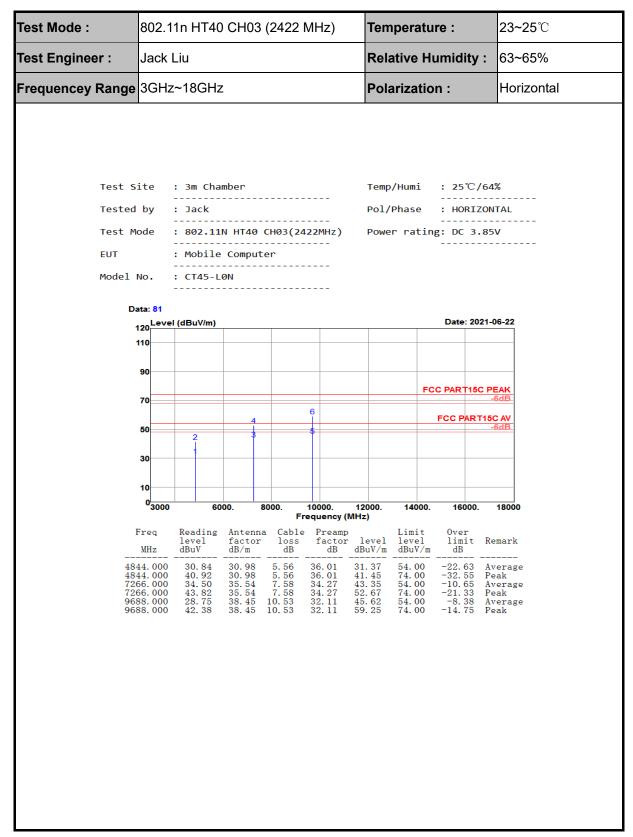
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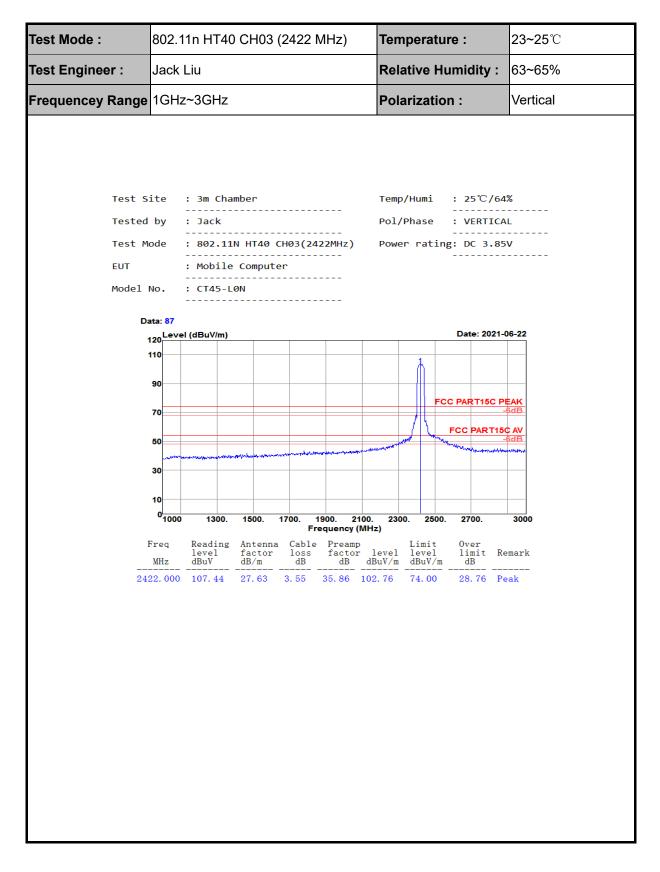


least 20dB below the specification limit.

