## SAR-based exemption for FCC-ID: 2AJYB-ST1955

## Regarding the rule changes per FCC 19-126 Order

Title 47 §1.1307(b)(3)(ii) For multiple RF sources: Multiple RF sources are exempt if:

(B) in the case of fixed RF sources operating in the same time-averaging period, or of multiple mobile or portable RF sources within a device operating in the same time averaging period, if the sum of the fractional contributions to the applicable thresholds is less than or equal to 1 as indicated in the following equation.

$$\sum_{i=1}^{a} \frac{P_i}{P_{th,i}} + \sum_{j=1}^{b} \frac{ERP_j}{ERP_{th,j}} + \sum_{k=1}^{c} \frac{Evaluated_k}{Exposure\ Limit_k} \leq 1 \quad ERP_{20\ cm}\ (\text{mW}) = \begin{cases} 2040f & 0.3\ \text{GHz} \leq f < 1.5\ \text{GHz} \\ 3060 & 1.5\ \text{GHz} \leq f \leq 6\ \text{GHz} \end{cases}$$

## **SAR-based exemption calculation**

Multiple RF sources, calculated for d = 20 cm (module declared for mobile use only by manufacturer)

|              | test report | frequency<br>[MHz] | antenna | output<br>power,<br>conducted<br>[mW] | max.<br>antenna<br>gain<br>[dBi] | max.<br>antenna<br>gain [1] | output<br>power,<br>EIRP<br>[mW] | output<br>power,<br>ERP<br>[mW] | duty cycle<br>[%] | average<br>ERP<br>[mW] | ERP20cm<br>[mW] | fraction of ERP20cm |
|--------------|-------------|--------------------|---------|---------------------------------------|----------------------------------|-----------------------------|----------------------------------|---------------------------------|-------------------|------------------------|-----------------|---------------------|
| Bluetooth    | FG-21/144   | 2480               |         | 3,98                                  | 3,5                              | 2,24                        | 13,93                            | 8,49                            |                   |                        | 3060            | 0,0028              |
| BLE          | FG-21/145   | 2440               |         | 4,27                                  | 3,5                              | 2,24                        | 14,95                            | 9,11                            |                   |                        | 3060            | 0,0030              |
| 2,4 GHz Wifi | FG-21/146   | 2437               | 1       | 87,12                                 | 3,5                              | 2,24                        | 304,92                           | 185,93                          |                   |                        | 3060            | 0,0608              |
| 2,4 GHz Wifi | FG-21/146   | 2437               | 2       | 99,31                                 | 3,5                              | 2,24                        | 347,59                           | 211,94                          |                   |                        | 3060            | 0,0693              |
| 5 GHz U-NII  | FG-21/147   | 5700               | 1       | 31,65                                 | 4                                | 2,51                        | 126,60                           | 77,20                           | 83,13             | 64,17                  | 3060            | 0,0210              |
| 5 GHz U-NII  | FG-21/147   | 5700               | 2       | 32,35                                 | 4                                | 2,51                        | 129,40                           | 78,90                           | 83,13             | 65,59                  | 3060            | 0,0214              |
|              |             |                    |         |                                       |                                  |                             |                                  |                                 |                   |                        | Sum             | 0,1782              |

The sum is less than 1.

## Declaration

I hereby declare that the device with FCC-ID 2AJYB-ST1955 was determined to be exempt from routine evaluation as per Title 47 §1.1307(b)(3)(ii)(B).

Gereld A

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