

SAR-based exemption for FCC-ID: 2AD4M-S4000

Regarding the rule changes per FCC 19-126 Order

Title 47 §15.247

(i) Radio frequency devices operating under the provisions of this part are subject to the radio frequency radiation exposure requirements specified in §§1.1307(b), 1.1310, 2.1091, and 2.1093 of this chapter, as appropriate. Applications for equipment authorization of mobile or portable devices operating under this section must contain a statement confirming compliance with these requirements. Technical information showing the basis for this statement must be submitted to the Commission upon request.

Title 47 §1.1307(b)(3)(i):

(3) Determination of exemption. (i) For single RF sources (i.e., any single fixed RF source, mobile device, or portable device, as defined in paragraph (b)(2) of this section): A single RF source is exempt if:

(A) The available maximum time-averaged power is no more than 1 mW, regardless of separation distance. This exemption may not be used in conjunction with other exemption criteria other than those in paragraph (b)(3)(ii)(A) of this section. Medical implant devices may only use this exemption and that in paragraph (b)(3)(ii)(A);

(B) Or the available maximum time-averaged power or effective radiated power (ERP), whichever is greater, is less than or equal to the threshold P_{th} (mW) described in the following formula. This method shall only be used at separation distances (cm) from 0.5 centimeters to 40 centimeters and at frequencies from 0.3 GHz to 6 GHz (inclusive). P_{th} is given by:

$$P_{th} \text{ (mW)} = \begin{cases} ERP_{20 \text{ cm}} (d/20 \text{ cm})^x & d \leq 20 \text{ cm} \\ ERP_{20 \text{ cm}} & 20 \text{ cm} < d \leq 40 \text{ cm} \end{cases}$$

Where

$$x = -\log_{10} \left(\frac{60}{ERP_{20 \text{ cm}} \sqrt{f}} \right) \text{ and } f \text{ is in GHz;}$$

and

$$ERP_{20 \text{ cm}} \text{ (mW)} = \begin{cases} 2040f & 0.3 \text{ GHz} \leq f < 1.5 \text{ GHz} \\ 3060 & 1.5 \text{ GHz} \leq f \leq 6 \text{ GHz} \end{cases}$$

d = the separation distance (cm);

Effective Radiated Power exemption calculation


Frequency [MHz]	Transmitter Power (EIRP) [mW]	Effective Radiated Power (ERP) [mW]	P _{th} [mW]
2406.1	0.85	0.52	2.78
2438.1	0.63	0.38	2.75
2474.1	0.44	0.27	2.72

ERP is below P_{th}.

Declaration

I hereby declare that the device with FCC-ID 2AD4M-S4000 was determined to be exempt from routine evaluation as per Title 47 §1.1307(b)(3)(i)(A).

Dr. techn. Gerald Artner
TÜV AUSTRIA Services GmbH
Vienna, Austria, 27th May 2021

A handwritten signature in black ink, appearing to read "Gerald Artner", written in a cursive style.