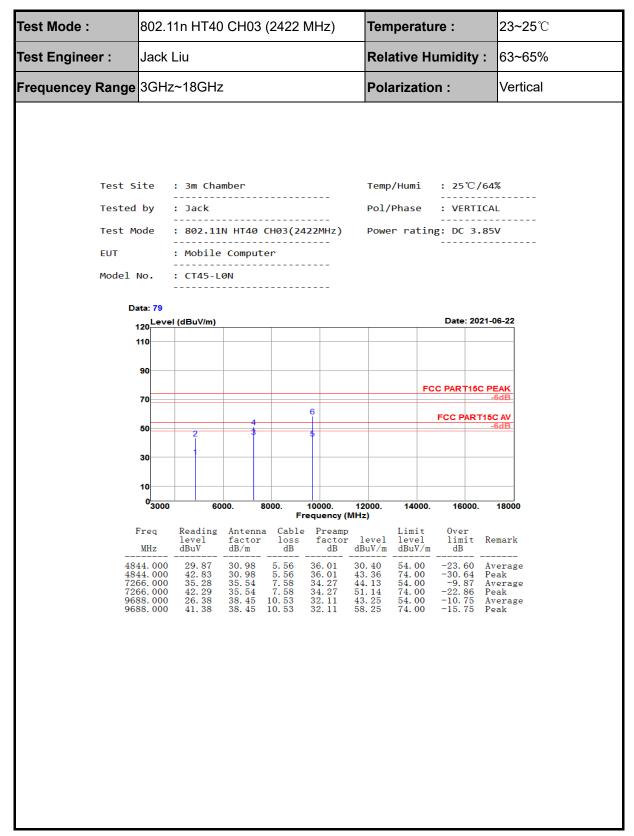
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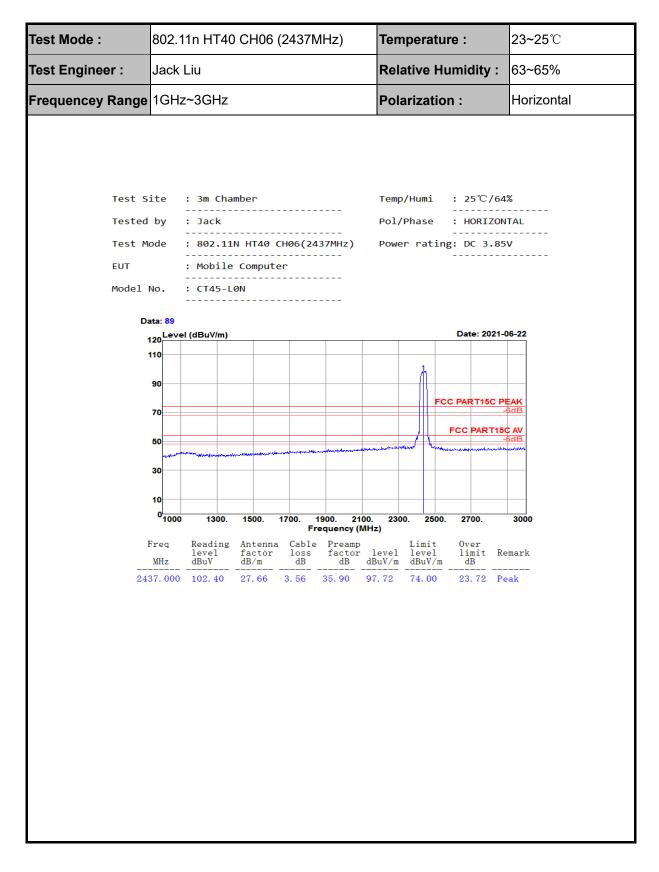


least 20dB below the specification limit.

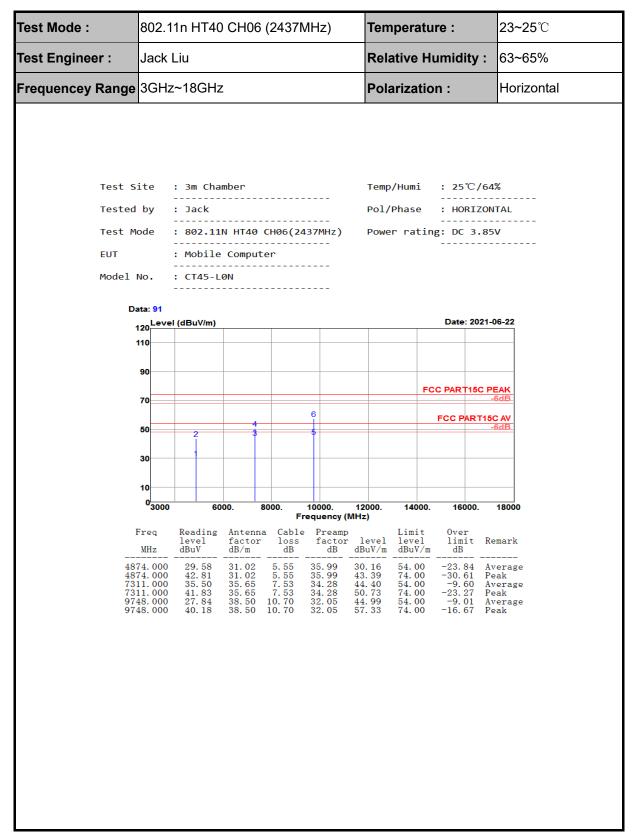
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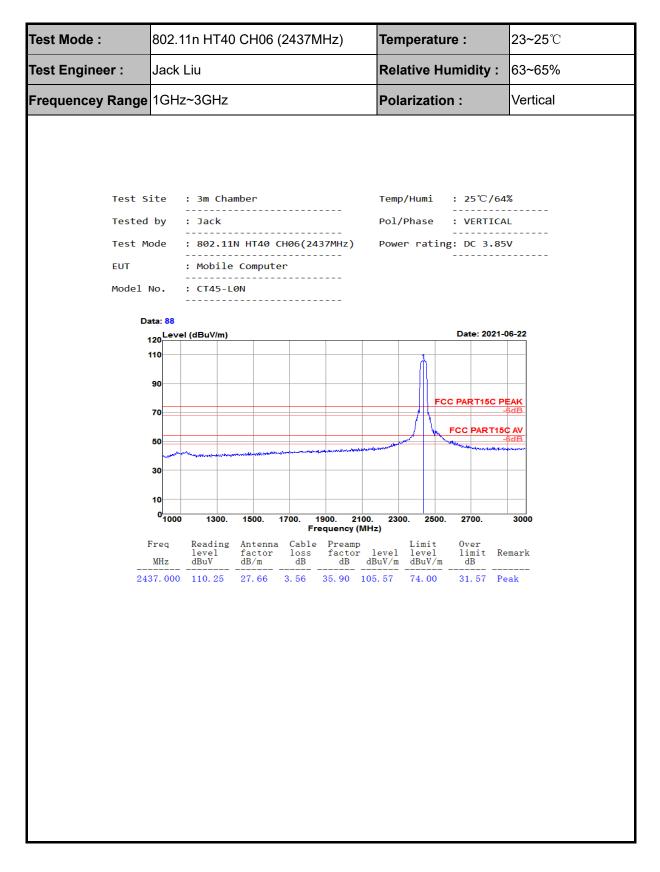


