

RF EXPOSURE ANALYSIS

Product	FCC ID
WT41-E Bluetooth Module	QOQWT41E

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

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

For WT41 the rated TX power is 39.3 mW and maximum TX frequency is 2.48 GHz. Using separation distance of 21 mm with the formula above results

$$\left(\frac{39mW}{21mm} \right) * \sqrt{2.48} = 2.92 < 3$$

Thus for portable use the SAR exclusion condition is fulfilled and SAR evaluation is not required for separation distance of 21 mm or more.

The module is sold only for OEM integrators and guidance for integrating the module to the end product and for keeping the minimum separation distance between the radiator and human body is given in the user guide.

Analysis for FCC, mobile use

$$S = \frac{E.I.R.P}{4\pi R^2} = \frac{69mW}{4\pi * (20cm)^2} = 0.008mW / cm^2$$

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
69	20	0.008	1	PASS



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