



RF EXPOSURE ANALYSIS

<u>Product</u>	<u>FCC ID</u>
BT121 Bluetooth Module	QOQBT121

Analysis for FCC, portable use

Standalone SAR test exclusion considerations are defined in the KDB 447498 Chapter 4.3.1. 1-g head or body SAR exclusion threshold is defined with formula

$$[(\text{max. power of channel, including tun-up tolerance, mW}) / (\text{min. separation distance, mm.})]^* (\sqrt{f(\text{GHz})}) \leq 3$$

For BT121 the maximum TX power including tolerances is 13 mW and maximum TX frequency is 2.48 GHz. Using separation distance of 7 mm with the formula above results

$$\left(\frac{13\text{mW}}{7\text{mm}} \right) * \sqrt{2.48} = 2.92 < 3$$

For portable use the SAR exclusion condition is fulfilled and SAR evaluation is not required for BT121 with 7 mm separation distance or more. If the separation distance is less than 7 mm additional SAR evaluation will be required.

Analysis for FCC, mobile use

$$S = \frac{E.I.R.P}{4\pi R^2} = \frac{13\text{mW}}{4\pi * (20\text{cm})^2} = 0.0026\text{mW} / \text{cm}^2$$

E.I.R.P (mW)	Evaluation distance R (cm)	Power density S at prediction frequency (mW/cm ²)	MPE limit for uncontrolled exposure at prediction frequency (mW/cm ²)	Verdict
13	20	0.0026	1	PASS