
American Aires Inc.
Research and Development department

REPORT

**R&D: Evaluation of the effective range of the
LIFETUNE Pets (2020 model)**

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The properties of LIFETUNE Pets are due to its ability to stabilize the functional state of the organism of animals (pets) as an open physical system that constantly exchanges energy with the environment, permeated by technogenic electromagnetic fields through their coherent transformation [1], [2].

An electromagnetic field converted using the LIFETUNE Pets is a stationary coherent wave superposition with a corresponding energy density characterized by intensity I (see table). Calculations were made for the frequency 2.4 GHz, which is standard for Wi-Fi radiation and 4G mobile communications, and for the frequency 28 GHz, which is standard for 5G. The effectiveness of the LIFETUNE Pets was estimated based on the intensity of the field transformed into a coherent form, determining the zone of maximum action.

The stable electromagnetic field generated by the LIFETUNE Pets has several fractal levels due to the number of ring elements in the topological circuit of its microprocessor and the size of the circuit itself [3]. Outside the zone of maximum action, the density of the highly coherent field begins to decrease and, accordingly, the effectiveness of the device decreases.

Table of the basic parameters of the LIFETUNE Pets

Diameter of the 16S5G microprocessor circuit	0.01 m
Number of elements in the topological circuit of the microprocessor	1419857
Device size	0.03 m
Radius of the maximum effective zone of influence	0.18 m
Intensity I of the EM field in the maximum effective zone for 4G	$5.5 \cdot 10^3 \text{ W/m}^2$
Intensity I of the EM field in the maximum effective zone for 5G	$1.6 \cdot 10^7 \text{ W/m}^2$

Fig. 1 shows the scale of the drop in the LIFETUNE Pets's effectiveness using the example of its interaction with Wi-Fi radiation at a frequency of 2.4 GHz ($I \sim 0.33 \text{ W/m}^2$).

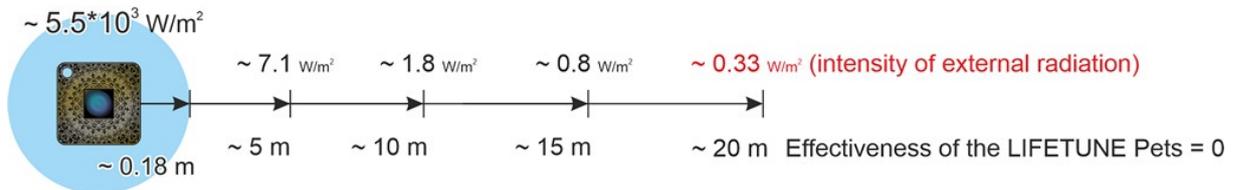


Fig. 1. Scale of the drop in the effectiveness of protection from the LIFETUNE Pets from EMR at a frequency of 2.4 GHz (4G).

Fig. 2 shows the scale of the drop in the LIFETUNE Pets's effectiveness using the example of its interaction with Wi-Fi radiation at a frequency of 28 GHz ($I \sim 6146.67 \text{ W/m}^2$).

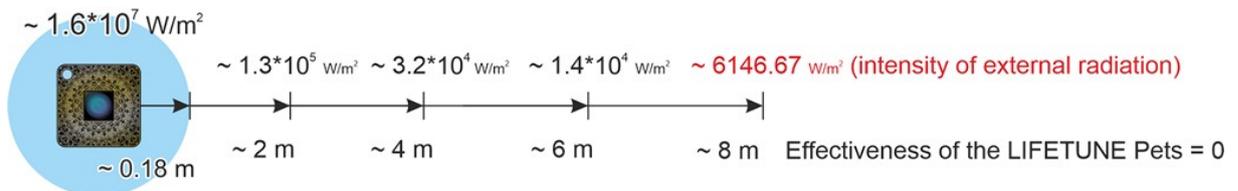


Fig. 2. Scale of the drop in the effectiveness of protection from the LIFETUNE Pets from EMR at a frequency of 28 GHz (5G).

