RF Exposure Report

Report No.: SA161219D15

FCC ID: RFH-TUS3400-1

Test Model: TUS3400

Received Date: Dec. 19, 2016

Test Date: Dec. 20, 2016 ~ Jan. 6, 2017

Issued Date: Jan. 16, 2017

Applicant: IEI Integration Corp.

Address: No.29, Zhongxing Rd., Xizhi Dist., New Taipei City 221,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.)

This report is 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. You have 60 days from date of issuance of this report to notify us of any material error or omission caused by our negligence, 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 your unqualified acceptance of the completeness of this report, the tests conducted and the correctness of the report contents. Unless specific mention, the uncertainty of measurement has been explicitly taken into account to declare the compliance or non-compliance to the specification. The report must not be used by the client to claim product certification, approval, or endorsement by TAF or any government agencies.

Table of Contents

Release Control Record **3**

1 Certificate of Conformity **4**

2 RF Exposure **5**

2.1 Limits For Maximum Permissible Exposure (MPE) 5
2.2 MPE Calculation Formula 5
2.3 Classification 5
2.4 Smallest Distance From The Antenna And Radiating Structures Or Outer Surface Of The Device 6

3 Calculation Result Of Maximum Conducted Power **7**

Release Control Record

Issue No.	Description	Date Issued
SA161219D15	Original release.	Jan. 16, 2017

1 Certificate of Conformity

Product:	Portable Computer
Brand:	Terason
Test Model:	TUS3400
Sample Status:	Engineering sample
Applicant:	IEI Integration Corp.
Test Date:	Dec. 20, 2016 ~ Jan. 6, 2017
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 : Annie Chang , **Date:** Jan. 16, 2017

Annie Chang / Senior Specialist

Approved by : Rex. Lai , **Date:** Jan. 16, 2017

Rex Lai / Assistant 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				
300-1500	…	…	F/1500	30
1500-100,000	…	…	1.0	30

F = Frequency in MHz

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

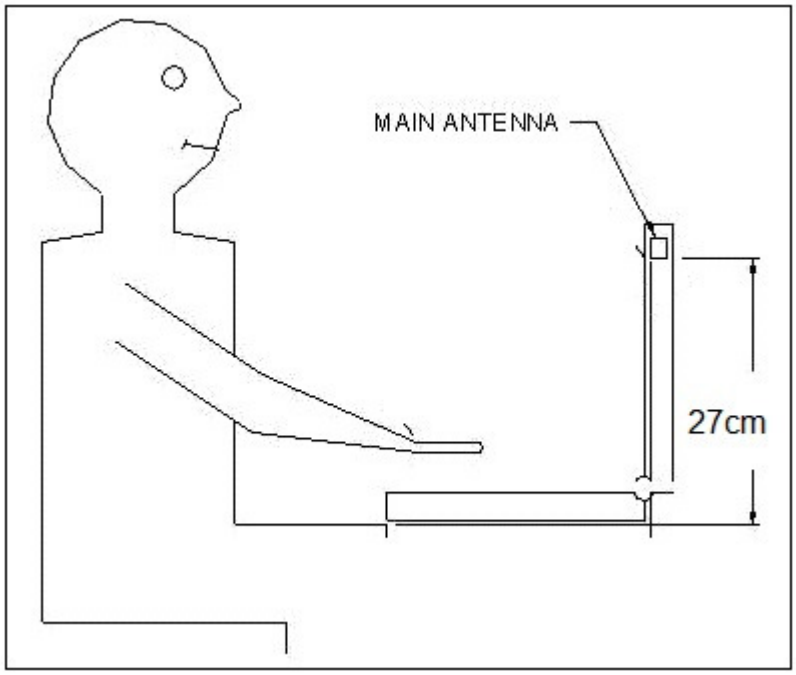
R = distance between observation point and center of the radiator in cm

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 Smallest Distance From The Antenna And Radiating Structures Or Outer Surface Of The Device

The minimum test separation distance is determined by the smallest distance from the antenna and radiating structures or outer surface of the device, according to the host form factor, exposure conditions and platform requirements, to any part of the body or extremity of a user or bystander. (See below figure)



3 Calculation Result Of Maximum Conducted Power

Function	Frequency Band (MHz)	Max Power (dBm)	Antenna Gain (dBi)	Distance (cm)	Power Density (mW/cm^2)	Limit (mW/cm^2)
WLAN	2412 - 2462	26.38	2	20	0.1370	1
WLAN	5180 - 5240	14.52	2	20	0.0089	1
WLAN	5260 - 5320	14.41	2	20	0.0087	1
WLAN	5500 - 5700	14.48	2	20	0.0088	1
WLAN	5745 - 5825	14.55	2	20	0.0090	1
BT LE	2402-2480	1.26	2	20	0.0004	1
BT EDR	2402-2480	1.33	2	20	0.0004	1

CONCULSION:

Both of the WLAN & Bluetooth can transmit simultaneously, the formula of calculated the MPE is:
CPD1 / LPD1 + CPD2 / LPD2 + ……etc. < 1
CPD = Calculation power density
LPD = Limit of power density

WLAN + BT = 0.1370 + 0.0004 = 0.1374

Therefore, the maximum calculation of this situation is 0.1374, which is less than the “1” limit.

FREQUENCY BAND (MHz)	MAX POWER (dBm)				TOTAL POWER (dBm)	POWER LIMIT (dBm)
	WLAN (5.0G)	WLAN (2.4G)	BT LE	BT EDR		
2400 ~ 2483.5	-	26.38	1.26	1.33	26.41	30
5180 ~ 5240	14.52	-	-	-	14.52	24
5260 ~ 5320	14.41	-	-	-	14.41	24
5500 ~ 5700	14.48	-	-	-	14.48	24
5745 ~ 5825	14.55	-	-	-	14.55	30

--- END ---