RF Exposure Report

Report No.:	SA180601E04
FCC ID:	O2U-CH7469
Test Model:	CH7469
Series Model:	CH7469XXXXX (The “X” in the model name could be defined as 0~9,A~Z, “-” or blank.)
Received Date:	June 01, 2018
Test Date:	July 09, 2018
Issued Date:	Sep. 06, 2018
Applicant:	Compal Broadband Networks, Inc.
Address:	13F.-1, No.1, Taiyuan 1st. St., Zhubei City, Hsinchu County 302, Taiwan (R.O.C.)
Issued By:	Bureau Veritas Consumer Products Services (H.K.) Ltd., Taoyuan Branch Hsin Chu Laboratory
Lab Address:	E-2, No.1, Li Hsin 1st Road, Hsinchu Science Park, Hsinchu City 300, Taiwan R.O.C.
Test Location:	E-2, No.1, Li Hsin 1st Road, Hsinchu Science Park, Hsinchu City 300, Taiwan R.O.C.
FCC Registration / Designation Number:	723255 / TW2022

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Release Control Record

Issue No.	Description	Date Issued
SA180601E04	Original release.	Sep. 06, 2018

1 Certificate of Conformity

Product:	Cable Modem
Brand:	cbn
Test Model:	CH7469
Series Model:	CH7469XXXXX (The “X” in the model name could be defined as 0~9,A~Z, “-” or blank.)
Sample Status:	ENGINEERING SAMPLE
Applicant:	Compal Broadband Networks, Inc.
Test Date:	July 09, 2018
Standards:	FCC Part 2 (Section 2.1091) KDB 447498 D01 General RF Exposure Guidance v06 IEEE C95.1-1992

The above equipment has been tested by **Bureau Veritas Consumer Products Services (H.K.) Ltd., Taoyuan Branch**, and found compliance with the requirement of the above standards. The test record, data evaluation & Equipment Under Test (EUT) configurations represented herein are true and accurate accounts of the measurements of the sample’s EMC characteristics under the conditions specified in this report.

Prepared by : Wendy Wu , **Date:** Sep. 06, 2018

Wendy Wu / Specialist

Approved by : , **Date:** Sep. 06, 2018

May Chen / Manager

2 RF Exposure

2.1 Limits for Maximum Permissible Exposure (MPE)

Frequency Range (MHz)	Electric Field Strength (V/m)	Magnetic Field Strength (A/m)	Power Density (mW/cm^2)	Average Time (minutes)
Limits For General Population / Uncontrolled Exposure				
0.3-1.34	614	1.63	(100)*	30
1.34-30	824/f	2.19/f	($180/f^2$)*	30
30-300	27.5	0.073	0.2	30
300-1500	…	…	f/1500	30
1500-100,000	…	…	1.0	30

f = Frequency in MHz ; *Plane-wave equivalent power density

2.2 MPE Calculation Formula

$Pd = (Pout*G) / (4*pi*r^2)$

where

Pd = power density in mW/cm^2

Pout = output power to antenna in mW

G = gain of antenna in linear scale

Pi = 3.1416

R = distance between observation point and center of the radiator in cm

2.3 Classification

The antenna of this product, under normal use condition, is at least 21cm away from the body of the user. So, this device is classified as **Mobile Device**.

2.4 Antenna Gain

Frequency Range (GHz)	Directional Antenna Gain (dBi)	Antenna Type	Connecter Type
2.4~2.4835	6.23	Dipole	i-pex(MHF)
5.15~5.35	6.05		
5.47~5.85	5.44		
Note: More detailed information, please refer to operating description.			

2.5 Calculation Result of Maximum Conducted Power

Operation Mode	Evaluation Frequency (MHz)	Max Power (mW)	Antenna Gain (dBi)	Distance (cm)	Power Density (mW/cm^2)	Limit (mW/cm^2)
WLAN 2.4GHz	2437	891.996	6.23	24	0.51728	1
WLAN UNII-1	5200	649.936	6.05	24	0.36161	1
WLAN UNII-3	5785	972.589	5.44	24	0.47021	1

Conclusion:

The formula of calculated the MPE is:

CPD1 / LPD1 + CPD2 / LPD2 + ……etc. < 1

CPD = Calculation power density

LPD = Limit of power density

WLAN 2.4GHz + WLAN 5GHz = 0.51728 / 1 + 0.47021 / 1 = 0.98749

Therefore the maximum calculations of above situations are less than the "1" limit.

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