

 Spectrum Research & Testing Lab., Inc. No.167,Ln. 780, Shan-Tong Rd., Ling 8, Shan-Tong Li, Chung-Li Dist., Taoyuan City 320, Taiwan (R.O.C.)	RF Exposure Evaluation	Reference No.: A23062901 Report No.: FCCA23062901 FCC ID : 2BDFK-N280 Date: Aug. 23, 2023
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Subject: FCC Application for FCC ID: **2BDFK-N280**

According to 447498 D01 General RF Exposure Guidance v06

The 1-g and 10-g SAR test exclusion thresholds for 100 MHz to 6 GHz at test separation distances ≤ 50 mm are determined by:

Devices operating in standalone mobile device, the test exclusion thresholds for test minimum test separation distance ≥ 20 cm.

$[(\text{max. power of channel, including tune-up tolerance, mW}) / (\text{min. test separation distance, mm})]$ ·

$[\sqrt{f(\text{GHz})}] \leq 3.0$ for 1-g SAR and ≤ 7.5 for 10-g extremity SAR, where

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

Power and distance are rounded to the nearest mW and mm before calculation

The result is rounded to one decimal place for comparison

$$\text{eirp} = \text{pt} \times \text{gt} = (\text{EXd})^2 / 30$$

where:

pt = transmitter output power in watts,

gt = numeric gain of the transmitting antenna (unitless),

E = electric field strength in V/m --- $10^{((\text{dBuV/m})/20)} / 10^6$

d = measurement distance in meters (m) --- 3m

$$\text{So pt} = (\text{EXd})^2 / (30 \times \text{gt})$$

Field strength = 94.55 dBuV/m @3m (2437 MHz) (Test Report page 48)

Ant gain = 2.0 dBi ;so Ant numeric gain = $10^{(3.07 / 10)} = 1.59$

$$\text{So pt} = \{ \{ [10^{(94.55 / 20)} / 10^6] \times 3 \}^2 / (30 \times 1.59) \} \times 1000 \text{ mW} = 0.5397 \text{ mW}$$

$$\text{So } (0.5397 \text{ mW} / 200\text{mm}) \times \sqrt{2.437} = 0.0042 < 3$$

Then SAR testing/evaluation is not required.