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Contact Information:

Customer First Name: Evan

Customer Last Name: Mi

Telephone Number: +86(0) 755 2532 8630

Extension:

E-mail Address: evan.mi@sgs.com

Address:

Line 1:

Line 2:

P.O. Box:

City:

State:

Zip Code:

Country:

Inquiry Details on 07/17/2017:

First category: RF Exposure *

Second category: SAR (RF Exposure)

Third category:

Subject: handheld thermal Monocular SAR

Inquiry: Dear Sir/Madam,

Here is a handheld thermal Monocular with WIFI. There is a battery in it, so we can take it anywhere. The maximum average power of WIFI is 14dBm, so we consider whether it need to do SAR test for the bellow position.

1, For head position, Per KDB447498D01v06 section 4.3.1 and the antenna location, it is no need to be tested.

2, For body position, it used with the neck belt , so the wifi does not transmit normally, so this position is no need to be tested.

3, For the hand(extremity) position, Per KDB447498D01v06 section 4.3.1 and the antenna location, it is need to be tested, and due the power is 14dBm, a test separation distance of 0 mm is required between the phantom and all surfaces and edges with a transmitting antenna located within 5 mm from that surface or edge.

Whether does the SAR test proposal is OK, please give us your precious advise, thanks!

The antenna location as bellow figure:

FCC Response on 07/17/2017:

Thank you for your inquiry. Just because a device supports a neck belt, lanyard, or other body-worn accessory does not necessarily exempt the device from body-worn SAR testing. As indicated in FCC KDB Publication 447498 D01 General RF Exposure Guidance v06, Section 4.2.2, "Devices that support transmission while used with body-worn accessories must be tested for body-worn accessory SAR compliance...Devices that are designed to operate on the body of users using lanyards and straps without requiring additional body-worn accessories must be tested for SAR compliance using a conservative minimum test separation distance ≤ 5 mm to support compliance." In your inquiry you state, "For body position, it used with the neck belt , so the wifi does not transmit normally". How is this condition maintained? What prevents the wifi from transmitting normally when on the neck belt? If the wifi can transmit normally while on the neck belt, the device should be tested for 1-g body-worn SAR compliance using a test separation distance of ≤ 5 mm. Ideally, a test separation distance of 0 mm should be used since most likely the device will be hanging directly against the chest/body of the user. If the device is evaluated for 1-g body-worn SAR at 0 mm, SAR testing for the extremity exposure condition will not be necessary since the 1-g body-worn SAR at 0 mm is more conservative and will cover the extremity exposure condition.

---Reply from Customer on 07/17/2017---

Dear Sir/Madam,

Thank you ! so your advice is I only need to test at the body positon with 0mm separation?

FCC Response on 07/17/2017:

Yes. If head SAR testing is excluded based on the standalone SAR test exclusion found in FCC KDB Publication 447498 D01 General RF Exposure Guidance v06, Section 4.3.1, you will on have to test for 1-g body-worn SAR at 0 mm for all edges/sides that require testing. Since the 1-g body-worn SAR uses a more conservative limit than the 10-g extremity SAR, the 1-g body-worn SAR will cover the extremity testing.

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Federal Communications Commission
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Washington, DC 20554
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Fax: 202-418-0232
E-mail: fccinfo@fcc.gov

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