

RF exposure information for SAR test exclusion

The Wi-Fi modular transmitter as approval under FCC ID: 2AC7Z-ESPWROOM32DC will be used in portable device (130H/130W).

The maximum conducted output power of the module is limited to 19 dBm according to the manufacturer manual.

Maximum declare transmitter power obtained from the User Manual:

P _{out} EIRP		Maximum antenna gain, dBi	P _{out} conducted	
dBm	mW		dBm	mW
22.71	186.63	3.71	19	79.43

According to KDB 447498 D01 v05r02 section 4.3.1 the exemption limit for 100 MHz to 6 GHz at ≤ 50 mm distance is determined as follow:

[(max. power including tune-up tolerance, mW) / (min. test separation distance, mm)] x [√f(GHz)] ≤ 3.0 for 1-g whole body SAR

SAR test exclusion threshold for frequency 2462 MHz at minimum separation distance of 50 mm:

$$3 \times 50 \text{ mm} / (\sqrt{2.462}) = 95.60 \text{ mW}$$

According to KDB 447498 D01 v05r02 the device is excluded from SAR evaluation.