

## RF EXPOSURE REPORT

OF

**Applicant:** GOOGLE LLC  
1600 Amphitheatre Parkway Mountain View, CA 94043

**Product Name:** Wireless Streaming Device

**Brand Name:** Google

**Model No.:** G3AL9

**Model Difference:** N/A

**Report Number:** ER/2020/80017

**FCC ID:** A4RG3AL9

**FCC Rule Part** Part 2.1091

**Issue Date:** Feb. 26, 2021

**We hereby certify that:**

The above equipment was verified by SGS Taiwan Ltd. The evaluation in this report is in compliance with the above rule(s).

The results of this report relate only to the sample identified in this report.

John Teh

**Approved By:** \_\_\_\_\_**Yeh John / Asst. Manager**

Unless otherwise stated the results shown in this test report refer only to the sample(s) tested and such sample(s) are retained for 90 days only.  
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## Revision History

| Report Number | Revision | Description | Issue Date    | Remark                     |
|---------------|----------|-------------|---------------|----------------------------|
| ER/2020/80017 | Rev.00   | Original.   | Feb. 26, 2021 | Revised By:<br>Tiffany Kao |
|               |          |             |               |                            |

**Note:**

## 1、Disclaimer

Antenna information is provided by the applicant, test results of this report are applicable to the sample EUT received.

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## 1 DESCRIPTION OF EQUIPMENT UNDER TEST (EUT)

### 1.1 General:

|                   |                                                                          |
|-------------------|--------------------------------------------------------------------------|
| Product Name:     | Wireless Streaming Device                                                |
| Brand Name:       | Google                                                                   |
| Model No.:        | G3AL9                                                                    |
| Model Difference: | N/A                                                                      |
| Hardware Version: | N/A                                                                      |
| Software Version: | N/A                                                                      |
| Power Supply:     | 3.65Vdc from Rechargeable Li-polymer Battery<br>or 5V from AC/DC Adapter |

### 1.2 Antenna Information:

#### 1.2.1 BT / WLAN 2.4GHz

| Antenna Type | Supplier | Antenna Part No. | Freq. (MHz) | Peak Antenna Gain (dBi) |
|--------------|----------|------------------|-------------|-------------------------|
| PIFA         | N/A      | N/A              | 2.4GHz      | 2.4                     |

#### 1.2.2 WLAN 5GHz

| Antenna Type | Supplier | Antenna Part No. | Main / Aux | Operating Frequency (MHz) | Peak Antenna Gain (dBi) |
|--------------|----------|------------------|------------|---------------------------|-------------------------|
| PIFA         | N/A      | N/A              | Main       | 5150~5250                 | 5.9                     |
|              |          |                  |            | 5250~5350                 | 5.9                     |
|              |          |                  |            | 5470~5725                 | 6.5                     |
|              |          |                  |            | 5725~5850                 | 6.6                     |

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## 2 FCC MAXIMUM PERMISSIBLE EXPOSURE (MPE)

### 2.1 FCC Standard Applicable

According to §1.1307(b)(1), systems operating under the provisions of this section shall be operated in a manner that ensure that the public is not exposed to radio frequency energy level in excess of the Commission's guideline.

This is a Mobile device, the MPE is required.

According to §1.1310 and §2.1091 RF exposure is calculated.

Limits for Maximum Permissible Exposure (MPE)

| Frequency Range (MHz)                               | Electric Field Strength (V/m) | Magnetic Field Strength (A/m) | Power Density (mW/cm <sup>2</sup> ) | Averaging Time (minute) |
|-----------------------------------------------------|-------------------------------|-------------------------------|-------------------------------------|-------------------------|
| 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 <sup>2</sup> )              | 30                      |
| 30-300                                              | 27.5                          | 0.073                         | 0.2                                 | 30                      |
| 300-1500                                            | /                             | /                             | f/1500                              | 30                      |
| 1500-15000                                          | /                             | /                             | 1.0                                 | 30                      |

f = frequency in MHz

\* = Plane-wave equipment power density

Prediction of MPE limit at a given distance

$$S = PG / 4\pi R^2$$

Where: S = Power density

P = Power input to antenna

G = Power gain of the antenna in the direction of interest relative to an isotropic radiator

R = Distance to the center of radiation of the antenna

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## 2.2 Power Density Calculation (Worst Case)

### FCC Standalone MPE

| Operation Mode | Evaluation Frequency (MHz) | Operation Distance (cm) | Max. tune-up Power With Tolerance (dBm) | Antenna Gain (dBi) | Max. output Power EIRP (mW) | Power Density (PD) (mW/cm <sup>2</sup> ) | Limit (mW/cm <sup>2</sup> ) | Pass / Fail | Power Density / Limit |
|----------------|----------------------------|-------------------------|-----------------------------------------|--------------------|-----------------------------|------------------------------------------|-----------------------------|-------------|-----------------------|
| BLE            | 2402.00                    | 20                      | 11.00                                   | 2.40               | 21.88                       | 0.004                                    | 1.000                       | Pass        | 0.004                 |
| WLAN 2.4G      | 2437.00                    | 20                      | 19.50                                   | 2.40               | 154.88                      | 0.031                                    | 1.000                       | Pass        | 0.031                 |
| WLAN 5G        | 5745.00                    | 20                      | 15.50                                   | 6.6                | 162.18                      | 0.032                                    | 1.000                       | Pass        | 0.032                 |

~ End of Report ~

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