# A Test Lab Techno Corp.

Changan Lab：N o. 140-1, Changan Street, Bade District, Taoyuan City 33465, Taiwan (R.O.C)
Tel：886-3-271-0188 / Fax：886-3-271-0190

## MPE Report

| | | |
|---|---|---|
| Test Report No. | : | 1701FS12 |
| Applicant | : | Ocean Star Electronics Limited |
| Product Type | : | Bluetooth/Wi-Fi Wireless Stereo Smart Speaker |
| Trade Name | : | JENSEN, SOLIS, Ocean |
| Model Number | : | JSB-1000, JSB-1000XXXXX, SO-3000, SO-3000XXXXX, SO-6000, SO-6000XXXXX, iStation 20GC, iStation 4GC, iStation 8GC |
| Date of Received | : | Nov. 10, 2016 |
| Test Period | : | Nov. 16, 2016 |
| Date of Issued | : | Jan. 19, 2017 |
| Test Specification | : | ANSI / IEEE Std.C95.1-1992 / IEEE Std. 1528-2013 |
| | | 47 CFR § 2.1091 |
| | | 47 CFR § 1.1310 |
| Location of Test Lab. | : | Chang-an Lab. |

1. The test operations have to be performed with cautious behavior, the test results are as attached.
2. The test results are under chamber environment of A Test Lab Techno Corp. A Test Lab Techno Corp. does not assume responsibility for any conclusions and generalizations drawn from the test results with regard to other specimens or samples.
3. The measurement report has to be written approval of A Test Lab Techno Corp. It may only be reproduced or published in full. This report shall not be reproduced except in full, without the written approval of A Test Lab Techno Corp.
4. This document may be altered or revised by A Test Lab Techno. Corp. personnel only, and shall be noted in the revision section of the document.

Approved By : (Bill Hu)

Tested By : (Mark Duan)

# Contents

# 1. Description of Equipment under Test (EUT)

| | | | |
|---|---|---|---|
| Applicant | Ocean Star Electronics Limited<br>Unit 15, 8/F., Wah Wai Centre, 38-40 Au Pui Wan Street, Fo Tan, Hong Kong | | |
| Manufacturer | Ocean Star Electronics Limited<br>Unit 15, 8/F., Wah Wai Centre, 38-40 Au Pui Wan Street, Fo Tan, Hong Kong | | |
| Product Type | Bluetooth/Wi-Fi Wireless Stereo Smart Speaker | | |
| Trade Name | JENSEN, SOLIS, Ocean | | |
| Model Number | JSB-1000, JSB-1000XXXXX, SO-3000, SO-3000XXXXX, SO-6000, SO-6000XXXXX, iStation 20GC, iStation 4GC, iStation 8GC | | |
| FCC ID | LMZ-250737476GC | | |
| Frequency Range | Operate Band | | Frequency Range (MHz) |
| | IEEE 802.11b / 802.11g / 802.11n 2.4GHz 20 | | 2412 - 2462 |
| | IEEE 802.11a U-NII Band I | | 5180 - 5240 |
| | IEEE 802.11a U-NII Band II-A | | 5260 - 5320 |
| | IEEE 802.11a U-NII Band II-C | | 5500 - 5700 |
| | IEEE 802.11a U-NII Band III | | 5745 - 5825 |
| | IEEE 802.1ac / 802.11n 5GHz 20MHz U-NII Band I | | 5180 - 5240 |
| | IEEE 802.1ac / 802.11n 5GHz 20MHz U-NII Band II-A | | 5260 - 5320 |
| | IEEE 802.1ac / 802.11n 5GHz 20MHz U-NII Band II-C | | 5500 - 5700 |
| | IEEE 802.1ac / 802.11n 5GHz 20MHz U-NII Band III | | 5745 - 5825 |
| | IEEE 802.1ac / 802.11n 5GHz 40MHz U-NII Band I | | 5190 - 5230 |
| | IEEE 802.1ac / 802.11n 5GHz 40MHz U-NII Band II-A | | 5270 - 5310 |
| | IEEE 802.1ac / 802.11n 5GHz 40MHz U-NII Band II-C | | 5510 - 5670 |
| | IEEE 802.1ac / 802.11n 5GHz 40MHz U-NII Band III | | 5755 - 5795 |
| | IEEE 802.11ac 80MHz U-NII Band I | | 5210 |
| | IEEE 802.11ac 80MHz U-NII Band II-A | | 5210 |
| | IEEE 802.11ac 80MHz U-NII Band II-C | | 5530 |
| | IEEE 802.11ac 80MHz U-NII Band III | | 5775 |
| | Bluetooth BR/EDR | | 2402 - 2480 |
| | Bluetooth LE | | 2402 - 2480 |
| Antenna information | Model Number | Type | Max. Gain (dBi) |
| | GY 9000 | PCB Antenna | 2.4GHz: 2 |
| | | | 5GHz: 4 |
| Antenna Delivery | All of operate bands are diversity transmit (1TX/1RX). | | |
| Temperature Range | 0 ~ +70℃ | | |
| RF Evaluation | 0.035 mW/cm2 | | |

