

FCC ID: QZ9-FINDMATE  
 Model: FM01

**SAR test exclusion according to KDB447498 (General RF Exposure Guidance v05r02)**

Equation from Chapter 4.3.1: Standalone SAR test exclusion considerations (page 11 and ff).

(1) Standalone SAR test exclusion for 100 MHz to 6 GHz at test separation distances ≤ 50mm

$$P \leq (\text{Threshold}_{1-g;10-g}) * d_{\text{separation}} / f_{(\text{GHz})}^{1/2}$$

where

- P max. Power of channel (incl. tune-up tolerance [mW])
- Threshold<sub>1-g;10-g</sub> is 3 for 1-g; 7.5 for 10-g
- d<sub>separation</sub> is the min. test separation distance in mm (5 mm is used if the distance is less)
- f<sub>(GHz)</sub> is the RF channel transmit frequency in GHz

The table below gives the calculated maximal power that could be used for source based time averaged conducted power, adjusted for tune up tolerance. If this is below the calculated value SAR testing is obsolete.

Bluetooth Low Energy:

f in [MHz]	d <sub>separation</sub> [mm]	Threshold <sub>1-g;10-g</sub>	Powerlimit [mW]	P <sub>max-declared</sub> [mW]	Exclusion
2402,00	5	3	9,7	0,05	yes
2440,00	5	3	9,6	0,05	yes
2480,00	5	3	9,5	0,05	yes

Note: P<sub>max-declared</sub> = Average Power Conducted (Peak Power - Duty cycle correction factor) + Tune up tolerance  
 Peak power declared: 10 dBm  
 According to customer's declaration from the document "Information about BT transmission\_05.PDF", the worst case duty cycle occurs after pressing the device button:

- TX on-time: 0.69 ms
- TX off-time: 199.31 ms
- Duty cycle: 0.69 ms / (0.69 ms + 199.31 ms) = 0.00345 = 0.345%
- Duty cycle correction factor: -10\*log(0.00345) = 24.6 dB

Tune up tolerance declared: +2dB

Co-location: no

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