

RF Exposure

FCC ID: MTD-0030

These calculations are based on the highest EIRP possible from the EUT, measured in the radiated mode.

EIRP was calculated using the following.

EIRP = $(E \times d)^2/30$, where:

- **E** = electric field strength in V/m,
- **d** = measurement distance in meters (m).

It was measured to be 92.5 dBuV/m at 2402 MHz at 3 meters or -2.7 dBm (0.53 mW) EIRP.

KDB 447498 D04 Interim General RF Exposure Guidance v01, Section 2.1.2: 1mW Test Exemption

As per Section 2.1.2: of KDB 447498 D04 v01:

“Per § 1.1307(b)(3)(i)(A), a single RF source is exempt RF device (from the requirement to show data demonstrating compliance to RF exposure limits, as previously mentioned) if the available maximum time-averaged power is no more than 1 mW, regardless of separation distance. This exemption applies to all operating configurations and exposure conditions, for the frequency range 100 kHz to 100 GHz, regardless of fixed, mobile, or portable device exposure conditions. This is a standalone exemption, and it cannot be applied in conjunction with any other test exemption.”

Band	Freq. (MHz)	Max Power EIRP (dBm)	Tune up Tolerance (dB)	Max Power (mW)	Duty Cycle %	Average EIRP (mW)
2.4G	2402	-2.7	2.5	0.95	10	0.095

As can be seen in the table above, the average power is much less than 1 mW, therefore it is exempt from testing. The product is stand-alone transmitter

A 10% duty cycle was used for the calculation. In actual use, it will be lower.

SAR EXCLUSION RESULT

In accordance with FCC KDB Publication 447498 D01 V05R06 Clause 4.3.1 a),

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

$[(\text{max. power, mW})/(\text{min. separation distance, mm})] \times [\sqrt{f_{\text{(GHz)}}}] \leq 3.0$ for 1-g extremity SAR, where

• $f_{\text{(GHz)}}$ is the RF channel transmit frequency in GHz

Judgement: The product is exempt from SAR testing