The above equipment was tested by A Test Lab Techno Corp. For compliance with the requirements set forth in 47 CFR § 2.1091 / 47 CFR § 1.1310. The results of testing in this report apply only to the product/system, which was tested. Other similar equipment will not necessarily produce the same results due to production tolerance and measurement uncertainties

**Trade name / model number and model different description：**

| Model Group | Trade Name | Model Number | Description |
|---|---|---|---|
| 1 | JENSEN | JSB-1000 | JSB-1000XXXXX (where XXXXX denote any printable characters in the ASCII Standard Character Table to represent variances in cosmetics or buyers)<br><br>JSB-1000 and iStation 20GC differ is the model number only. |
| | | JSB-1000XXXXX | |
| | Ocean | iStation 20GC | |
| 2 | SOLIS | SO-3000 | SO-3000XXXXX (where XXXXX denote any printable characters in the ASCII Standard Character Table to represent variances in cosmetics or buyers)<br><br>SO-3000 and iStation 4GC differ is the model number only. |
| | | SO-3000XXXXX | |
| | Ocean | iStation 4GC | |
| | SOLIS | SO-6000 | SO-6000XXXXX (where XXXXX denote any printable characters in the ASCII Standard Character Table to represent variances in cosmetics or buyers)<br><br>SO-6000 and iStation 8GC differ is the model number only. |
| | | SO-6000XXXXX | |
| | Ocean | iStation 8GC | |
| The model group 1 and group 2 differ is the appearance and button. | | | |

## 2. Human Exposure Assessment

Due to the design and installation of this product, it is not possible to conduct SAR evaluation. This is because client either manufactures or supplies the antenna(s) that will be used in the installation of this product. Therefore, this product will be evaluated as a mobile device per 47 CFR § 1.1310 titled “Radiofrequency radiation exposure limits”, generally referred to as MPE limits.

In 47 CFR § 2.1091, paragraph (b) defines a mobile device as “a transmitting device designed to be used in other than fixed locations and to generally be used in such a way that a separation distance of at least 20 cm is normally maintained between the transmitter’s radiating structure(s) and the body of the user or nearby persons. ” This product is intended to be installed into a vehicle such that the unit is physically secured at one location. In the installation guide supplied with the product,

Client has made the following statement: “IMPORTANT: To meet the FCC’s RF Exposure Guidelines, the antenna should be installed so there is at least 20 cm of separation between the body of the user and nearby persons and the antenna”. Based on the installation of the transceiver and the antenna, the transmitters radiating structure is more than 20 cm from the user. Thus, this product is a “mobile device” as defined in section § 2.1091 paragraph (b).

| Exposure evaluation |
| --- |
| $$S = \frac{PG}{4\pi R^2}$$<br>Where<br>S: power density<br>P: power input to the antenna<br>G: power gain of the antenna in the direction of interest relative to an isotropic radiator.<br>R: distance to the center of radiation of the antenna. |

## 3. RF Output Power

The conducted power turn-up tolerance reference manufacturer specification.

