MPE ESTIMATION
FCC ID: 2AJVKTAB9

## 1. Standard Requirement

According to §15.247 (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.

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

[(*max. power of channel, including tune-up tolerance, mW*)/(*min. test separation distance, mm*)] · [$\sqrt{f_{(GHz)}}$] ≤ 3.0 for 1-g SAR and ≤ 7.5 for 10-g extremity SAR,[16] where

- $f_{(GHz)}$ is the RF channel transmit frequency in GHz
- Power and distance are rounded to the nearest mW and mm before calculation[17]
- The result is rounded to one decimal place for comparison

The test exclusions are applicable only when the minimum *test separation distance* is ≤ 50 mm and for transmission frequencies between 100 MHz and 6 GHz. When the minimum *test separation distance* is < 5 mm, a distance of 5 mm is applied to determine SAR test exclusion.

Routine SAR evaluation refers to that specifically required by § 2.1093, using measurements or computer simulation. When routine SAR evaluation is not required, portable transmitters with output power greater than the applicable low threshold require SAR evaluation to qualify for TCB approval.

Result = $P\sqrt{F}/D$

P = Maximum turn-up power in mW

F = Channel frequency in GHz

D = Minimum test separation distance in mm

2. Test Result

| Modulation | CH | Freq (MHz) | Conducted Power (dBm) | Tune Up Power (dBm) | Max Tune Up Power (dBm) | Max Tune Up Power (mW) | Result | Limit |
|---|---|---|---|---|---|---|---|---|
| 802.11b | Low | 2412 | 8.86 | 8.0±1 | 9.0 | 7.94 | 2.47 | 3 |
| | Mid | 2437 | 8.78 | 8.0±1 | 9.0 | 7.94 | 2.48 | 3 |
| | High | 2462 | 8.77 | 8.0±1 | 9.0 | 7.94 | 2.49 | 3 |
| 802.11g | Low | 2412 | 8.33 | 8.0±1 | 9.0 | 7.94 | 2.47 | 3 |
| | Mid | 2437 | 8.28 | 8.0±1 | 9.0 | 7.94 | 2.48 | 3 |
| | High | 2462 | 8.27 | 8.0±1 | 9.0 | 7.94 | 2.49 | 3 |
| 802.11n (HT20) | Low | 2412 | 7.58 | 8.0±1 | 9.0 | 7.94 | 2.47 | 3 |
| | Mid | 2437 | 7.62 | 8.0±1 | 9.0 | 7.94 | 2.48 | 3 |
| | High | 2462 | 7.60 | 8.0±1 | 9.0 | 7.94 | 2.49 | 3 |
| Note: Conducted Power see the test report UNIA2018071023-2FR-01 | | | | | | | | |

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