

RF Exposure Report

Report No.: SA170419E14

FCC ID: JNZVR0007

Test Model: V-R0007

Received Date: Apr. 19, 2017

Test Date: May 11, 2017

Issued Date: May 17, 2017

Applicant: LOGITECH FAR EAST LTD.

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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
SA170419E14	Original release.	May 17, 2017

1 Certificate of Conformity

Product: Camera and Speakerphone unit

Brand: Logitech

Test Model: V-R0007

Sample Status: ENGINEERING SAMPLE

Applicant: LOGITECH FAR EAST LTD.

Test Date: May 11, 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 : Wendy Wu , **Date:** May 17, 2017
Wendy Wu / Specialist

Approved by : May Chen , **Date:** May 17, 2017
May Chen / 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				
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

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

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**.

2.4 Antenna Gain

For BT-EDR						
Brand	Model	Antenna Gain (dBi)	Frequency range(GHz)	Antenna Type	Connector Type	Cable Length
YAGEO	ANTX130P001B24003	-3.75	2.4-2.4835	PCB	I-PEX	130mm
For BT-LE						
Brand	Model	Antenna Gain (dBi)	Frequency range(GHz)	Antenna Type	Connector Type	Cable Length
NA	NA	0.23	2.4-2.4835	Printing	NA	NA

2.5 Calculation Result Of Maximum Conducted Power

BT-EDR:

Frequency Band (MHz)	Max Power (mW)	Antenna Gain (dBi)	Distance (cm)	Power Density (mW/cm ²)	Limit (mW/cm ²)
2402-2480	4.56	0.23	20	0.00038	1

BT-LE:

Frequency Band (MHz)	Max Power (mW)	Antenna Gain (dBi)	Distance (cm)	Power Density (mW/cm ²)	Limit (mW/cm ²)
2402-2480	0.9247	-3.75	20	0.00019	1

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

$BT-EDR + BT-LE = 0.00038 / 1 + 0.00019 / 1 = 0.00057$

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

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