| Band | Date Rate (Mbps) | Frequency (MHz) | Average Conducted power (dBm) | |
|---|---|---|---|---|
| | | | ANT-0 | ANT-1 |
| IEEE 802.11b | 1 | 2412 | 16.50 | 16.42 |
| | | 2437 | 16.56 | 16.53 |
| | | 2462 | 16.62 | 16.58 |
| | 2 | 2437 | 16.50 | 16.43 |
| | 5.5 | 2437 | 16.45 | 16.39 |
| | 11 | 2437 | 16.31 | 16.30 |
| IEEE 802.11g | 6 | 2412 | 13.15 | 13.10 |
| | | 2437 | 13.19 | 13.15 |
| | | 2462 | 13.22 | 13.19 |
| | 9 | 2437 | 13.12 | 13.05 |
| | 12 | 2437 | 13.07 | 13.01 |
| | 18 | 2437 | 13.01 | 12.97 |
| | 24 | 2437 | 12.99 | 12.91 |
| | 36 | 2437 | 12.94 | 12.87 |
| | 48 | 2437 | 12.88 | 12.80 |
| | 54 | 2437 | 12.82 | 12.76 |
| IEEE 802.11n 2.4GHz 20MHz | 6.5 | 2412 | 11.80 | 11.75 |
| | | 2437 | 11.98 | 11.94 |
| | | 2462 | 12.04 | 11.97 |
| | 13 | 2437 | 11.92 | 11.85 |
| | 19.5 | 2437 | 11.87 | 11.81 |
| | 26 | 2437 | 11.82 | 11.74 |
| | 39 | 2437 | 11.76 | 11.71 |
| | 52 | 2437 | 11.71 | 11.69 |
| | 58.5 | 2437 | 11.68 | 11.65 |
| | 65 | 2437 | 11.62 | 11.56 |

| Band | Date Rate (Mbps) | Frequency (MHz) | Average Conducted power (dBm) | |
|---|---|---|---|---|
| | | | ANT-0 | ANT-1 |
| IEEE 802.11a | 6 | 5180 | 14.99 | 14.89 |
| | | 5200 | 15.13 | 15.10 |
| | | 5220 | 15.14 | 15.11 |
| | | 5240 | 14.98 | 14.93 |
| | | 5260 | 14.93 | 14.85 |
| | | 5280 | 14.85 | 14.81 |
| | | 5300 | 14.67 | 14.64 |
| | | 5320 | 14.58 | 14.52 |
| | | 5500 | 14.36 | 14.29 |
| | | 5520 | 14.46 | 14.39 |
| | | 5540 | 14.53 | 14.43 |
| | | 5560 | 14.67 | 14.58 |
| | | 5580 | 14.47 | 14.37 |
| | | 5660 | 14.79 | 14.77 |
| | | 5680 | 14.73 | 14.68 |
| | | 5700 | 14.66 | 14.63 |
| | | 5745 | 14.82 | 14.72 |
| | | 5765 | 14.77 | 14.71 |
| | | 5785 | 14.72 | 14.68 |
| | | 5805 | 14.67 | 14.60 |
| | | 5825 | 14.55 | 14.46 |
| | 54 | 5180 | 14.95 | 14.89 |
| | | 5200 | 15.04 | 14.96 |
| | | 5220 | 15.10 | 15.01 |
| | | 5240 | 14.96 | 14.89 |
| | | 5260 | 14.83 | 14.79 |
| | | 5280 | 14.81 | 14.77 |
| | | 5300 | 14.59 | 14.56 |
| | | 5320 | 14.49 | 14.45 |
| | | 5500 | 14.33 | 14.31 |
| | | 5520 | 14.43 | 14.38 |
| | | 5540 | 14.49 | 14.44 |
| | | 5560 | 14.65 | 14.61 |
| | | 5580 | 14.40 | 14.31 |
| | | 5660 | 14.76 | 14.71 |
| | | 5680 | 14.63 | 14.58 |
| | | 5700 | 14.63 | 14.55 |
| | | 5745 | 14.80 | 14.73 |
| | | 5765 | 14.72 | 14.69 |
| | | 5785 | 14.66 | 14.56 |
| | | 5805 | 14.59 | 14.54 |
| | | 5825 | 14.51 | 14.44 |