least 20dB below the specification limit.

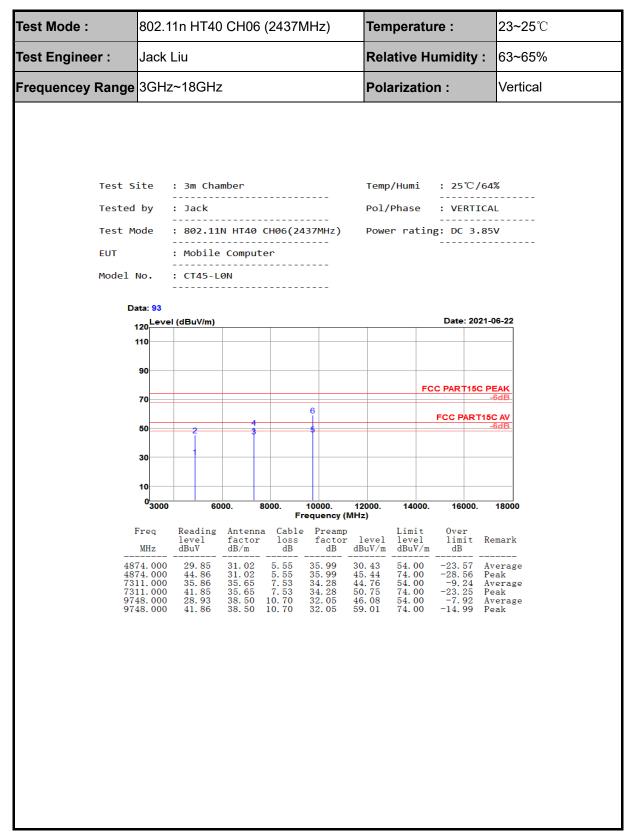
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No.B102, Dazu Chuangxin Mansion, North of Beihuan Avenue, North Area, Hi-Tech Industrial Park, Nanshan District, Shenzhen, Guangdong, China







