

# **FCC RF EXPOSURE REPORT**

**FCC ID: BEJ-SJ2**

**Project No. : 1701C176**  
**Equipment : WIRELESS SOUND BAR**  
**Model : SJ2**  
**Applicant : LG Electronics USA**  
**Address : 1000 Sylvan Avenue Englewood Cliffs New  
Jersey United States 07632**

**According: : FCC Guidelines for Human Exposure IEEE  
C95.1**

**B T L I N C .**

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## MPE CALCULATION METHOD:

Calculation Method of RF Safety Distance:

$$S = \frac{PG}{4\pi^2} = \frac{EIRP}{4\pi^2}$$

where:

S = power density

P = power input to the 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

Table for Filed Antenna

BT:

| Ant. | Brand | Model Name | Antenna Type | Connector | Gain(dBi) |
|------|-------|------------|--------------|-----------|-----------|
| 1    | N/A   | N/A        | Internal     | N/A       | 1.396     |

5.8G Wireless:

| Ant. | Brand | Model Name | Antenna Type | Connector | Gain(dBi) |
|------|-------|------------|--------------|-----------|-----------|
| 1    | N/A   | N/A        | Internal     | N/A       | 2.85      |
| 2    | N/A   | N/A        | Internal     | N/A       | 2.85      |

## TEST RESULTS

BT:

|                |                    |                    |      |
|----------------|--------------------|--------------------|------|
| EUT :          | WIRELESS SOUND BAR | Model Name :       | SJ2  |
| Temperature :  | 25 °C              | Relative Humidity: | 55 % |
| Test Voltage : | AC 120V/60Hz       |                    |      |
| Test Mode :    | TX Mode _1Mbps     |                    |      |

| Antenna Gain (dBi) | Antenna Gain (numeric) | Peak Output Power (dBm) | Peak Output Power (mW) | Power Density (S) (mW/cm <sup>2</sup> ) | Limit of Power Density (S) (mW/cm <sup>2</sup> ) | Test Result |
|--------------------|------------------------|-------------------------|------------------------|-----------------------------------------|--------------------------------------------------|-------------|
| 1.396              | 1.3791                 | 3.02                    | 2.0045                 | 0.00055                                 | 1                                                | Complies    |
| 1.396              | 1.3791                 | 4.18                    | 2.6182                 | 0.00072                                 | 1                                                | Complies    |
| 1.396              | 1.3791                 | 4.03                    | 2.5293                 | 0.00069                                 | 1                                                | Complies    |

|                |                    |                    |      |
|----------------|--------------------|--------------------|------|
| EUT :          | WIRELESS SOUND BAR | Model Name :       | SJ2  |
| Temperature :  | 25 °C              | Relative Humidity: | 55 % |
| Test Voltage : | AC 120V/60Hz       |                    |      |
| Test Mode :    | TX Mode _3Mbps     |                    |      |

| Antenna Gain (dBi) | Antenna Gain (numeric) | Peak Output Power (dBm) | Peak Output Power (mW) | Power Density (S) (mW/cm <sup>2</sup> ) | Limit of Power Density (S) (mW/cm <sup>2</sup> ) | Test Result |
|--------------------|------------------------|-------------------------|------------------------|-----------------------------------------|--------------------------------------------------|-------------|
| 1.396              | 1.3791                 | 2.2                     | 1.6596                 | 0.00046                                 | 1                                                | Complies    |
| 1.396              | 1.3791                 | 3.11                    | 2.0464                 | 0.00056                                 | 1                                                | Complies    |
| 1.396              | 1.3791                 | 2.67                    | 1.8493                 | 0.00051                                 | 1                                                | Complies    |

## 5.8G Wireless:

### For ANT 1

|                |                            |                    |      |
|----------------|----------------------------|--------------------|------|
| EUT :          | WIRELESS SOUND BAR         | Model Name :       | SJ2  |
| Temperature:   | 25 °C                      | Relative Humidity: | 55 % |
| Test Voltage : | AC 120V/60Hz               |                    |      |
| Test Mode :    | TX Mode / CH01, CH18, CH35 |                    |      |

| Antenna Gain (dBi) | Antenna Gain (numeric) | Peak Output Power (dBm) | Peak Output Power (mW) | Power Density (S) (mW/cm <sup>2</sup> ) | Limit of Power Density (S) (mW/cm <sup>2</sup> ) | Test Result |
|--------------------|------------------------|-------------------------|------------------------|-----------------------------------------|--------------------------------------------------|-------------|
| 2.85               | 1.9275                 | 8.57                    | 7.1945                 | 0.00276                                 | 1                                                | Complies    |
| 2.85               | 1.9275                 | 8.7                     | 7.4131                 | 0.00284                                 | 1                                                | Complies    |
| 2.85               | 1.9275                 | 8.92                    | 7.7983                 | 0.00299                                 | 1                                                | Complies    |

### For ANT 2

|                |                            |                    |      |
|----------------|----------------------------|--------------------|------|
| EUT :          | WIRELESS SOUND BAR         | Model Name :       | SJ2  |
| Temperature:   | 25 °C                      | Relative Humidity: | 55 % |
| Test Voltage : | AC 120V/60Hz               |                    |      |
| Test Mode :    | TX Mode / CH01, CH18, CH35 |                    |      |

| Antenna Gain (dBi) | Antenna Gain (numeric) | Peak Output Power (dBm) | Peak Output Power (mW) | Power Density (S) (mW/cm <sup>2</sup> ) | Limit of Power Density (S) (mW/cm <sup>2</sup> ) | Test Result |
|--------------------|------------------------|-------------------------|------------------------|-----------------------------------------|--------------------------------------------------|-------------|
| 2.85               | 1.9275                 | 6.12                    | 4.0926                 | 0.00157                                 | 1                                                | Complies    |
| 2.85               | 1.9275                 | 6.05                    | 4.0272                 | 0.00155                                 | 1                                                | Complies    |
| 2.85               | 1.9275                 | 6.31                    | 4.2756                 | 0.00164                                 | 1                                                | Complies    |

Note: the calculated distance is 20 cm.