| Band | Date Rate (Mbps) | Frequency (MHz) | Average Conducted power (dBm) | |
|---|---|---|---|---|
| | | | ANT-0 | ANT-1 |
| IEEE 802.11ac 20MHz | 6.5 | 5180 | 13.82 | 13.78 |
| | | 5200 | 13.61 | 13.58 |
| | | 5220 | 13.56 | 13.47 |
| | | 5240 | 13.53 | 13.48 |
| | | 5260 | 13.28 | 13.21 |
| | | 5280 | 13.35 | 13.32 |
| | | 5300 | 13.26 | 13.18 |
| | | 5320 | 13.29 | 13.25 |
| | | 5500 | 13.13 | 13.10 |
| | | 5520 | 13.21 | 13.17 |
| | | 5540 | 13.24 | 13.15 |
| | | 5560 | 13.14 | 13.11 |
| | | 5580 | 13.26 | 13.22 |
| | | 5660 | 13.32 | 13.28 |
| | | 5680 | 13.45 | 13.36 |
| | | 5700 | 13.52 | 13.49 |
| | | 5745 | 13.61 | 13.57 |
| | | 5765 | 13.51 | 13.49 |
| | | 5785 | 13.38 | 13.35 |
| | | 5805 | 13.35 | 13.27 |
| | | 5825 | 13.43 | 13.37 |
| | 78 | 5180 | 13.78 | 13.70 |
| | | 5200 | 13.58 | 13.48 |
| | | 5220 | 13.48 | 13.46 |
| | | 5240 | 13.51 | 13.46 |
| | | 5260 | 13.24 | 13.22 |
| | | 5280 | 13.33 | 13.23 |
| | | 5300 | 13.21 | 13.16 |
| | | 5320 | 13.25 | 13.21 |
| | | 5500 | 13.04 | 12.99 |
| | | 5520 | 13.15 | 13.12 |
| | | 5540 | 13.17 | 13.13 |
| | | 5560 | 13.07 | 13.01 |
| | | 5580 | 13.17 | 13.09 |
| | | 5660 | 13.29 | 13.25 |
| | | 5680 | 13.38 | 13.33 |
| | | 5700 | 13.43 | 13.35 |
| | | 5745 | 13.58 | 13.51 |
| | | 5765 | 13.44 | 13.42 |
| | | 5785 | 13.30 | 13.25 |
| | | 5805 | 13.31 | 13.23 |
| | | 5825 | 13.38 | 13.32 |

| Band | Date Rate (Mbps) | Frequency (MHz) | Average Conducted power (dBm) | |
|---|---|---|---|---|
| | | | ANT-0 | ANT-1 |
| IEEE 802.11ac 40MHz | 13.5 | 5190 | 12.83 | 12.78 |
| | | 5230 | 12.76 | 12.68 |
| | | 5270 | 12.43 | 12.38 |
| | | 5310 | 12.49 | 12.46 |
| | | 5510 | 12.38 | 12.32 |
| | | 5550 | 12.46 | 12.43 |
| | | 5670 | 12.56 | 12.51 |
| | | 5755 | 12.59 | 12.56 |
| | | 5795 | 12.46 | 12.41 |
| | 180 | 5190 | 12.74 | 12.67 |
| | | 5230 | 12.69 | 12.67 |
| | | 5270 | 12.40 | 12.35 |
| | | 5310 | 12.42 | 12.35 |
| | | 5510 | 12.36 | 12.33 |
| | | 5550 | 12.40 | 12.36 |
| | | 5670 | 12.49 | 12.43 |
| | | 5755 | 12.55 | 12.47 |
| | | 5795 | 12.39 | 12.37 |
| IEEE 802.11ac 80MHz | 29.3 | 5210 | 10.56 | 10.53 |
| | | 5290 | 10.42 | 10.35 |
| | | 5530 | 10.25 | 10.17 |
| | | 5775 | 10.21 | 10.11 |
| | 390 | 5210 | 10.49 | 10.45 |
| | | 5290 | 10.33 | 10.25 |
| | | 5530 | 10.18 | 10.14 |
| | | 5775 | 10.17 | 10.12 |