When the protective electromagnetic field's intensity decreases to the parameters of the intensity of external radiation, the LIFETUNE Pets's effectiveness drops to zero.

If there are several external sources of radiation, it is necessary to additionally use a more powerful devices (LIFETUNE Personal or LIFETUNE Room) or several devices LIFETUNE Pets, since the external radiation's total intensity dramatically reduces the LIFETUNE Pets's zone of effective influence.

The decrease in effectiveness is determined by the decrease in the intensity of the protective EM field, which is inversely proportional to the square of the distance from the device (LIFETUNE Pets) and is estimated using the following formula:

$$I \sim \frac{1}{R^2}.$$

At a distance of ~ 5 m from the center of the LIFETUNE Pets (for EMR at a frequency of 2.4 GHz), the intensity of the protective field reaches a value at which the effectiveness drops to a critical level (see Figure 3), determining the boundary of a highly coherent spherical field with a diameter of ~ 10 m.

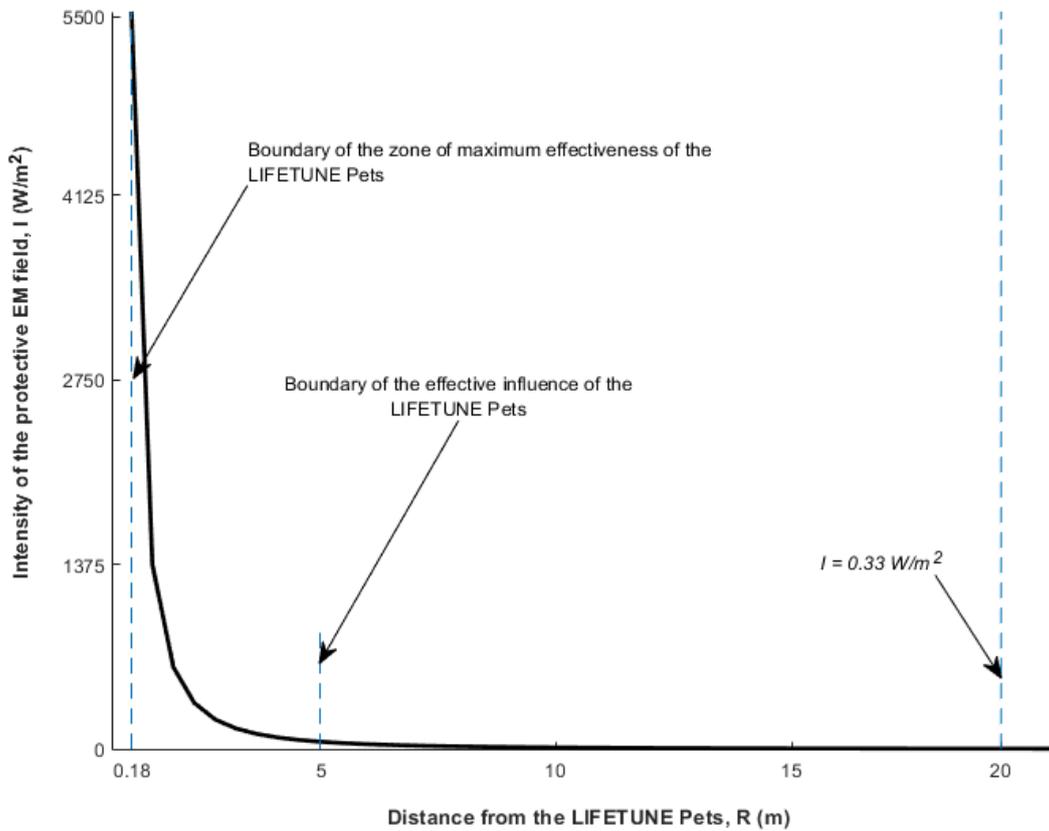


Fig. 3. Graph of the effectiveness of the LIFETUNE Pets as a function of distance for EMR at a frequency of 2.4 GHz.