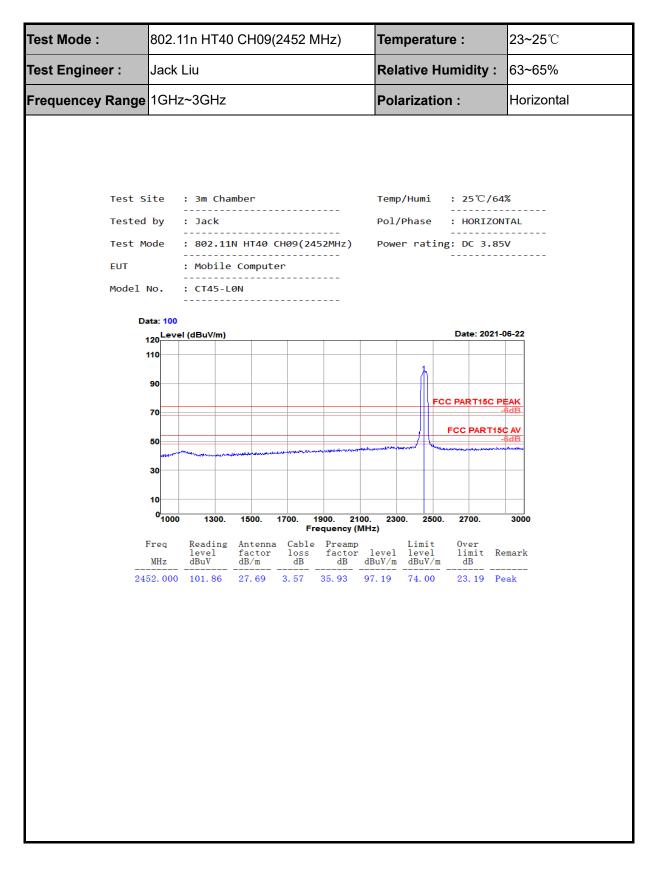


least 20dB below the specification limit.

BV 7Layers Communications Technology (Shenzhen) Co. Ltd

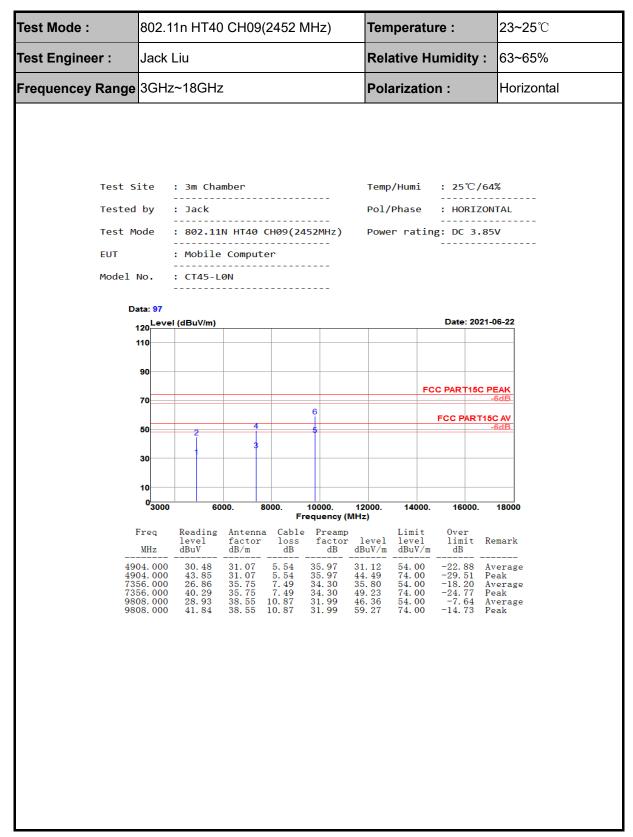
No.B102, Dazu Chuangxin Mansion, North of Beihuan Avenue, North Area, Hi-Tech Industrial Park, Nanshan District, Shenzhen, Guangdong, China





Tel: +86 755 8869 6566



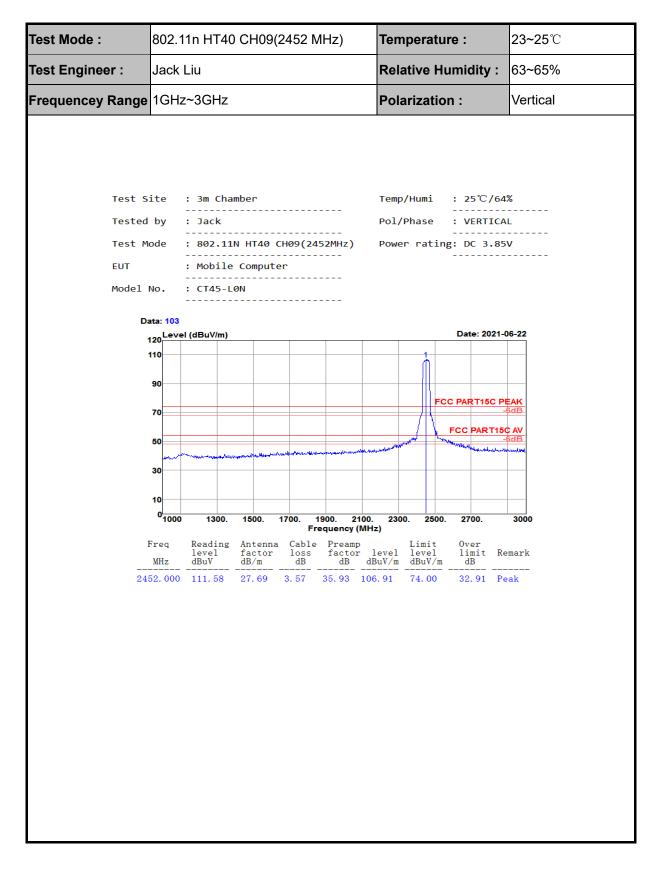


least 20dB below the specification limit.

