

RE: RE: SAR Testing Inquiry - Pet Locator Device (Neck-Worn)

Certification Bureau / Bureau homologation (IC)

发给 toby858@tobylab.cn, Certification Bureau / Bureau homologation (IC)

2026-05-20 21:44 隐藏信息

发件人:
Certification Bureau / Bureau homologation (IC) <certificationbureau-bureauhomologation@ised-isde.gc.ca>

收件人: toby858@tobylab.cn <toby858@tobylab.cn>,
Certification Bureau / Bureau homologation (IC) <certificationbureau-bureauhomologation@ised-isde.gc.ca>

时间: 2026年5月20日 (周三) 21:44
大小: 671 KB

Hello,

The attachments meet the requirements.

Best Regards,

Engineering, Planning and Standards Branch

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From: toby858@tobylab.cn <toby858@tobylab.cn>

Sent: May 14, 2026 10:54 PM

To: Certification Bureau / Bureau homologation (IC) <certificationbureau-bureauhomologation@ised-isde.gc.ca>

Subject: 回复 : RE: SAR Testing Inquiry - Pet Locator Device (Neck-Worn)

Good Day :

Could you please confirm whether the statement provided by the client meets the requirements? thank You

Best Regards,

Ivan Su

EMC Supervisor

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发件人 : [Certification Bureau / Bureau homologation \(IC\)](#)

发送时间 : 2026-05-08 02:31

收件人 : toby858@tobylab.cn; [Certification Bureau / Bureau homologation \(IC\)](#)

主题 : RE: RE: SAR Testing Inquiry - Pet Locator Device (Neck-Worn)

Hello,

In accordance with RSS-102 Issue 6, Sections 4 and 6.1 along with RSS-102.SAR.Meas Issue 2 Section 5.3.c., the following clarifications and compliance measures shall be provided for product certification to substantiate the applied duty-cycle reduction for RF exposure:

1. Conservative Duty-Cycle Determination

A conservative duty-cycle value has been established based on measured uplink transmission behavior while accounting for the worst-case network conditions.

The duty-cycle calculation includes margin for additional uplink activity resulting from LTE scheduling behavior such as retransmissions (e.g., HARQ), MAC/RLC control signalling, and network congestion consistent with poor radio conditions. The maximum duty cycle used in the RF exposure evaluation therefore represents an upper-bound time-averaged transmission scenario for normal operation of the device.

2. Manufacturer Attestation and Lifecycle Control

An attestation from the manufacturer will be included in the certification package stating that the maximum duty cycle will be limited for cellular and Bluetooth LE transmissions to not exceed the value used in the SAR exclusion and RF exposure assessment for the lifetime of the product.

The attestation will further state that any firmware modification or functional change that could increase the maximum duty cycle beyond the certified value will trigger a re-evaluation of RF exposure compliance in accordance with RSS-102 Issue 6 and RSP-100 Issue 12 via a C3PC.

3. User-Accessible Operating Constraints (RSS-102 Issue 6, Sections 4.5)

The user manual will explicitly state that the minimum location refresh interval in live-tracking operation is limited to no less than 4 seconds.

This ensures that user-configurable operation does not permit transmission behavior exceeding the duty-cycle assumptions used in the RF exposure SAR assessment.

Best Regards,

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From: toby858@tobylab.cn <toby858@tobylab.cn>

Sent: May 6, 2026 10:10 PM

To: Certification Bureau / Bureau homologation (IC) <certificationbureau-bureauhomologation@ised-isde.gc.ca>

Subject: 回复: RE: SAR Testing Inquiry - Pet Locator Device (Neck-Worn)

Good Day:

Please find our response below, and let us know if you need any further clarification.

Q1: How was the base station simulator configured to evaluate the duty cycle?

A: The CMW500 was configured as an LTE eNodeB with uplink dynamic scheduling enabled to emulate real network behavior, where resources are allocated based on UE demand.

