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Reply to an OET Inquiry Response

Currently Displaying Inquiry Tracking Number: 340466

Contact Information:

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Country:

Inquiry Details on 12/23/2014:

First category: RF Exposure *
Second category: SAR (RF Exposure)
Third category:
Subject: Low transmission duty factor devices
Inquiry:

Dear Sir/Madam,

Here is a location tracker, it supports GSM850/1900 without any voice mode, when the device is power on, it stays on stand by mode. If I press the SOS button, the device will send the location message through the GSM network every 30 seconds, then I can see the message through a APP or in the computer.

The time of a frame for GSM network is 4.615ms, every frame contains 8 timeslots, for this device the duty cycle is less than $10 \times \lg(4.615/30000) = -38\text{dB}$, the Max. power of the device is 34dBm, so the average power of the device is less than -4dBm.

So for the SAR test, whether can the KDB 447498 D01 General RF Exposure Guidance v05r02 section 6.3. "Low transmission duty factor devices" applies? and not need to do SAR test?

---Reply from Customer on 01/08/2015---

Dear Sir/Madam,

I am urgent to need your guidance, please give some advice, thanks!

FCC Response on 01/09/2015:

It is appropriate to consider duty factor analysis in lieu of SAR testing for tracking devices that do not provide voice-mode communication. Please provide the following information:

- 1] Does this device provide for continuous tracking?
- 2] What is the minimum time (shortest interval) between transmissions?
- 3] What is the maximum transmission time?
- 4] Does the GSM module have a FCC ID?
- 5] What is the maximum number of slots utilized; for example, is it GPRS Class 10?

ERP power is generally not useful; we need to know average conducted power. Unless it can be shown otherwise, since this is a small device that can be placed almost anywhere, we will need to use a default minimum test separation distance of 5mm in order to qualify for SAR test exclusion.

---Reply from Customer on 01/12/2015---

Dear Sir/Madam,

- 1] Does this device provide for continuous tracking?
No,when the device is power on,it stays on stand by mode. If I press the SOS button,the device will send the location message(SMS) through the GSM network every 30 seconds
- 2] What is the minimum time (shortest interval) between transmissions?
The minimum time (shortest interval) between transmissions is 30 seconds
- 3] What is the maximum transmission time?
The maximum transmission time is 0.576875 ms
- 4] Does the GSM module have a FCC ID?
No
- 5] What is the maximum number of slots utilized; for example, is it GPRS Class 10?
It supports GSM only,the device send the location only through SMS

The maximum conducted power of GSM850 is 32.56dBm,and maximum tune up limit is 34dBm;

The maximum conducted power of GSM1900 is 30.43dBm,and maximum tune up limit is 32dBm.

please see the above information and give your value advice,thanks!

---Reply from Customer on 01/19/2015---

Dear Sir/Madam,

I'am urgent to need your guidance,please give some advice ,thanks!

FCC Response on 01/20/2015:


















Because of the low duty factor for this device, as communicated through this KDB inquiry, it has been determined that SAR testing can be excluded.

Proceed with TCB consultation and have the TCB submit a Permit-But-Ask (PBA) for this device. The TCB will need to reference KDB 340466 in the PBA. For certification purposes, instead of a SAR report, an attachment will serve as the RF exposure exhibit in the FCC Form 731. The attachment will explain why this device has been excluded from SAR testing by showing that the source-based time-averaged conducted output power meets the standalone SAR test exclusion threshold in KDB 447498, Section 4.3.1. Use a default minimum test separation distance of 5mm to qualify for SAR test exclusion.

For an example of the documentation required, please review the RF exposure exhibit presented in TC 718299 for FCC ID: YQD-GL300.

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