RF Exposure Report

Report No.:	SA180530C08A
FCC ID:	GKR-SHC100
Test Model:	QCNFA435
Received Date:	Aug. 09, 2018
Date of Evaluation:	Aug. 10, 2018
Issued Date:	Aug. 13, 2018
Applicant:	COMPAL ELECRTONICS, INC.
Address:	No.581, Ruiguang Rd., Neihu District,Taipei City 11492, Taiwan, R.O.C.
Issued By:	Bureau Veritas Consumer Products Services (H.K.) Ltd., Taoyuan Branch
Lab Address:	No. 47-2, 14th Ling, Chia Pau Vil., Lin Kou Dist., New Taipei City, Taiwan, R.O.C.
Test Location:	No. 19, Hwa Ya 2nd Rd, Wen Hwa Vil, Kwei Shan Dist., Taoyuan City 33383, Taiwan (R.O.C)
FCC Registration / Designation Number:	788550 / TW0003

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Release Control Record

Issue No.	Description	Date Issued
SA180530C08A	Original Release	Aug. 13, 2018

1 Certificate of Conformity

Product:	Single Stream 802.11a/b/g/n/ac + BT 4.1 M.2 Type Card
Brand:	Qualcomm Atheros
Test Model:	QCNFA435
Sample Status:	Production Unit
Applicant:	COMPAL ELECRTONICS, INC.
Date of Evaluation:	Aug. 10, 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 : Rona Chen , **Date:** Aug. 13, 2018

Rona Chen / Specialist

Approved by : , **Date:** Aug. 13, 2018

Dylan Chiou / Project Engineer

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 20cm away from the body of the user. So, this device is classified as **Mobile Device**.

2.4 Antenna Gain

Ant. No.	Ant. Type	Vendor	Part Number	Antenna Gain (dBi)			
				BT/WLAN 2.4GHz	WLAN 5.15~5.35 GHz	WLAN 5.47~5.725 GHz	WLAN 5.725~5.85 GHz
1	PCB	Nienyi	WLAN Main Antenna: NYS3283 (DC330026I0U)	0.75	-0.76	-0.47	0.13
			WLAN Aux Antenna: NYS3284 (DC330026I1U)	0.59	-0.93	-1.01	-1.96
2	Dipole	Nienyi	WLAN Main Antenna: NYS3285+ NYS3281	1.64	0.91	1.42	0.52
			WLAN Aux Antenna: NYS3285+ NYS3282	0.81	-0.78	-0.47	-0.44

2.5 Calculation Result of Maximum Conducted Power

Band	Frequency Band (MHz)	Max Power (dBm)	Antenna Gain (dBi)	Distance (cm)	Power Density (mW/cm^2)	Limit (mW/cm^2)
WLAN	2412-2462	24.82	1.64	20	0.088	1.00
	5180-5240	17.34	0.91	20	0.013	1.00
	5260-5320	17.46	0.91	20	0.014	1.00
	5500-5720	17.27	1.42	20	0.015	1.00
	5745-5825	17.32	0.52	20	0.012	1.00
BT	2402-2480	11.55	1.64	20	0.004	1.00

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