The UE is attached and in RRC Connected state and using cDRX (while maintaining context), simulating live network activity.

To create worst-case RF conditions, uplink TPC was set to maximum, forcing the UE to operate near peak transmit power (cell-edge scenario).

Also, continuous UDP traffic with fixed packet size in every 4 seconds was generated to achieve a realistic duty cycle, to emulate typical live data session behavior

Q2: Will the duty cycle be hard limited by the firmware and/or hardware?

A: The duty cycle of sending positions in live tracking is limited only by the firmware

Q3: What is the maximum amount of data being transmitted in each session by the collar?

A: Taking under the consideration that by session it is referring to data burst that is measured every 4 seconds, the amount of data can vary from ~40 bytes to around 100 bytes.

Q4: On the manufacturer's website, it is stated that in live mode, the coordinates are updated every 2-3 seconds. However, in the test report provided, the transmission period was between 4.17-4.83 seconds, please explain.

A: Statement on the website is a marketing language that is not following technical specifications, as it was meant to sound more real-time oriented for the customers.

Therefore, the technical implementation respects an interval of 4s (by FW limitation answered in Q2)

Best Regards,

Ivan Su

EMC Supervisor

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发件人: [Certification Bureau / Bureau homologation \(IC\)](#)

发送时间: 2026-05-02 04:03

收件人: toby858@toby-lab.cn; [Certification Bureau / Bureau homologation \(IC\)](#)

主题: RE: RE: SAR Testing Inquiry - Pet Locator Device (Neck-Worn)

Hello,

How was the base station simulator configured to evaluate the duty cycle?

Also, will the duty cycle be hard limited by the firmware and/or hardware?

What is the maximum amount of data being transmitted in each session by the collar?

On the manufacturer's website, it is stated that in live mode, the coordinates are updated every 2-3 seconds. However, in the test report provided, the transmission period was between 4.17 – 4.83 seconds, please explain.

Best Regards,

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From: toby858@tobylab.cn <toby858@tobylab.cn>
Sent: April 28, 2026 7:43 AM
To: Certification Bureau / Bureau homologation (IC) <certificationbureau-bureauhomologation@ised-isde.gc.ca>
Subject: 回复: RE: SAR Testing Inquiry - Pet Locator Device (Neck-Worn)

Dear,

I hope this message finds you well.

We are currently preparing the regulatory submission for our new product, which incorporates low-power BLE and LTE?CAT1 functionalities. The device operates on a duty-cycle basis rather than continuous transmission, and the emission pattern follows the duty-cycle profile described in the attached documentation.

Attachments:

- . Product Datasheet (PDF)
- . Evaluation Report (PDF)

Could you please advise whether it is possible to use the assessment method outlined in the evaluation report and waive the mandatory SAR testing?

Thank you for your guidance. I look forward to your response.

Kind regards,

Best Regards,

Ivan Su
EMC Supervisor



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发件人: [Certification Bureau / Bureau homologation \(IC\)](#)

发送时间: 2026-03-25 20:20

收件人: toby858@tobylab.cn; [Certification Bureau / Bureau homologation \(IC\)](#)

主题: RE: SAR Testing Inquiry - Pet Locator Device (Neck-Worn)

Hello,

The following information will be provided.

1. Calculations of the duty cycle along with time domain test plots supporting the duty cycle used.
2. Firmware specific limitations that will prevent the device from transmitting at a duty cycle >10 %.

Best Regards,

Engineering, Planning and Standards Branch

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From: toby858@tobylab.cn <toby858@tobylab.cn>

Sent: March 24, 2026 10:37 PM

To: Certification Bureau / Bureau homologation (IC) <certificationbureau-bureauhomologation@ised-isde.gc.ca>

Subject: SAR Testing Inquiry - Pet Locator Device (Neck-Worn)

Good Day:

I hope this email finds you well.

