RJ Brands LLC

MPE ASSESSMENT REPORT

Report Type:
FCC Part §2.1091, §2.1093 and §1.1307(b) assessment report

Model:
CQ60-QPR-01,CQ60-QPR-02,CQ60-QPR-03

REPORT NUMBER:
230302238SHA-002

ISSUE DATE:
July 13, 2023

DOCUMENT CONTROL NUMBER:
TTRFFCCMPE-01_V1

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Report no.: 230302238SHA-002

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Applicant:	RJ Brands LLC
	200 Performance Drive,Mahwah,NJ 07495 USA
Manufacturer:	RJ Brands LLC
	200 Performance Drive,Mahwah,NJ 07495 USA
Manufacturer Site:	Chefman Smart Tech (Hangzhou) Co., Ltd
	Dalu Industrial Park, Hangzhou City, Zhejiang Province
Product Name:	Smart Thermometer CHEF PROBE
Type/Model:	CQ60-QPR-01,CQ60-QPR-02,CQ60-QPR-03
FCC ID:	2A2YP-CQ60QPROBE

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:	**REVIEWED BY:**
Project Engineer Dylan Tang	Reviewer Wakeyou Wang

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Revision History

Report No.	Version	Description	Issued Date
230302238SHA-002	Rev. 01	Initial issue of report	July 13, 2023

TEST REPORT

1 GENERAL INFORMATION

1.1 Description of Equipment Under Test (EUT)

Product name:	Smart Thermometer CHEF PROBE
Type/Model:	CQ60-QPR-01, CQ60-QPR-02, CQ60-QPR-03
Description of EUT:	The EUT is Smart Thermometer CHEF PROBE, it supports Bluetooth function. The differences between CQ60-QPR-01 CQ60-QPR-02 and CQ60-QPR-03 is that the decal number/color on the ceramic handle. the models PCB layout and circuit design is the same. so choose CQ60-QPR-01 to test as representative.
Rating:	DC 3V, 0.03A
Category of EUT:	Class B
EUT type:	☒ Table top ☐ Floor standing
Product Marketing Name:	CQ60-QPR-01, CQ60-QPR-02, CQ60-QPR-03
HVIN:	CQ60-QPR-01, CQ60-QPR-02, CQ60-QPR-03
Software Version:	V2.0.0
Hardware Version:	B
Serial numbers:	0230708-12-001(for radiation sample), 0230708-12-002(for conduction sample)
Sample received date:	March 25, 2023
Date of test:	March 25, 2023~ July 6, 2023

1.2 Technical Specification

Frequency Range:	2402-2480MHz
Support Standards:	IEEE 802.15.1
Type of Modulation:	GFSK
Channel Number:	3
Data Rate:	1Mbps
Antenna Information:	-13.71dBi, Metal antenna

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1.3 Description of Test Facility

Name:	Intertek Testing Services Shanghai
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 L0139
	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

TEST REPORT

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

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

TEST REPORT

2.2 Assessment Results

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

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

Where S = power density in mW/cm^2

P = Radiated transmit power in mW

G = numeric gain of transmit antenna

R = distance (cm)

As we can see from the test report: 230302238SHA-001.

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.

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Frequency band	Power		Antenna Gain		R	S	Limits
(MHz)	dBm	mW	dBi	(Numeric)	(cm)	(mW/cm2)	(mW/cm2)
2402 – 2480	-10.6	0.087	-13.71	0.043	20	0.000007	1

Note: 1 mW/cm2 from 1.310 Table 1.

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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**********