

Johnson Health Tech. Co., Ltd.

MPE ASSESSMENT REPORT

Report Type:
FCC MPE assessment report

Model:
T16-C

REPORT NUMBER:
2505B1015SHA-005

ISSUE DATE:
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DOCUMENT CONTROL NUMBER:
TTRFFCCMPE-01_V1 © 2018 Intertek



Applicant : Johnson Health Tech. Co., Ltd.
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Lot CN-24, Thuan Thanh II industrial Park, Mao Dien Ward, Bac Ninh Province, Vietnam

Factory : Johnson Health Industry (Vietnam) CO., LTD.
Lot CN-24, Thuan Thanh II industrial Park, Mao Dien Ward, Bac Ninh Province, Vietnam

FCC ID : TN7BFXT16

SUMMARY:

The equipment complies with the requirements according to the following standard(s) or Specification:

KDB447498 D01 General RF Exposure Guidance v06
FCC Part2.1091, FCC Part2.1093 FCC Part1.1307(b)

PREPARED BY:

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Reviewer
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Revision History

Report No.	Version	Description	Issued Date
2505B1015SHA-005	Rev. 01	Initial issue of report	October 12, 2025

1 GENERAL INFORMATION

1.1 Description of Equipment Under Test (EUT)

Product name:	Fitness Equipment TV Console
Type/Model:	T16-C
Description of EUT:	The EUT is a Fitness Equipment TV Console, it supports Bluetooth, RFID and WIFI functions. The RFID used an approved module, FCC ID is We tested it and listed the worst results in this report.
Rating:	12V ⁼⁼ /2A
Category of EUT:	Class B
EUT type:	☒ Table top ☐ Floor standing
Software Version:	/
Hardware Version:	/
Sample received date:	A250816-011-003
Date of test:	2025.8.16
	2025.8.17~2025.9.28

1.2 Technical Specification

Frequency Band:	2400MHz ~ 2483.5MHz
Support Standards:	IEEE 802.11b, IEEE 802.11g, IEEE 802.11n-HT20, IEEE 802.11n-HT40
Type of Modulation:	IEEE 802.11b: DSSS (CCK, DQPSK, DBPSK) IEEE 802.11g: OFDM (64-QAM, 16-QAM, QPSK, BPSK) IEEE 802.11n-HT20: OFDM (64-QAM, 16-QAM, QPSK, BPSK) IEEE 802.11n-HT40: OFDM (64-QAM, 16-QAM, QPSK, BPSK)
Channel Number:	11 Channels for 802.11b, 802.11g and 802.11n(HT20) 7 Channels for 802.11n(HT40)
Channel Separation:	5 MHz
Antenna:	Two FPC Antenna, gain is 1.77dBi for both antenna

Frequency Band:	2402MHz to 2480MHz
Support Standards:	Bluetooth Low Energy
Type of Modulation:	GFSK
Channel Number:	40
Data Rate	1Mbps, 2Mbps
Channel Separation:	2MHz
Antenna Information:	FPC Antenna, gain is 1.77dBi

TEST REPORT

Frequency Range:	5150 ~ 5250MHz 5725 ~ 5850MHz
Support Standards:	802.11a, 802.11n/ac(HT20), 802.11n/ac(HT40), 802.11ac(VHT80)
Type of Modulation:	OFDM (BPSK, QPSK, 16QAM, 64QAM, 256QAM)
Channel Number:	For 5150 ~ 5250MHz band: Channel 36 - 48 For 5725 ~ 5850MHz band: Channel 149 - 165
Antenna Information:	FPC Antenna 1, gain is 3.84dBi; FPC Antenna 2, gain is 3.84dBi

Frequency Range:	2402MHz ~ 2480MHz
Support Standards:	Bluetooth 5.0 (BR+EDR)
Modulation Technique:	Frequency Hopping Spread Spectrum(FHSS)
Type of Modulation:	GFSK, $\pi/4$ DQPSK, 8DPSK
Channel Number:	79 (0 - 78)
Data Rate:	1Mbps, 2Mbps, 3Mbps
Channel Separation:	1 MHz
Antenna:	FPC Antenna, gain is 1.77dBi

Frequency Range:	13.56 MHz ~ 13.56 MHz
Type of Modulation:	ASK
Antenna Information:	PCB Antenna

1.3 Description of Test Facility

Name:	Intertek Testing Services (Shanghai FTZ) Co., Ltd.
Address:	Building 86, No. 1198 Qinzhou Road(North), Shanghai 200233, P.R. China
Telephone:	86 21 61278200
Telefax:	86 21 54262353