The product is a pet tracker that supports both BLE and LTE CAT 1 functions. In actual use, the LTE signal is not continuously transmitted, with an approximate usage cycle of 10%. For this working state, can the following method be adopted to assess SAR during testing:

(SAR evaluation is conducted under fixed frequency mode, the duty cycle is 100% when in fixed frequency mode, but when actual used, the duty cycle is only 10%, so the SAR result is scaled down to 10% duty cycle depending on result of 100%.)

Best Regards,

Ivan Su

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发件人: [Certification Bureau / Bureau homologation \(IC\)](#)

发送时间: 2026-02-26 21:07

收件人: toby858@toby-lab.cn; [Certification Bureau / Bureau homologation \(IC\)](#)

主题: Re: RE: SAR Testing Inquiry - Pet Locator Device (Neck-Worn)

Hello,

If the device is locked via the firmware to only transmit at specific intervals, then yes, the device may be exempt based on a separation distance of $\leq 5\text{mm}$ and the exemption limits specified in RSS-102 Issue 6.

The RF Exposure technical brief must include all applicable calculations for all applicable technologies and frequency bands along with time domain test plots of the inherent duty cycle.

In addition, the company shall provide details of the firmware specific limitations in the operational description and an attestation confirming this functionality.

Best Regards,

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From: toby858@tobylab.cn <toby858@tobylab.cn>

Sent: Wednesday, February 11, 2026 2:29 AM

To: Certification Bureau / Bureau homologation (IC) <certificationbureau-bureauhomologation@ised-isde.gc.ca>

Subject: 回复: RE: SAR Testing Inquiry - Pet Locator Device (Neck-Worn)

Good Day:

Thank you for your reply.

I have another question here. The Pet Locator Device (Worn Around Neck) is a low-power product. Can it be exempted from the SAR assessment by following the method described below when its LTE transmission period is very short?

thank you !

1. Per KDB 447498 D01v06 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:

$$[(\text{max. power of channel, including tune-up tolerance, mW})/(\text{min. test separation distance, mm})] \cdot [\sqrt{f(\text{GHz})}] \leq 3.0$$
 for 1-g SAR and ≤ 7.5 for 10-g extremity SAR

- $f(\text{GHz})$ 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

Wireless Interface	LTE Cat M1 Band 2	LTE Cat M1 Band 4	LTE Cat M1 Band 12	Wi-Fi	Bluetooth
Calculated Frequency (MHz)	1910	1755	716	2462	2480
Maximum power (dBm)	25.00	25.00	25.00	14.00	15.50
Maximum power (mW)	316.23	316.23	316.23	25.12	35.48
Most conservative transmission duty cycle	0.75%	0.75%	0.75%	1.10%	0.21%
duty factor adjusted maximum output power (mW)	2.37	2.37	2.37	0.28	0.07
Separation distance (mm)	< 5mm	< 5mm	< 5mm	< 5mm	< 5mm
exclusion threshold	0.7	0.6	0.4	0.1	0.02
SAR testing required?	No	No	No	No	No
Estimated SAR	0.087	0.084	0.053	0.012	0.003

Best Regards,

Ivan Su
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发件人: [Certification Bureau / Bureau homologation \(IC\)](#).
发送时间: 2026-02-10 23:49
收件人: toby858@tobylab.cn; [Certification Bureau / Bureau homologation \(IC\)](#).
主题: RE: RE: SAR Testing Inquiry - Pet Locator Device (Neck-Worn)

Hello,

The top part can easily come into direct contact with the pet's upper neck and chin, especially for small pets. As such, the previous guidance still applies.

