

RF Exposure Report

Report No.: SA160323C07

FCC ID: S4A50-0101-QT-44

Test Model: Amulet 655

Series Model: Amulet 6XYzzzzzz (where "X" can be 0-9, "Y" can be 0-9; "zzzzzz" can be any combination of "0-9", "a-z", "-", "/" or blank for marketing purpose)

Received Date: Mar. 22, 2016

Test Date: Apr. 08 ~ May 09, 2016

Issued Date: May 09, 2016

Applicant: Entone Technologies (HK) Limited

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Issued By: Bureau Veritas Consumer Products Services (H.K.) Ltd., Taoyuan Branch

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Test Location: No. 19, Hwa Ya 2nd Rd., Wen Hwa Vil., Kwei Shan Dist., Taoyuan City 33383, TAIWAN (R.O.C.)



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Release Control Record

Issue No.	Description	Date Issued
SA160323C07	Original release.	May 09, 2016

1 Certificate of Conformity

Product: High Definition IP TV receiver

Brand: entone, amino

Test Model: Amulet 655

Series Model: Amulet 6XYzzzzzz (where "X" can be 0-9, "Y" can be 0-9; "zzzzzz" can be any combination of "0-9", "a-z", "-", "/", or blank for marketing purpose)

Sample Status: Engineering sample

Applicant: Entone Technologies (HK) Limited

Test Date: Apr. 08 ~ May 09, 2016

Standards: FCC Part 2 (Section 2.1091)

KDB 447498 D01 (October 23, 2015)

IEEE C95.1

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 : Polly Chien, **Date:** May 09, 2016
Polly Chien / Specialist

Approved by : Ken Liu, **Date:** May 09, 2016
Ken Liu / Senior 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

$$P_d = (P_{out} \cdot G) / (4 \cdot \pi \cdot r^2)$$

where

P_d = power density in mW/cm²

P_{out} = output power to antenna in mW

G = gain of antenna in linear scale

π = 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**.

3 Calculation Result of Maximum Conducted Power

Frequency Band (MHz)	Max Power (dBm)	Antenna Gain (dBi)	Distance (cm)	Power Density (mW/cm ²)	Limit (mW/cm ²)
WLAN (CDD Mode)					
5180-5240	23.75	9.08	20	0.382	1
5260-5320	23.67	9.08	20	0.375	1
5500-5700	23.79	9.08	20	0.385	1
5745-5825	24.69	9.08	20	0.474	1
WLAN (Beamforming Mode)					
5180-5240	19.90	9.08	20	0.157	1
5260-5320	19.82	9.08	20	0.154	1
5500-5700	19.82	9.08	20	0.154	1
5745-5825	24.76	9.08	20	0.482	1
BT LE					
2402-2480	-2.59	1.8	20	0.0002	1

Note: Directional gain = $10 \log[(10^{G1/20} + 10^{G2/20} + \dots + 10^{GN/20})^2/N] = 9.08\text{dBi}$

Conclusion:

The formula of calculated the MPE is:

$CPD1 / LPD1 + CPD2 / LPD2 + \dots \text{etc.} < 1$

CPD = Calculation power density

LPD = Limit of power density

WLAN 5GHz + BT LE = 0.482 + 0.0002 = 0.4822

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

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