# **RF** Exposure Evaluation Report

Product Name	:	F2-AVX7MT
Model No.	:	F2-AVX7MT
FCC ID	:	2AO4C-F2AVX7MT

Applicant : UniMax Electronics Inc.

Address : No.18, Sec. 2, Zhongyang S. Rd., Beitou Dist., Taipei City, Taiwan 112

Date of Receipt:Jan. 25, 2018Date of Declaration :Feb. 14, 2018Report No.:1810363R-RFUSP01V00

The test results relate only to the samples tested.

The test results shown in the test report are traceable to the national/international standard through the calibration report of the equipment and evaluated measurement uncertainty herein.

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Product Name	F2-AVX7MT	
Applicant	UniMax Electronics Inc.	
Address	No.18, Sec. 2, Zhongyang S. Rd., Beitou Dist., Taipei City, Taiwan 112	
Manufacturer	ASKEY COMPUTER CORP.	
Model No.	F2-AVX7MT	
FCC ID.	2AO4C-F2AVX7MT	
EUT Rated Voltage	DC 12V(Power by battery)	
EUT Test Voltage	DC 12V(Power by battery)	
Trade Name	UniMax	
Applicable Standard	FCC 47 CFR 1.1310	
Test Result	Complied	
Documented By	Antra Chan	
	(Senior Engineering Adm. Specialist / Anita Chou)	
Tested By	Xiao Chen	
	(Engineer / Xiao Chen)	
Approved By	Hand	

( Director / Vincent Lin )

### **1. RF Exposure Evaluation**

### 1.1. Limits

According to FCC 1.1310: The criteria listed in the following table shall be used to evaluate the environment impact of human exposure to radio frequency (RF) radiation as specified in 1.1307(b) LIMITS FOR MAXIMUM PERMISSIBLE EXPOSURE (MPE)

Frequency Range	Electric Field	Magnetic Field	Power Density	Average Time	
(MHz)	Strength (V/m)	Strength (A/m)	$(mW/cm^2)$	(Minutes)	
(A) Limits for Occupational/ Control Exposures					
300-1500			F/300	6	
1500-100,000			5	6	
(B) Limits for General Population/ Uncontrolled Exposures					
300-1500			F/1500	6	
1500-100,000			1	30	

F= Frequency in MHz

Friis Formula

Friis transmission formula:  $Pd = (Pout*G)/(4*pi*r^2)$ 

Where

Pd = power density in mW/cm<sup>2</sup> Pout = output power to antenna in mW

G = gain of antenna in linear scale

Pi = 3.1416

 $\mathbf{R}$  = distance between observation point and center of the radiator in cm

Pd id the limit of MPE,  $1 \text{ mW/cm}^2$ . If we know the maximum gain of the antenna and the total power input to the antenna, through the calculation, we will know the distance r where the MPE limit is reached.

## **1.2.** Test Procedure

Software provided by client enabled the EUT to transmit and receive data at lowest, middle and highest channel individually.

The temperature and related humidity: 18°C and 78% RH.

## **1.3.** Test Result of RF Exposure Evaluation

Product	:	F2-AVX7MT
Test Item	:	<b>RF</b> Exposure Evaluation

#### **RF Exposure 2.4G:**

Operation Frequency	Bluetooth: 2402-2480MHz
Maximum Conducted output power	3.91dBm
Antenna gain	1.13dBi

## Output Power Into Antenna & RF Exposure Evaluation Distance:

Output Power to Antenna (mW)	Power Density at $R = 20 \text{ cm} (\text{mW/cm2})$
2.460367604	0.0006

Power density is lower than the limit (1 mW/cm2).