BV 7Layers Communications Technology (Shenzhen) Co. Ltd

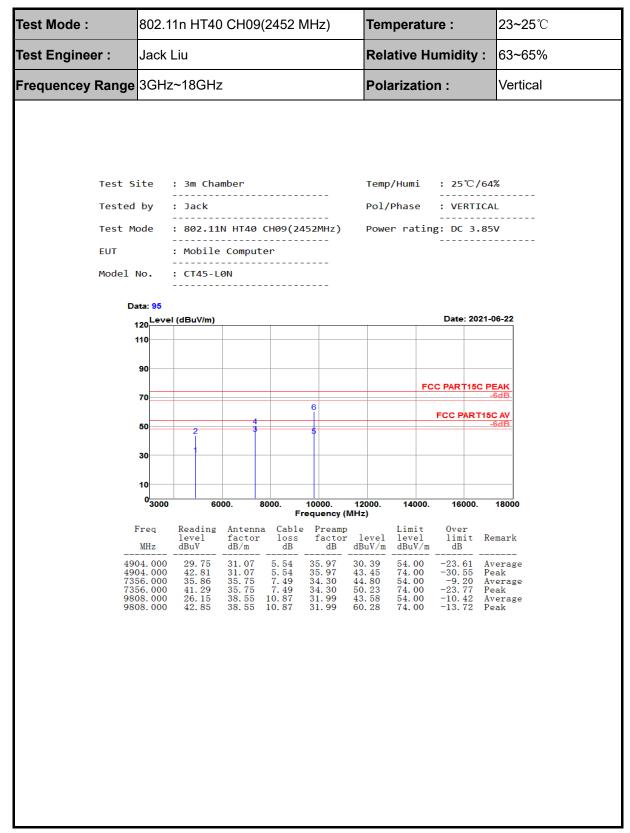
No.B102, Dazu Chuangxin Mansion, North of Beihuan Avenue, North Area, Hi-Tech Industrial Park, Nanshan District, Shenzhen, Guangdong, China





Tel: +86 755 8869 6566





least 20dB below the specification limit.

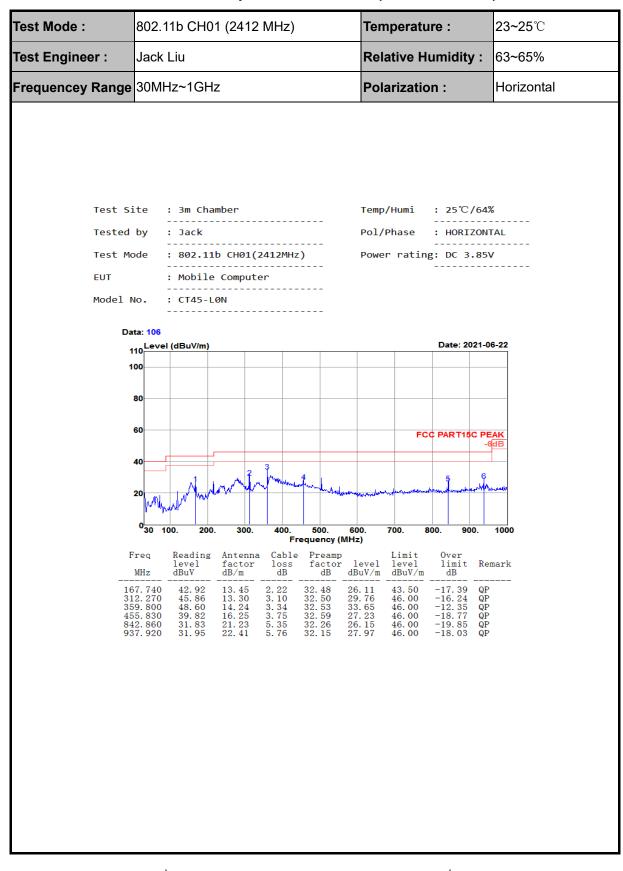
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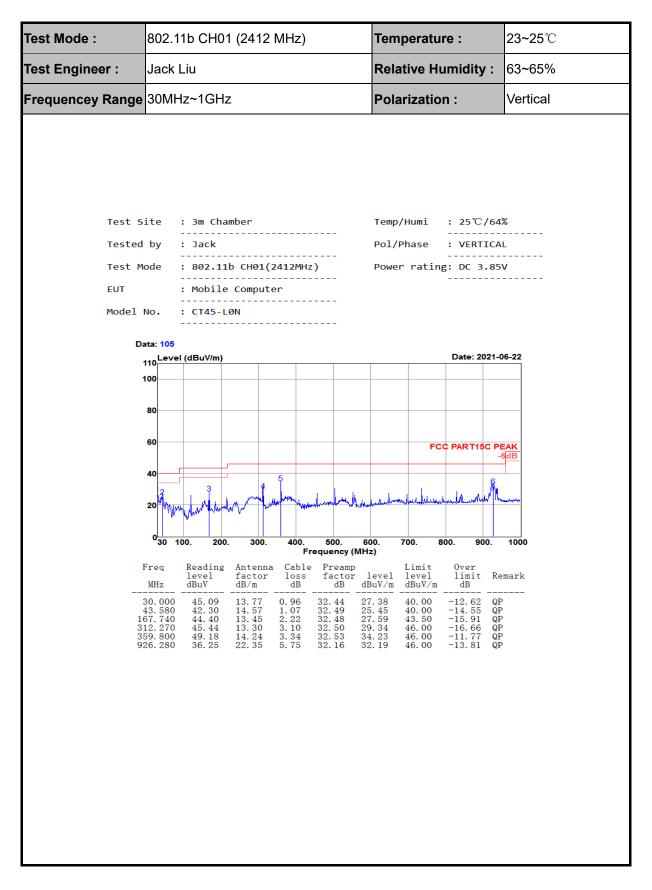
## 3.5.2 Test Result of Radiated Spurious Emission (30MHz ~ 1GHz)



