| | | BUREAU VERITAS |
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| | | |
| | RF Exposure Report | |
| Report No.: | SA190723E02 | |
| FCC ID: | JNZS00182 | |
| Test Model: | S00182 | |
| Received Date: | July 23, 2019 | |
| Test Date: | Aug. 05, 2019 | |
| Issued Date: | Aug. 20, 2019 | |
| Applicant: | LOGITECH FAR EAST LTD. | |
| Address: | #2 Creation Rd. 4, Science-Based Ind. Park Hsinchu Taiwan, R.O.C. | |
| Issued By: | Bureau Veritas Consumer Products Services (H.K.) Ltd., Taoyuan Branc Hsin Chu Laboratory | h |
| Lab Address: | E-2, No.1, Li Hsin 1st Road, Hsinchu Science Park, Hsinchu City 300, Taiwan R.O.C. | |
| Test Location: | E-2, No.1, Li Hsin 1st Road, Hsinchu Science Park, Hsinchu City 300, Taiwan R.O.C. | |
| FCC Registration / Designation Number: | 723255 / TW2022 | |
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| only with our prior written permission. The report are not indicative or representative unless specifically and expressly noted. provided to us. You have 60 days from however, that such notice shall be in writt shall constitute your unqualified acceptane mention, the uncertainty of measurement | copying or replication of this report to or for any other person or entity, or use of our name or trademark, is is report sets forth our findings solely with respect to the test samples identified herein. The results set e of the quality or characteristics of the lot from which a test sample was taken or any similar or identified Our report includes all of the tests requested by you and the results thereof based upon the informatic date of issuance of this report to notify us of any material error or omission caused by our negligence ing and shall specifically address the issue you wish to raise. A failure to raise such issue within the presi- ce of the completeness of this report, the tests conducted and the correctness of the report contents. Unlet thas been explicitly taken into account to declare the compliance or non-compliance to the specification. roduct certification, approval, or endorsement by any government agencies. | forth in this cal product on that you a, provided, cribed time ess specific |



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| | Release Control Record | | | | | |
|-------------|------------------------|--|--|--|---------------|--|
| Issue No. | Description | | | | Date Issued | |
| SA190723E02 | Original release. | | | | Aug. 20, 2019 | |
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1 Certificate of Conformity

| Product: | Bluetooth Speaker |
|----------------|---|
| Brand: | logitech |
| Test Model: | S00182 |
| Sample Status: | ENGINEERING SAMPLE |
| Applicant: | LOGITECH FAR EAST LTD. |
| Test Date: | Aug. 05, 2019 |
| 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 : | Wondy Mu | , Date: | Aug. 20, 2019 | |
|---------------|-----------------------|----------|---------------|--|
| | Wendy Wu / Specialist | | | |
| Approved by : | May Chen / Manager | _, Date: | Aug. 20, 2019 | |



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/f²)* | 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

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

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 Antenna Gain

| Antenna Gain (dBi) | Antenna Gain (dBi) Frequency range(GHz) | | Connector Type | |
|--------------------|---|-----------------|----------------|--|
| 2.62 | 2.4~2.4835GHz | printed antenna | NA | |



2.5 Calculation Result of Maximum Conducted Power

| Operation Mode | Evaluation Frequency (MHz) | Max Power (mW) | Antenna Gain (dBi) | Distance (cm) | Power Density (mW/cm ²) | Limit (mW/cm ²) |
|-----------------------|----------------------------------|-------------------|-----------------------|------------------|--|--------------------------------|
| Bluetooth (BT-EDR) | 2402 | 2.667 | 2.62 | 20 | 0.00097 | 1 |

NOTE:

1. Determining compliance based on the results of the compliance measurement, not taking into account measurement instrumentation uncertainty.

--- END ---