| Band | Frequency (MHz) | Packet Type | Average Conducted power (dBm) | |
|---|---|---|---|---|
| | | | ANT-0 | ANT-1 |
| Bluetooth BR GFSK | 2402 | DH1 | 9.56 | --- |
| | | DH3 | 9.59 | --- |
| | | DH5 | 9.61 | --- |
| | 2441 | DH1 | 9.00 | --- |
| | | DH3 | 9.03 | --- |
| | | DH5 | 9.07 | --- |
| | 2480 | DH1 | 8.53 | --- |
| | | DH3 | 8.56 | --- |
| | | DH5 | 8.58 | --- |
| Bluetooth EDR $\pi$/4-DQPSK | 2402 | 2DH1 | 7.09 | --- |
| | | 2DH3 | 7.12 | --- |
| | | 2DH5 | 7.14 | --- |
| | 2441 | 2DH1 | 6.52 | --- |
| | | 2DH3 | 6.56 | --- |
| | | 2DH5 | 6.59 | --- |
| | 2480 | 2DH1 | 6.01 | --- |
| | | 2DH3 | 6.05 | --- |
| | | 2DH5 | 6.07 | --- |
| Bluetooth EDR 8DPSK | 2402 | 3DH1 | 7.29 | --- |
| | | 3DH3 | 7.32 | --- |
| | | 3DH5 | 7.35 | --- |
| | 2441 | 3DH1 | 6.74 | --- |
| | | 3DH3 | 6.77 | --- |
| | | 3DH5 | 6.89 | --- |
| | 2480 | 3DH1 | 6.24 | --- |
| | | 3DH3 | 6.27 | --- |
| | | 3DH5 | 6.29 | --- |
| Bluetooth LE | 2402 | --- | 2.30 | 2.10 |
| | 2440 | | 1.84 | 1.65 |
| | 2480 | | 1.41 | 1.20 |

## 4. Test Result

| Band | Data Rate (Mbps) | Frequency (MHz) | Limit (mw) | Distance [R] (cm) | Max tune-up Power (upper limit) [P] (dBm) | ANT Gain (dBi) | Numeric Gain [G] | Duty Cycle | [P] x [G] with Duty cycle [TP] (mW) | Power Density [S] ($mw/cm^2$) |
|---|---|---|---|---|---|---|---|---|---|---|
| IEEE 802.11b | 1 | 2412 | 1 | 20 | 16.70 | 2 | 1.58 | 1 | 73.9 | 0.015 |
| | | 2437 | 1 | 20 | 16.70 | 2 | 1.58 | 1 | 73.9 | 0.015 |
| | | 2462 | 1 | 20 | 16.70 | 2 | 1.58 | 1 | 73.9 | 0.015 |
| IEEE 802.11g | 6 | 2412 | 1 | 20 | 13.30 | 2 | 1.58 | 1 | 33.78 | 0.007 |
| | | 2437 | 1 | 20 | 13.30 | 2 | 1.58 | 1 | 33.78 | 0.007 |
| | | 2462 | 1 | 20 | 13.30 | 2 | 1.58 | 1 | 33.78 | 0.007 |
| IEEE 802.11n 2.4GHz 20MHz | 6.5 | 2412 | 1 | 20 | 12.10 | 2 | 1.58 | 1 | 25.62 | 0.005 |
| | | 2437 | 1 | 20 | 12.10 | 2 | 1.58 | 1 | 25.62 | 0.005 |
| | | 2462 | 1 | 20 | 12.10 | 2 | 1.58 | 1 | 25.62 | 0.005 |