Thus, the recommended coverage diameter of the effective influence of the LIFETUNE Pets is ~ 10 m.

At a distance of ~ 2 m from the center of the LIFETUNE Pets (for EMR at a frequency of 28 GHz), the intensity of the protective field reaches a value at which the effectiveness drops to a critical level (see Figure 4), determining the boundary of a highly coherent spherical field with a diameter of ~ 4 m.

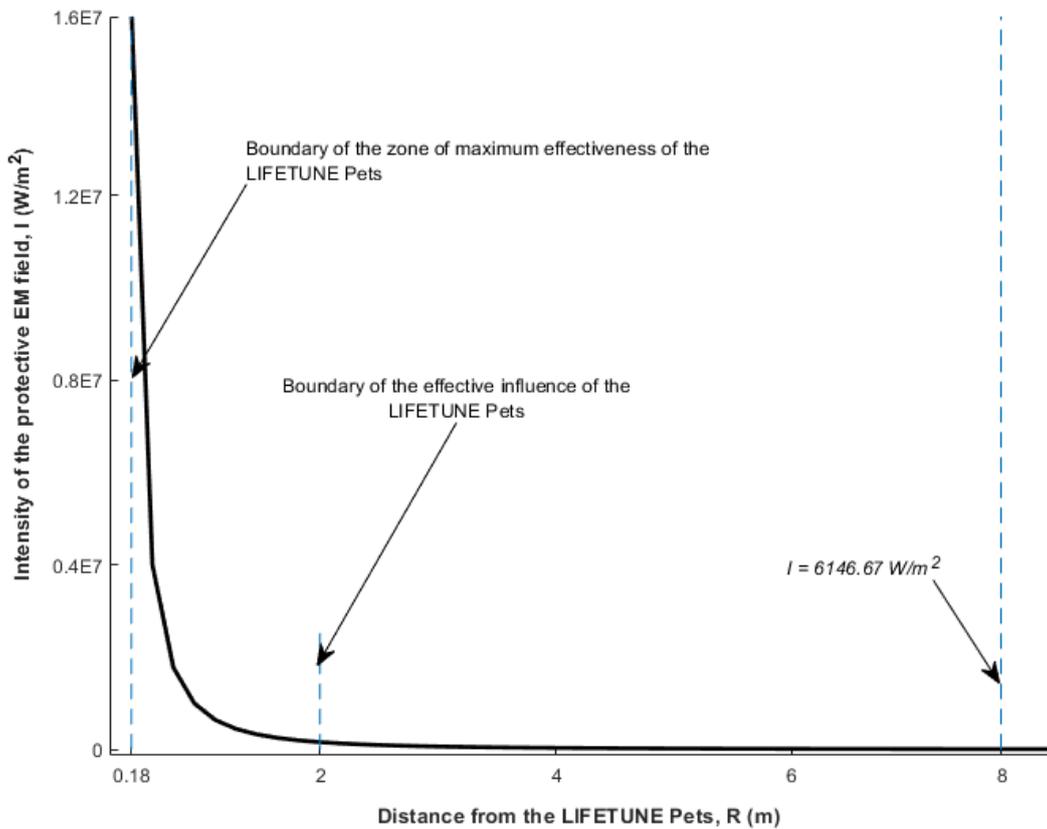


Fig. 4. Graph of the effectiveness of the LIFETUNE Pets as a function of distance for EMR at a frequency of 28 GHz.

Thus, the recommended coverage diameter of the effective influence of the LIFETUNE Pets is ~ 4 m.

The indicated distances are reached in open space.

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3. Serov I.S., Korshunov K.A., Soltovskaya I.A., Shamko T.V., Kopyltsov A.V., A. Yukna R&D: Calculation of the strength and intensity of the electromagnetic field during the interaction of electromagnetic radiation at a frequency of 28 GHz (Wi-Fi 5G) with an Aires 16S5G resonator (microprocessor), which is used in the LIFETUNE Device and LIFETUNE Pets (2020 model), 2020.