

RF Exposure Evaluation Report

Product : Infrared Ear/Forehead Thermometer
Trade mark : N/A
Model/Type reference : DET-218
Serial Number : N/A
Report Number : EED32L00041002
FCC ID : 2AQVU0004
Date of Issue : Mar. 27, 2019
47 CFR Part 1.1307
47 CFR Part 2.1093
Test Standards : KDB447498D01 General RF
Exposure Guidance v06
Test result : PASS

Prepared for:

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Hangzhou city, 311100 Zhejiang, China

Prepared by:

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2 Version

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00	Mar. 27, 2019	Original

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4 General Information

4.1 Client Information

Applicant:	JOYTECH HEALTHCARE CO., LTD.
Address of Applicant:	No. 365, Wuzhou Road, Yuhang Economic Development Zone, Hangzhou city, 311100 Zhejiang, China
Manufacturer:	JOYTECH HEALTHCARE CO., LTD.
Address of Manufacturer:	No. 365, Wuzhou Road, Yuhang Economic Development Zone, Hangzhou city, 311100 Zhejiang, China
Factory:	JOYTECH HEALTHCARE CO., LTD.
Address of Factory:	No. 365, Wuzhou Road, Yuhang Economic Development Zone, Hangzhou city, 311100 Zhejiang, China

4.2 General Description of EUT

Product Name:	Infrared Ear/Forehead Thermometer
Model No.(EUT):	DET-218
Trade Mark:	N/A
EUT Supports Radios application:	BT 4.0 Single mode, 2402MHz-2480MHz

4.3 Product Specification subjective to this standard

Frequency Range:	2402MHz-2480MHz
Sample Type:	Portable production
Test Power Grade:	N/A
Test Software of EUT:	N/A
Antenna Type:	PIFA Antenna
Antenna Gain:	-13.6016dBi
Power Supply:	DC3V(2×AAA battery)
Conduct Peak Power:	3.571dBm
	The Conduct Peak Power data refer to the report EED32L00041001
Firmware version of the sample:	V1.0(manufacturer declare)
Hardware version of the sample:	Z(manufacturer declare)
Sample Received Date:	Mar. 04, 2019
Sample tested Date:	Mar. 04, 2019 to Mar. 20, 2019
The tested sample(s) and the sample information are provided by the client.	

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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:

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

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 Max Conducted Peak Output Power is 4.31dBm in highest channel(2.480GHz);

The best case gain of the antenna is -13.6016dBi.

EIRP= 3.571dBm -13.6016dBi = -10.0306dBm

10.0306dBm logarithmic terms convert to numeric result is nearly0.099mW

According to the formula. calculate the EIRP test result:

$$\left[\frac{\text{max. power of channel, including tune-up tolerance, mW}}{(\text{min. test separation distance, mm}) \cdot \sqrt{f(\text{GHz})}} \right]$$

General RF Exposure = $(0.099\text{mW} / 5 \text{ mm}) \times \sqrt{2.402\text{GHz}} = 0.03069$ ①

SAR requirement:0.0198

S= 3.0

② ;

① < ②.

So the SAR report is not required.

PHOTOGRAPHS OF EUT Constructional Details

Refer to Report No. EED32L00041001 for EUT external and internal photos.

*** End of Report ***

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