



A Test Lab Techno Corp.

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SAR Exclusion Evaluation Report



Test Report No.	: 1601FS12
Applicant	: Mobile Action Technology Inc.
Product Type	: Bluetooth 4.0 Low Energy Wristband
Trade Name	: Q-Watch
Model Number	: Q-77HR, Q-77HRx, Q-77HRa, Q-77HRc, Q-77HRe, Q-77HRg
Dates of Received	: Aug. 25, 2015
Dates of Test	: Aug. 26, 2015
Dates of Issued	: Jan. 12, 2016
Test Specification	: ANSI/IEEE C95.1-1992 / IEEE Std. 1528-2013 47 CFR § 2.1093 KDB 447498 D01 v06 KDB 865664 D01 v01r04 KDB 865664 D02 v01r02
Location of Test Lab.	: Chang-an Lab.

1. The test operations have to be performed with cautious behavior, the test results are as attached.
2. The test results are under chamber environment of A Test Lab Techno Corp. A Test Lab Techno Corp. does not assume responsibility for any conclusions and generalizations drawn from the test results with regard to other specimens or samples.
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Approved By : Bill Hu
(Bill Hu)

Tested By : Sky Chou
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1. Description of Equipment under Test (EUT)

Applicant	Mobile Action Technology Inc. 5F., No.205-3, Sec.3, Beishin Rd., Shindian City Taipei Taiwan 231
Manufacturer	Heisei Technology Co., Ltd. 2F.,No.5,Aly.8,Ln.45.,Baoxing Rd.,Xindian Dist.,New Taipei City 231,Taiwan,R.O.C.
Product Type	Bluetooth 4.0 Low Energy Wristband
Trade Name	Q-Watch
Model Number	Q-77HR, Q-77HRx, Q-77HRa, Q-77HRc, Q-77HRe, Q-77HRg
Model Different Description	Those model numbers differ from each other in selling region.
FCC ID	Q7Z-16H77R1
Frequency Range	2402 - 2480 MHz : Bluetooth LE
Transmit Power (conducted power)	0.005 W / 7.10 dBm
Antenna Type	FPC Antenna
Antenna Max. Gain	-1.14 dBi

The above equipment was tested by A Test Lab Techno Corp. For compliance with the requirements set forth in 47 CFR § 2.1093. The results of testing in this report apply only to the product/system, which was tested. Other similar equipment will not necessarily produce the same results due to production tolerance and measurement uncertainties.



2. SAR Test Exclusion

As RF exposure evaluation of portable device, SAR test is not required when the evaluation results . According to KDB 447498 4.3.1, unless excluded by specific FCC test procedures, portable devices shall include SAR data for equipment approval. SAR test necessity will be based on the exclusion result.

The test exclusion refers KDB 447498 as below:

≤50mm:

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

≤ 3.0 for 1-g SAR and ≤ 7.5 for 10-g extremity SAR

>50mm and <200mm:

- a) $[\text{Power allowed at numeric threshold for 50 mm in step 1}) + (\text{test separation distance} - 50 \text{ mm}) \cdot (f(\text{MHz})/150)] \text{ mW}$, at 100 MHz to 1500 MHz
- b) $[\text{Power allowed at numeric threshold for 50 mm in step 1}) + (\text{test separation distance} - 50 \text{ mm}) \cdot 10]$ mW at > 1500 MHz and ≤ 6 GHz

2.1 Conducted Power

Band	Frequency (MHz)	Average Power (dBm)
Bluetooth LE	2402.0	5.84
	2440.0	6.58
	2480.0	7.10

2.2 Evaluation Results

The evaluation of SAR test reduction according to KDB447498

SAR test is not required when the results showed "SAR is not required".

Extremity SAR:

Limbs SAR test reduction						
Band	Channel	Frequency (GHz)	Power (dBm)	Power (mW)	distance (mm)	Calculated Threshold Value
Bluetooth LE	39	2.48	7.5	6.0	5.0	1.9
						EXEMPT

Note1 : Transmitters that are built-in within a wrist watch, no speaker mode for voice communication not have positioned next to the mouth mode.

Note 2 : The test reduction for distance less

Note 3 : For 100 MHz to 6 GHz and test separation distances ≤ 50 mm, the 10-g SAR test exclusion thresholds are determined by the following:

According to KDB 447498, if the calculated threshold value is >7.5 then Limbs SAR testing are required.