Best Regards,

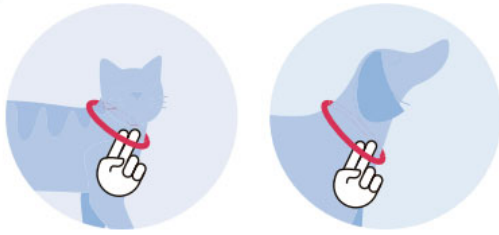
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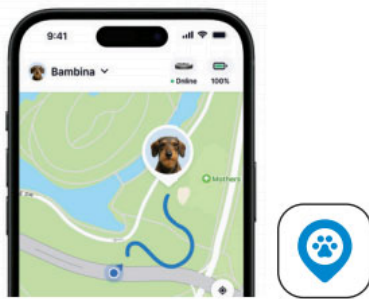
From: toby858@tobylab.cn <toby858@tobylab.cn>
Sent: February 10, 2026 3:19 AM
To: Certification Bureau / Bureau homologation (IC) <certificationbureau-bureauhomologation@ised-isde.gc.ca>
Subject: 回 复 : RE: SAR Testing Inquiry - Pet Locator Device (Neck-Worn)

Good Day:

When the locator is worn on the pet, the top of the locator points forward. In this case, does SAR need to test the top? Thank You!



- 5 Attach collar & adjust length**
Two fingers should fit between your pet's skin and collar.



- 6 You're all set**
Open the app to start tracking your pet.

4



Magnetic Charging Cable

- TRACKER CHARGING**
Charge the tracker by connecting the cable to the magnetic port as shown. The bottom LED bar will gradually light up from left to right as the device charges.

The tracker is fully charged when the entire LED bar is lit. A full charge takes around 2 hours.

5

Best Regards,

Ivan Su

EMC Supervisor

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发件人 : [Certification Bureau / Bureau homologation \(IC\)](#)

发送时间 : 2026-02-02 21:53

收件人 : toby858@tobylab.cn; [Certification Bureau / Bureau homologation \(IC\)](#)

主题 : RE: SAR Testing Inquiry - Pet Locator Device (Neck-Worn)

Hello,

As with other regulatory authorities, ISED is requiring the same RF Exposure requirement to domestic animals. That being said, all the requirements in RSS-102 would apply in this case.

As such, the primary exposure is to the pet's neck, chin and chest areas. Each side and edge (top edge facing chin, bottom edge facing chest and back side facing neck would require testing against the 1 g limit of 1.6 W/Kg at a test distance of 0 mm.

Incidental exposure for contact with humans can be excluded as the 1 g testing is more conservative.

Best Regards,

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From: toby858@tobylab.cn <toby858@tobylab.cn>

Sent: January 28, 2026 11:29 PM

To: Certification Bureau / Bureau homologation (IC) <certificationbureau-bureauhomologation@ised-isde.gc.ca>

Subject: SAR Testing Inquiry - Pet Locator Device (Neck-Worn)

Good Day:

I hope this email finds you well.

We are developing a new product, a pet locator device, which is designed to be worn around a pet's neck. As this device will be in close proximity to the pet's body, we are seeking clarification on the appropriate SAR (Specific Absorption Rate) testing requirements for this unique application.

Given that the primary exposure scenario involves the pet, and the secondary exposure pertains to potential incidental contact with humans, we would like to inquire if it is permissible to conduct SAR testing for the following relevant exposure conditions:

- **Forelimb SAR:** To simulate the device's proximity to the pet's legs and body.
- **[Potentially Add - torso/body SAR]:** If applicable, to simulate the device being worn around the pet's torso.

Our specific question is: **Can we proceed with SAR testing focusing on these "limb" exposure scenarios and omit "head" SAR testing, considering the device is intended for use on animals, not humans directly on their heads?**

We understand that SAR guidelines are primarily established for human exposure. Therefore, we are keen to understand how these regulations are interpreted or adapted for animal-worn devices, especially regarding the distinction between head and limb/body exposure.

Could you kindly advise on the accepted testing methodologies and SAR assessment approach for this type of product? We are committed to ensuring our device meets all relevant safety standards and would greatly appreciate your guidance.

Please let us know if you require any further information about the product's design, intended use, or dimensions.

Thank you for your time and assistance.

Best Regards,

Ivan Su

EMC Supervisor

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