| Band | Data Rate (Mbps) | Frequency (MHz) | Limit (mw) | Distance [R] (cm) | Max tune-up Power (upper limit) [P] (dBm) | ANT Gain (dBi) | Numeric Gain [G] | Duty Cycle | [P] x [G] with Duty cycle [TP] (mW) | Power Density [S] ($mw/cm^2$) |
|---|---|---|---|---|---|---|---|---|---|---|
| IEEE 802.11a | 6 | 5180 | 1 | 20 | 15.20 | 4 | 2.51 | 1 | 83.11 | 0.017 |
| | | 5200 | 1 | 20 | 15.20 | 4 | 2.51 | 1 | 83.11 | 0.017 |
| | | 5220 | 1 | 20 | 15.20 | 4 | 2.51 | 1 | 83.11 | 0.017 |
| | | 5240 | 1 | 20 | 15.20 | 4 | 2.51 | 1 | 83.11 | 0.017 |
| | | 5260 | 1 | 20 | 15.20 | 4 | 2.51 | 1 | 83.11 | 0.017 |
| | | 5280 | 1 | 20 | 15.20 | 4 | 2.51 | 1 | 83.11 | 0.017 |
| | | 5300 | 1 | 20 | 15.20 | 4 | 2.51 | 1 | 83.11 | 0.017 |
| | | 5320 | 1 | 20 | 15.20 | 4 | 2.51 | 1 | 83.11 | 0.017 |
| | | 5500 | 1 | 20 | 15.20 | 4 | 2.51 | 1 | 83.11 | 0.017 |
| | | 5520 | 1 | 20 | 15.20 | 4 | 2.51 | 1 | 83.11 | 0.017 |
| | | 5540 | 1 | 20 | 15.20 | 4 | 2.51 | 1 | 83.11 | 0.017 |
| | | 5560 | 1 | 20 | 15.20 | 4 | 2.51 | 1 | 83.11 | 0.017 |
| | | 5580 | 1 | 20 | 15.20 | 4 | 2.51 | 1 | 83.11 | 0.017 |
| | | 5660 | 1 | 20 | 15.20 | 4 | 2.51 | 1 | 83.11 | 0.017 |
| | | 5680 | 1 | 20 | 15.20 | 4 | 2.51 | 1 | 83.11 | 0.017 |
| | | 5700 | 1 | 20 | 15.20 | 4 | 2.51 | 1 | 83.11 | 0.017 |
| | | 5745 | 1 | 20 | 15.20 | 4 | 2.51 | 1 | 83.11 | 0.017 |
| | | 5765 | 1 | 20 | 15.20 | 4 | 2.51 | 1 | 83.11 | 0.017 |
| | | 5785 | 1 | 20 | 15.20 | 4 | 2.51 | 1 | 83.11 | 0.017 |
| | | 5805 | 1 | 20 | 15.20 | 4 | 2.51 | 1 | 83.11 | 0.017 |
| | | 5825 | 1 | 20 | 15.20 | 4 | 2.51 | 1 | 83.11 | 0.017 |

| Band | Data Rate (Mbps) | Frequency (MHz) | Limit (mw) | Distance [R] (cm) | Max tune-up Power (upper limit) [P] (dBm) | ANT Gain (dBi) | Numeric Gain [G] | Duty Cycle | [P] x [G] with Duty cycle [TP] (mW) | Power Density [S] ($mw/cm^2$) |
|---|---|---|---|---|---|---|---|---|---|---|
| IEEE 802.11ac 20MHz | 6.5 | 5180 | 1 | 20 | 14.00 | 4 | 2.51 | 1 | 63.05 | 0.013 |
| | | 5200 | 1 | 20 | 14.00 | 4 | 2.51 | 1 | 63.05 | 0.013 |
| | | 5220 | 1 | 20 | 14.00 | 4 | 2.51 | 1 | 63.05 | 0.013 |
| | | 5240 | 1 | 20 | 14.00 | 4 | 2.51 | 1 | 63.05 | 0.013 |
| | | 5260 | 1 | 20 | 14.00 | 4 | 2.51 | 1 | 63.05 | 0.013 |
| | | 5280 | 1 | 20 | 14.00 | 4 | 2.51 | 1 | 63.05 | 0.013 |
| | | 5300 | 1 | 20 | 14.00 | 4 | 2.51 | 1 | 63.05 | 0.013 |
| | | 5320 | 1 | 20 | 14.00 | 4 | 2.51 | 1 | 63.05 | 0.013 |
| | | 5500 | 1 | 20 | 14.00 | 4 | 2.51 | 1 | 63.05 | 0.013 |
| | | 5520 | 1 | 20 | 14.00 | 4 | 2.51 | 1 | 63.05 | 0.013 |
| | | 5540 | 1 | 20 | 14.00 | 4 | 2.51 | 1 | 63.05 | 0.013 |
| | | 5560 | 1 | 20 | 14.00 | 4 | 2.51 | 1 | 63.05 | 0.013 |
| | | 5580 | 1 | 20 | 14.00 | 4 | 2.51 | 1 | 63.05 | 0.013 |
| | | 5660 | 1 | 20 | 14.00 | 4 | 2.51 | 1 | 63.05 | 0.013 |
| | | 5680 | 1 | 20 | 14.00 | 4 | 2.51 | 1 | 63.05 | 0.013 |
| | | 5700 | 1 | 20 | 14.00 | 4 | 2.51 | 1 | 63.05 | 0.013 |
| | | 5745 | 1 | 20 | 14.00 | 4 | 2.51 | 1 | 63.05 | 0.013 |
| | | 5765 | 1 | 20 | 14.00 | 4 | 2.51 | 1 | 63.05 | 0.013 |
| | | 5785 | 1 | 20 | 14.00 | 4 | 2.51 | 1 | 63.05 | 0.013 |
| | | 5805 | 1 | 20 | 14.00 | 4 | 2.51 | 1 | 63.05 | 0.013 |
| | | 5825 | 1 | 20 | 14.00 | 4 | 2.51 | 1 | 63.05 | 0.013 |
| IEEE 802.11ac 40MHz | 13.5 | 5190 | 1 | 20 | 13.00 | 4 | 2.51 | 1 | 50.08 | 0.010 |
| | | 5230 | 1 | 20 | 13.00 | 4 | 2.51 | 1 | 50.08 | 0.010 |
| | | 5270 | 1 | 20 | 13.00 | 4 | 2.51 | 1 | 50.08 | 0.010 |
| | | 5310 | 1 | 20 | 13.00 | 4 | 2.51 | 1 | 50.08 | 0.010 |
| | | 5510 | 1 | 20 | 13.00 | 4 | 2.51 | 1 | 50.08 | 0.010 |
| | | 5550 | 1 | 20 | 13.00 | 4 | 2.51 | 1 | 50.08 | 0.010 |
| | | 5670 | 1 | 20 | 13.00 | 4 | 2.51 | 1 | 50.08 | 0.010 |
| | | 5755 | 1 | 20 | 13.00 | 4 | 2.51 | 1 | 50.08 | 0.010 |
| | | 5795 | 1 | 20 | 13.00 | 4 | 2.51 | 1 | 50.08 | 0.010 |

