

RF Exposure Report

Report No.: SA161114C05

FCC ID: TYM-BRIO

Test Model: K175

Series Model: K165

Received Date: Nov. 14 , 2016

Test Date: Dec. 01 ~ Dec. 29, 2016

Issued Date: Jan. 04, 2017

Applicant: AVAYA

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

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Release Control Record

Issue No.	Description	Date Issued
SA161114C05	Original release	Jan. 04, 2017

1 Certificate of Conformity

Product: IP Phone

Brand: AVAYA

Test Model: K175

Series Model: K165

Sample Status: Engineering sample

Applicant: AVAYA.

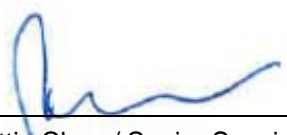
Test Date: Dec. 01 ~ Dec. 29, 2016

Standards: FCC Part 2 (Section 2.1091)

KDB 447498 D01 General RF Exposure Guidance v06

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 :  , **Date:** Jan. 04, 2017
Pettie Chen / Senior Specialist

Approved by :  , **Date:** Jan. 04, 2017
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				
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

2.2 MPE Calculation Formula

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

where

Pd = power density in mW/cm²

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**.

3 Calculation Result Of Maximum Conducted Power

The simultaneous operation mode was determined by client as below:

1. WLAN + NFC
2. Bluetooth + NFC

Frequency Band (MHz)	Max Power (dBm)	Antenna Gain (dBi)	Distance (cm)	Power Density (mW/cm ²)	Limit (mW/cm ²)
WLAN					
2412-2462	21.15	5.93	20	0.102	1
5180-5240	22.07	7.48	20	0.179	1
5745-5825	21.28	7.48	20	0.150	1
BT EDR					
2402-2480	4.66	2.96	20	0.001	1
BT LE					
2402-2480	11.89	2.96	20	0.006	1

NOTE:

WLAN 2.4GHz: Directional gain = $10 \log[(10^{G1/20} + 10^{G2/20} + \dots + 10^{GN/20})^2/N]$ = 5.93dBi
 WLAN 5.0GHz: Directional gain = $10 \log[(10^{G1/20} + 10^{G2/20} + \dots + 10^{GN/20})^2/N]$ = 7.48dBi

NFC:

Mode	Electric field (dBuV/m) @3m	EIRP (dBm)	Distance (cm)	Power Density (mW/cm ²)	Limit (mW/cm ²)
NFC	67.66	-27.57	20	0.00000035	0.978

Conclusion:

The formula of calculated the MPE is:

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

CPD = Calculation power density

LPD = Limit of power density

WLAN + NFC = $0.179/1 + 0.00000035/0.978 = 0.179000357$

Bluetooth + NFC = $0.006/1 + 0.00000035/0.978 = 0.006000357$

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

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