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## 3.6 AC Conducted Emission Measurement

### 3.6.1 Limit of AC Conducted Emission

FCC §15.207

IC RSS-GEN 8.8

For equipment that is designed to be connected to the public utility (AC) power line, the radio frequency voltage that is conducted back onto the AC power line on any frequency or frequencies within the band 150 kHz to 30 MHz shall not exceed the limits in the following table.

Frequency of emission (MHz)	Conducted limit (dBµV)				
Frequency of emission (MHZ)	Quasi-peak	Average			
0.15-0.5	66 to 56*	56 to 46*			
0.5-5	56	46			
5-30	60	50			

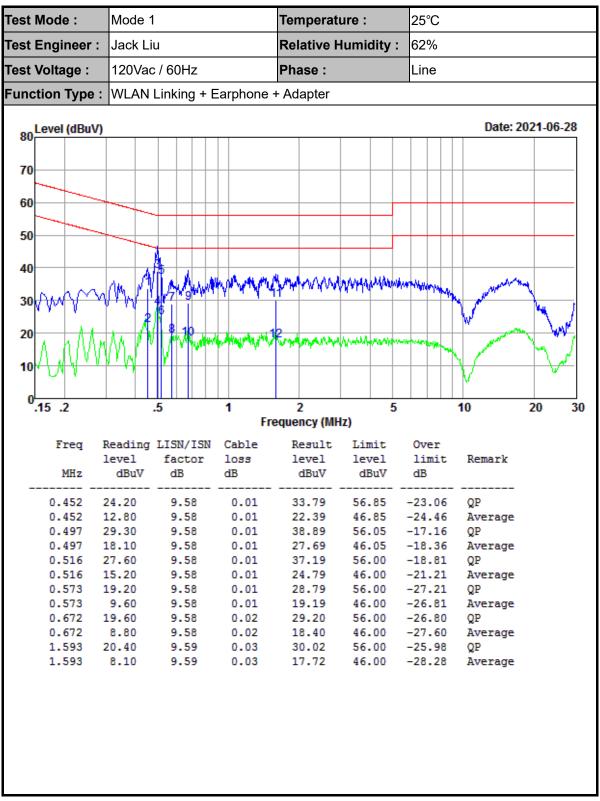
\*Decreases with the logarithm of the frequency.

### 3.6.2 Test Procedures

- 1. The EUT was placed 0.4 meter from the conducting wall of the shielding room was kept at least 80 centimeters from any other grounded conducting surface.
- 2. Connect EUT to the power mains through a line impedance stabilization network (LISN).
- 3. All the support units are connecting to the other LISN.
- 4. The LISN provides 50 ohm coupling impedance for the measuring instrument.
- 5. The FCC states that a 50 ohm, 50 microhenry LISN should be used.
- 6. Both sides of AC line were checked for maximum conducted interference.
- 7. The frequency range from 150 kHz to 30 MHz was searched.
- Set the test-receiver system to Peak Detect Function and specified bandwidth (IF Bandwidth = 9kHz) with Maximum Hold Mode. Then measurement is also conducted by Average Detector and Quasi-Peak Detector Function respectively.



