

# FCC ID: 2AIOIC640P

## Portable device

According to §15.247(e)(i) and §1.1307(b)(1), systems operating under the provisions of this section shall be operated in a manner that ensures that the public is not exposed to radio frequency energy level in excess of the Commission's guidelines.

According to KDB447498 D01 General RF Exposure Guidance V06

The 1-g and 10-g SAR test exclusion thresholds for 100 MHz to 6 GHz at test separation distances  $\leq 50$  mm are determined by:

$$[(\text{max. power of channel, including tune-up tolerance, mW})/(\text{min. test separation distance, mm})] * [ \sqrt{f(\text{GHz})}] \leq 3.0 \text{ for 1-g SAR and } \leq 7.5 \text{ for 10-g extremity SAR, where}$$

$f(\text{GHz})$  is the RF channel transmit frequency in GHz;

Power and distance are rounded to the nearest mW and mm before calculation;

The result is rounded to one decimal place for comparison;

The test exclusions are applicable only when the minimum test separation distance is  $\leq 50$  mm and for transmission frequencies between 100 MHz and 6 GHz.

We used a distance 5mm to calculated

Maximum measured transmitter power:

WIFI :

802.11b/g/n HT20/n HT40:

| Transmit Frequency (GHz) | Mode     | Max Conducted Power (dBm) | tune-up power (dBm) | Max tune-up power (dBm) | Result calculation | 1-g SAR |
|--------------------------|----------|---------------------------|---------------------|-------------------------|--------------------|---------|
| 2.412                    | 11b      | 8.12                      | 8.0±1               | 9.0                     | 2.4673             | 3.0     |
| 2.437                    | 11b      | 8.23                      | 8.0±1               | 9.0                     | 2.4800             | 3.0     |
| 2.462                    | 11b      | 8.07                      | 8.0±1               | 9.0                     | 2.4927             | 3.0     |
| 2.412                    | 11g      | 8.57                      | 8.0±1               | 9.0                     | 2.4673             | 3.0     |
| 2.437                    | 11g      | 8.55                      | 8.0±1               | 9.0                     | 2.4800             | 3.0     |
| 2.462                    | 11g      | 8.40                      | 8.0±1               | 9.0                     | 2.4927             | 3.0     |
| 2.412                    | 11n HT20 | 8.48                      | 8.0±1               | 9.0                     | 2.4673             | 3.0     |
| 2.437                    | 11n HT20 | 8.68                      | 8.0±1               | 9.0                     | 2.4800             | 3.0     |
| 2.462                    | 11n HT20 | 8.56                      | 8.0±1               | 9.0                     | 2.4927             | 3.0     |
| 2.422                    | 11n HT40 | 8.21                      | 8.0±1               | 9.0                     | 2.4724             | 3.0     |
| 2.437                    | 11n HT40 | 8.25                      | 8.0±1               | 9.0                     | 2.4800             | 3.0     |
| 2.452                    | 11n HT40 | 8.17                      | 8.0±1               | 9.0                     | 2.4877             | 3.0     |

BT DSS:

| Transmit Frequency (GHz) | Mode       | Measured power (dBm) | Tune-up power (dBm) | Max tune-up power (dBm) | Result calculation | 1-g SAR |
|--------------------------|------------|----------------------|---------------------|-------------------------|--------------------|---------|
| 2.402                    | GFSK       | 4.335                | 4.0±1               | 5.0                     | 0.9802             | 3.0     |
| 2.441                    | GFSK       | 4.425                | 4.0±1               | 5.0                     | 0.9881             | 3.0     |
| 2.480                    | GFSK       | 3.746                | 4.0±1               | 5.0                     | 0.9960             | 3.0     |
| 2.402                    | 1/4Π-DQPSK | 2.339                | 2.0±1               | 3.0                     | 0.6185             | 3.0     |
| 2.441                    | 1/4Π-DQPSK | 2.495                | 2.0±1               | 3.0                     | 0.6235             | 3.0     |
| 2.480                    | 1/4Π-DQPSK | 1.955                | 2.0±1               | 3.0                     | 0.6284             | 3.0     |
| 2.402                    | 8DPSK      | 2.910                | 3.0±1               | 4.0                     | 0.7786             | 3.0     |
| 2.441                    | 8DPSK      | 3.058                | 3.0±1               | 4.0                     | 0.7849             | 3.0     |
| 2.480                    | 8DPSK      | 2.510                | 3.0±1               | 4.0                     | 0.7911             | 3.0     |

Conclusion:

For the max result :  $2.4927 \leq 3.0$  for 1-g SAR extremity SAR, No SAR is required.

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