| Band | Data Rate (Mbps) | Frequency (MHz) | Limit (mw) | Distance [R] (cm) | Max tune-up Power (upper limit) [P] (dBm) | ANT Gain (dBi) | Numeric Gain [G] | Duty Cycle | [P] x [G] with Duty cycle [TP] (mW) | Power Density [S] ($mw/cm^2$) |
|---|---|---|---|---|---|---|---|---|---|---|
| IEEE 802.11ac 80MHz | 29.3 | 5210 | 1 | 20 | 10.60 | 4 | 2.51 | 1 | 28.82 | 0.006 |
| | | 5290 | 1 | 20 | 10.60 | 4 | 2.51 | 1 | 28.82 | 0.006 |
| | | 5530 | 1 | 20 | 10.60 | 4 | 2.51 | 1 | 28.82 | 0.006 |
| | | 5775 | 1 | 20 | 10.60 | 4 | 2.51 | 1 | 28.82 | 0.006 |
| Bluetooth BR DH5 | 1 | 2402 | 1 | 20 | 9.80 | 2 | 1.58 | 1 | 15.09 | 0.003 |
| | | 2441 | 1 | 20 | 9.80 | 2 | 1.58 | 1 | 15.09 | 0.003 |
| | | 2480 | 1 | 20 | 9.80 | 2 | 1.58 | 1 | 15.09 | 0.003 |
| Bluetooth LE | 1 | 2402 | 1 | 20 | 2.40 | 2 | 1.58 | 1 | 2.75 | 0.001 |
| | | 2440 | 1 | 20 | 2.40 | 2 | 1.58 | 1 | 2.75 | 0.001 |
| | | 2480 | 1 | 20 | 2.40 | 2 | 1.58 | 1 | 2.75 | 0.001 |

Note:
1. Mobile or fixed location transmitters, minimum separation distance is 20cm, even if calculations indicate MPE distance is less.
2. The Numeric Gain calculated by 10^(ant. Gain(dBi) /10).
3. Each band max power which perform MPE of any configurations.
4. The MPE results are evaluated by lowest data rate for WLAN.
5. The device operating IEEE 802.11 a/b/g/n/ac mode is 1TX (Diversity).
6. The device operating Bluetooth BR/EDR is 1TX (Diversity).
7. The device operating Bluetooth LE is 1TX only.

**Simultaneous MPE：**

Total MPE = Bluetooth MPE + 2.4GHz MPE + 5GHz MPE = 0.003 + 0.015 + 0.017 = 0.035 $mW/cm^2$ < $1mW/cm^2$