

RF Exposure Evaluation Report

Product : Zigbee Pro Temp tag
Trade mark : V-MARK
Model/Type reference : VTS04W02
Serial Number : N/A
Report Number : EED32M00045602
FCC ID : 2AQ7V-VTSCFGPROTT
Date of Issue : Jun. 08, 2020
Test Standards : 47 CFR Part 1.1307
47 CFR Part 2.1093
KDB447498D01 General RF Exposure Guidance v06
Test result : PASS

Prepared for:

V-MARK Enterprises Ltd.
400-601 West Broadway, Vancouver,
British Columbia, Canada

Prepared by:

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Jun. 08, 2020

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2 Version

Version No.	Date	Description
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4 General Information

4.1 Client Information

Applicant:	V-MARK Enterprises Ltd.
Address of Applicant:	400-601 West Broadway, Vancouver, British Columbia, Canada
Manufacturer:	Senpu Fishing Tackle Co., Ltd.
Address of Manufacturer:	Floor 2 No 2 Building Fucheng Industrial Park, 82nd Shilian lu, Shiji Town, Panyu District, GuangZhou

4.2 General Description of EUT

Product Name:	Zigbee Pro Temp tag
Model No.(EUT):	VTS04W02
Trade Mark:	V-MARK
EUT Supports Radios application:	2405-2480MHz (2405MHz/2440MHz/2480MHz)

4.3 Product Specification subjective to this standard

Frequency Range:	2405MHz to 2480MHz	
Modulation Type:	OQPSK	
Test Power Grade:	Default	
Test Software of EUT:	Default	
Antenna Type:	PCB Antenna	
Antenna Gain:	2 dBi	
Power Supply:	Battery	ER14335 3.6V 1600mAh
Max Conducted Peak Output Power:	3.976 dBm	
	The Max Conducted Peak Output Power data refer to the report EED32M00045601	
Sample Received Date:	Mar. 16, 2020	
Sample tested Date:	Mar. 16, 2020 to May 28, 2020	
The tested sample(s) and the sample information are provided by the client.		

4.4 Test Location

All tests were performed at:

Centre Testing International Group Co., Ltd

Building C, Hongwei Industrial Park Block 70, Bao'an District, Shenzhen, China

Telephone: +86 (0) 755 33683668 Fax: +86 (0) 755 33683385

No tests were sub-contracted.

FCC Designation No.: CN1164

4.5 Deviation from Standards

None.

4.6 Abnormalities from Standard Conditions

None.

4.7 Other Information Requested by the Customer

None.

5 SAR Evaluation

5.1 RF Exposure Compliance Requirement

5.1.1 Standard Requirement

According to KDB447498D01 General RF Exposure Guidance v06
Standalone SAR test exclusion considerations

Unless specifically required by the published RF exposure KDB procedures, standalone 1-g head or body and 10-g extremity SAR evaluation for general population exposure conditions, by measurement or numerical simulation, is not required when the corresponding SAR Exclusion Threshold condition, listed below, is satisfied.

5.1.2 Limits

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, where

$f(\text{GHz})$ is the RF channel transmit frequency in GHz

Power and distance are rounded to the nearest mW and mm before calculation¹⁷

The result is rounded to one decimal place for comparison

The test exclusions are applicable only when the minimum test separation distance is ≤ 50 mm and for transmission frequencies between 100 MHz and 6 GHz. When the minimum test separation distance is < 5 mm, a distance of 5 mm is applied to determine SAR test exclusion

5.1.3 EUT RF Exposure

The tune-up power is 4.0 dBm +/- 0.5dB, therefore the highest tune-up power is

4.5 dBm (2.82 mW) @ 2440 MHz

When the minimum test separation distance is < 5 mm, a distance of 5 mm according to 5) in section 4.1 is applied to determine SAR test exclusion.

So,

$$(2.82\text{mW} / 5\text{mm}) * (2.440\text{GHz}^{0.5}) = 0.9$$

$$[(\text{max. power of channel, including tune-up tolerance, mW}) / (\text{min. test separation distance, mm})] * [\sqrt{f(\text{GHz})}] = 0.9 < 3.0$$

Therefore, standalone SAR measurements are not required for both head and body

PHOTOGRAPHS OF EUT Constructional Details

Refer to Report No. EED32M00045601 for EUT external and internal photos.

*** End of Report ***

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