## 3.6.3 Test Result of AC Conducted Emission

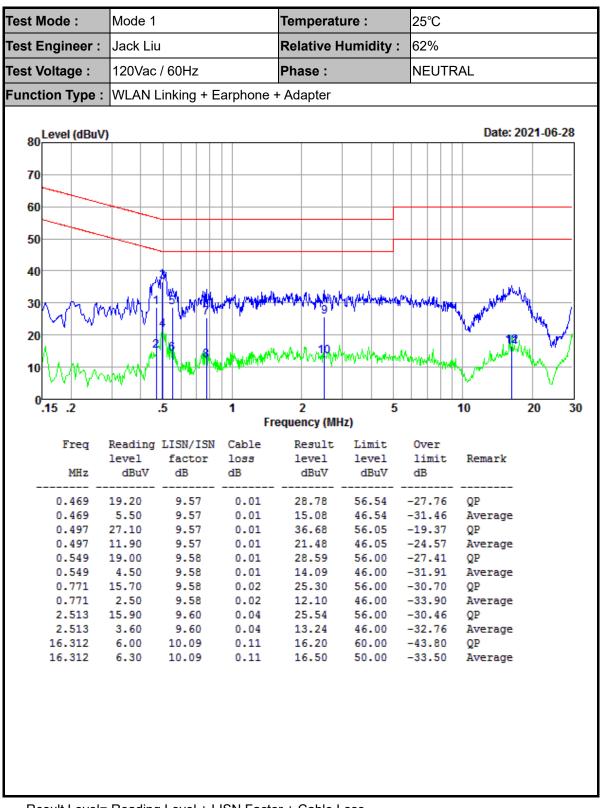


Result Level= Reading Level + LISN Factor + Cable Loss

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Result Level= Reading Level + LISN Factor + Cable Loss



## 3.7 Antenna Requirements

### 3.7.1 Standard Applicable

According to antenna requirement of §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. The use of a permanently attached antenna or of an antenna that uses a unique coupling to the intentional radiator shall be considered sufficient to comply with the provisions of this Section. The manufacturer may design the unit so that a broken antenna can be re-placed by the user, but the use of a standard antenna jack or electrical connector is prohibited. This requirement does not apply to carrier current devices or to devices operated under the provisions of Sections 15.211, 15.213, 15.217, 15.219, or 15.221. Further, this requirement does not apply to intentional radiators that must be professionally installed, such as perimeter protection systems and some field disturbance sensors, or to other intentional radiators which, in accordance with Section 15.31(d), must be measured at the installation site. However, the installer shall be responsible for ensuring that the proper antenna is employed so that the limits in this Part are not exceeded..

And according to §15.247(4)(1), system operating in the 2400-2483.5MHz bands that are used exclusively for fixed, point-to-point operations may employ transmitting antennas with directional gain greater than 6dBi provided the maximum peak output power of the intentional radiator is reduced by 1 dB for every 3 dB that the directional gain of the antenna exceeds 6dBi.

## 3.7.2 Antenna Connected Construction

An LDS type Antenna design is used.

### 3.7.3 Antenna Gain

The antenna peak gain of EUT is less than 6 dBi. Therefore, it is not necessary to reduce maximum peak output power limit.



# 4 List of Measuring Equipment

Instrument	Manufacturer	Model No.	Serial No.	Calibration Date	Due Date	Remark
Spectrum Analyzer	Keysight	N9010A	MY56070788	2021-01-05	2022-01-04	Conducted
Power Sensor	Keysight	U2021XA	MY56510025	2021-01-05	2022-01-04	Conducted
Power Sensor	Keysight	U2021XA	MY57030005	2021-01-05	2022-01-04	Conducted
Power Sensor	Keysight	U2021XA	MY56510018	2021-01-05	2022-01-04	Conducted
Power Sensor	Keysight	U2021XA	MY56480002	2021-01-05	2022-01-04	Conducted
Thermal Chamber	Howkin	UHL-34	19111801	2021-04-21	2022-04-20	Conducted
Base Station	R&S	CMW 270	101231	2021-01-05	2022-01-04	Conducted
Signal Generator (Interferer)	Keysight	N5182B	MY56200384	2021-01-05	2022-01-04	Conducted
Signal Generator (Blocker)	Keysight	N5171B	MY56200661	2021-01-05	2022-01-04	Conducted