The test facility is recognized, certified, or accredited by these organizations:	CNAS Accreditation Lab Registration No. CNAS L21189
	FCC Accredited Lab Designation Number: CN0175
	IC Registration Lab CAB identifier.: CN0014
	VCCI Registration Lab Registration No.: R-14243, G-10845, C-14723, T-12252
	A2LA Accreditation Lab Certificate Number: 3309.02

2 MPE Assessment

Test result: Pass

2.1 MPE Assessment Limit

Mobile device exposure for standalone operations:

Frequency range	E-field strength (V/m)	H-field strength (A/m)	B-field (uT)	Equivalent plane wave power density S_{eq} (W/m ²)
0-1 Hz	-	$3,2 \times 10^4$	4×10^4	-
1-8 Hz	10 000	$3,2 \times 10^4/f^2$	$4 \times 10^4/f^2$	-
8-25 Hz	10 000	$4\,000/f$	$5\,000/f$	-
0,025-0,8 kHz	$250/f$	$4/f$	$5/f$	-
0,8-3 kHz	$250/f$	5	6,25	-
3-150 kHz	87	5	6,25	-
0,15-1 MHz	87	$0,73/f$	$0,92/f$	-
1-10 MHz	$87/f^{1/2}$	$0,73/f$	$0,92/f$	-
10-400 MHz	28	0,073	0,092	2
400-2 000 MHz	$1,375 f^{1/2}$	$0,0037 f^{1/2}$	$0,0046 f^{1/2}$	$f/200$
2-300 GHz	61	0,16	0,20	10

According to §1.1310, the limit for general population/uncontrolled exposures

Frequency range (MHz)	Electric field strength (V/m)	Magnetic field strength (A/m)	Power density (mW/cm ²)	Averaging time (minutes)
0.3-1.34	614	1.63	*(100)	30
1.34-30	$824/f$	$2.19/f$	*($180/f^2$)	30
30-300	27.5	0.073	0.2	30
300-1500	/	/	$f/1500$	30
1500-100,000	/	/	1.0	30

Note: Limit for 13.56MHz is 60.77 V/m

For simultaneous transmission operations: **the sum of the MPE ratios for all simultaneously transmitting antennas incorporated in a host device is ≤ 1.0**

2.2 Assessment Results

Power density (S) is calculated according to the formula:

$$S = P / (4\pi R^2)$$

Where S = power density in mW/cm²

P = Radiated transmit power in mW

G = numeric gain of transmit antenna

R = distance (cm)

As we can see from the test report 2505B1015SHA-001, 2505B1015SHA-002, 2505B1015SHA-003, 2505B1015SHA-004:

The calculations in the table below use the highest gain of antenna for client EUT. These calculations represent worst case in terms of the exposure levels.

Mode	Frequency band	Max Power	Antenna Gain	R	S	Limits
	(MHz)	dBm	dBi	(cm)	(mW/cm ²)	(mW/cm ²)
BR+EDR	2402 -2480	10.41	1.77	20	0.0033	1
BLE	2402 -2480	8.18	1.77	20	0.0020	1
WIFI 2.4G	2412-2462	18.03	1.77	20	0.0190	1
WIFI 5G	5180 – 5825	16.56	3.84	20	0.0218	1

Note: 1 mW/cm² from 1.310 Table 1

As we can see from the test report BTL-FCCP-1-2404H025:

63.82dBuV/m@3m, @20cm=@3m+40log(3/0.2)=110.86dBuV/m=0.35V/m<60.77V/m.

Based on the information provided by the customer, the simultaneously transmitting mode as below:

RFID, WIFI(2.4GHz) and Bluetooth, the sum of the MPE ratios for all simultaneously transmitting is $0.0033/1+0.0020/1+0.0190/1+0.35/60.77=0.0301 \leq 1.0$

RFID, WIFI(5GHz) and Bluetooth, the sum of the MPE ratios for all simultaneously transmitting is $0.0033/1+0.0020/1+0.0218/1+0.35/60.77=0.0329 \leq 1.0$

For the device can support simultaneous transmission, according to 447498 D01 General RF Exposure Guidance v06,

Appendix I

Definition below must be outlined in the User Manual:

To satisfy FCC RF exposure requirements, a separation distance of 20 cm or more should be maintained between the antenna of this device and persons during device operation.

To ensure compliance, operations at closer than this distance is not recommended.

***** END *****