

RF Exposure Report

Project Number: 4887489**Proposal Number: SUW-202201002180****Report Number: 4887489EMC04****Revision Level: 0****Client: Pison Technology, Inc****Equipment Under Test: Hand Motion Control Band****Model Name: Vulcan****Model Number: VT01****Module Model: N/A****FCC ID: 2A4CW-VT01****Applicable Standards: 47 CFR §§ 2.1093 (Portable)****FCC KDB 447498 D01 General RF Exposure Guidance v06****Report issued on: 29 September 2022****Result: Exempt from SAR evaluation**

FOR THE SCOPE OF ACCREDITATION UNDER CERTIFICATE NUMBER: 3212.01

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1 General Information

1.1 Client Information

Name: Pison Technology, Inc
Address: 179 South Street 4th Floor
City, State, Zip, Country: Boston, MA 02111, USA

1.2 Test Laboratory

Name: SGS North America, Inc.
Address: 620 Old Peachtree Road NW, Suite 100
City, State, Zip, Country: Suwanee, GA 30024, USA

Accrediting Body: A2LA
Type of lab: Testing Laboratory
Certificate Number: 3212.01

1.3 General Information of EUT

Type of Product: Hand Motion Control Band
Model Name: Vulcan
Model Number: VT01
Serial Number: 50A1675F
Module Model: N/A

Frequency Ranges: 2402 – 2480 MHz (Bluetooth/BLE)
Antenna Gain: Internal Wire, 2402-2480MHz, 2.0dBi*
Max Conducted Output Power: Bluetooth LE: 4.0dBm

Sample Received Date: 04 March 2022, 27 July 2022 (C011)
Dates of testing: 07-10 March 2022, 22-26 September 2022 (4dBm retest)

**Data was not measured by SGS laboratory and therefore not responsible for accuracy. Data obtained via customer, specification sheet, previous regulatory filing or other.*

1.4 Separation Distance

The closest exposure distance occurs when a user places his or her hand on top of the band directly above the antenna.

2 SAR Exclusion Calculations

The highest output power in conjunction with the Upper and Lower frequency boundaries have been used to demonstrate compliance for both Bluetooth LE transmission mode.

Power levels were referenced from measurements captured in report number 4887489EMC01.

The EUT is considered an extremity application.

External Bluetooth LE (Low Channel)

447498 D01 General RF Exposure Guidance v06

SAR test exclusion calculations

Section 4.3: General SAR test exclusion guidance / Section 4.3.1: Standalone SAR test exclusion considerations

	Input	Select Units
Max Power:	1.8	dBm
Duty Cycle:	100.0%	
Min separation distance:	5	mm
Frequency, f:	2402	MHz

<== Source based time average duty cycle

Value reference Number	Values used for Calculation	Reference number definition
v1	2.000 mW	[max. power of channel, including tune-up tolerance, mW] 'Rounded to nearest mW'
v2	5 mm	[min. test separation distance, mm] 'Rounded to nearest mm'
v3	1.550	[f(GHz)]

- a) For 100 MHz to 6 GHz and test separation distances ≤ 50 mm, the 1-g and 10-g SAR test exclusion thresholds are determined by the following:

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

Exclusion Calculation(1g):	0.6199	number	<== [v2 / v3] must be less than 3
Exclusion Calculation(10g):	0.6199	number	<== [v2 / v3] must be less than 7.5

Conclusions (Body):	The EUT max power is BELOW the threshold. SAR Testing is NOT required for Body applications
Conclusions (Extremity):	The EUT max power is BELOW the threshold. SAR Testing is NOT required for Extremity applications

External Bluetooth LE (High Channel)

447498 D01 General RF Exposure Guidance v06

SAR test exclusion calculations

Section 4.3: General SAR test exclusion guidance / Section 4.3.1: Standalone SAR test exclusion considerations

	Input	Select Units
Max Power:	1.8	dBm
Duty Cycle:	100.0%	
Min separation distance:	5	mm
Frequency, f:	2480	MHz

<== Source based time average duty cycle

Value reference Number	Values used for Calculation	Reference number definition
v1	2.000 mW	[max. power of channel, including tune-up tolerance, mW] 'Rounded to nearest mW'
v2	5 mm	[min. test separation distance, mm] 'Rounded to nearest mm'
v3	1.575	[f(GHz)]

- a) For 100 MHz to 6 GHz and test separation distances ≤ 50 mm, the 1-g and 10-g SAR test exclusion thresholds are determined by the following:

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

Exclusion Calculation(1g):	0.6299	number	<== [v2 / v3] must be less than 3
Exclusion Calculation(10g):	0.6299	number	<== [v2 / v3] must be less than 7.5

Conclusions (Body):	The EUT max power is BELOW the threshold. SAR Testing is NOT required for Body applications
Conclusions (Extremity):	The EUT max power is BELOW the threshold. SAR Testing is NOT required for Extremity applications

3 Revision History

Revision Level	Description of changes	Revision Date
0	Initial Release	29 September 2022