Instrument	Manufacturer	Model No.	Serial No.	Calibration Date	Due Date	Remark
Spectrum Analyzer	R&S	FSV 40	101433	2021-01-05	2022-01-04	Radiation
Amplifier	Sonoma	310	363917	2021-01-06	2022-01-05	Radiation
Amplifier	Schwarzbeck	BBV 9718	327	2021-01-06	2022-01-05	Radiation
Amplifier	Narda	TTA1840-35-HG	2034380	2020-11-28	2021-11-27	Radiation
Loop Antenna	Schwarzbeck	FMZB 1519B	1519B-051	2020-02-14	2023-02-13	Radiation
Broadband Antenna	Schwarzbeck	VULB 9168	9168-757	2020-09-27	2023-09-26	Radiation
Horn Antenna	Schwarzbeck	BBHA 9120 D	1677	2020-02-14	2023-02-13	Radiation
Horn Antenna	COM-POWER	AH-1840	101117	2018-06-19	2021-06-18	Radiation
Horn Antenna	COM-POWER	AH-1840	101117	2021-06-18	2024-06-17	Radiation
Test Software	Audix	E3	6.111221a	N/A	N/A	Radiation
Filter	Micro-Tronics	BRM 50702	G266	N/A	N/A	Radiation

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Instrument	Manufacturer	Model No.	Serial No.	Calibration Date	Due Date	Remark	
LISN	R&S	ENV216	102125	2021-01-05	2022-01-04	Conducted	
LISN	R&S	ENV432	101327	2021-01-06	2022-01-05	Conducted	
EMI Test	R&S	ESR3	102143	2021-01-06	2022-01-05	Conducted	
Receiver	1.00	Lonto	102110	2021 01 00	2022 01 00	Conducted	
EMI Test	Audix	E3	N/A	N/A	N/A	Conducted	
Software	Audix	ES	N/A	N/A	N/A	Conducted	

N/A: No Calibration Required

NOTE: 1. The test was performed in 3m Semi-anechoic Chamber and RF Oven Room.

2. The horn antenna is used only for the measurement of emission frequency above 1GHz if tested.

3. The FCC Site Registration No. is 525120; The Designation No. is CN1171.



# 5 Uncertainty of Evaluation

Where relevant, the following measurement uncertainty levels have been estimated for tests performed on the EUT as specified in CISPR 16-4-2:

MEASUREMENT	FREQUENCY	UNCERTAINTY
Conducted emissions	9kHz~30MHz	2.42dB
	30MHz ~ 1GMHz	2.50dB
Radiated emission	1GHz ~ 18GHz	3.51dB
	18GHz ~ 40GHz	3.96dB

MEASUREMENT	UNCERTAINTY
Occupied Channel Bandwidth	±196.4Hz
RF output power, conducted	±2.31dB
Power density, conducted	±2.31dB

This uncertainty represents an expanded uncertainty expressed at approximately the 95% confidence level using a coverage factor of k=2.



# Appendix A: DTS Bandwidth

## **Test Result**

TestMode	Antenna	Channel	DTS BW [MHz]	FL[MHz]	FH[MHz]	Limit[MHz]	Verdict
		2412	8.560	2408.000	2416.560	>=0.5	PASS
11B	Ant1	2437	9.120	2432.440	2441.560	>=0.5	PASS
		2462	8.160	2457.920	2466.080	>=0.5	PASS
		2412	14.600	2405.320	2419.920	>=0.5	PASS
11G	Ant1	2437	13.800	2430.760	2444.560	>=0.5	PASS
		2462	16.160	2453.800	2469.960	>=0.5	PASS
		2412	16.320	2404.080	2420.400	>=0.5	PASS
11N20SISO	Ant1	2437	15.280	2430.280	2445.560	>=0.5	PASS
		2462	16.600	2453.560	2470.160	>=0.5	PASS
		2422	35.840	2404.400	2440.240	>=0.5	PASS
11N40SISO	Ant1	2437	35.520	2419.320	2454.840	>=0.5	PASS
		2452	35.200	2434.400	2469.600	>=0.5	PASS



## **Test Graphs**







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# **Appendix B: Occupied Channel Bandwidth**

### **Test Result**

TestMode	Antenna	Channel	OCB [MHz]	FL[MHz]	FH[MHz]	Limit[MHz]	Verdict
		2412	13.956	2405.159	2419.115		PASS
11B	Ant1	2437	14.018	2430.110	2444.128		PASS
		2462	13.931	2455.044	2468.975		PASS
		2412	16.919	2403.610	2420.529		PASS
11G	Ant1	2437	16.955	2428.595	2445.550		PASS
		2462	16.941	2453.533	2470.474		PASS
		2412	18.105	2403.053	2421.158		PASS
11N20SISO	Ant1	2437	18.206	2428.001	2446.207		PASS
		2462	18.146	2452.937	2471.083		PASS
		2422	36.267	2404.015	2440.282		PASS
11N40SISO	Ant1	2437	36.268	2418.991	2455.259		PASS
		2452	36.188	2433.965	2470.153		PASS