Anova Applied Electronics, Inc.

MPE ASSESSMENT REPORT

Report Type:
FCC MPE assessment report

Model:
AN950-10

REPORT NUMBER:
240600137SHA-005

ISSUE DATE:
August 30, 2024

DOCUMENT CONTROL NUMBER:
TTRFFCCMPE-01_V1 © 2018 Intertek

Intertek Testing Services (Shanghai FTZ) Co., Ltd.
Building No.86, 1198 Qinzhou Road (North)
Caohejing Development Zone
Shanghai 200233, China

Telephone: 86 21 6127 8200
www.intertek.com

Total Quality. Assured.

TEST REPORT

Report no.: 240600137SHA-005

Applicant:	Anova Applied Electronics, Inc. 180 Steuart Street #192843, San Francisco, CA 94105, U.S.A
Manufacturer:	Anova Applied Electronics, Inc. 180 Steuart Street #192843, San Francisco, CA 94105, U.S.A
Factory:	GUANGDONG SHUNDE RONG FANG ELECTRICAL APPLIANCE CO., LTD. Unit 8, No.2 Xinhui road, Wushan Viliage, Daliang Town Shude, Foshan city Guangdong Province, China.
FCC ID:	2APBOAN950

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 Eric Li	Reviewer Wakeyou Wang

TEST REPORT

Revision History

Report No.	Version	Description	Issued Date
240600137SHA-005	Rev. 01	Initial issue of report	August 30, 2024

TEST REPORT

1 GENERAL INFORMATION

1.1 Description of Equipment Under Test (EUT)

Product name:	Oven
Type/Model:	AN950-10
Description of EUT:	The product covered by this report is a household, indoor use, cord connected oven with BLE and WIFI functions, there is only one model. We tested it and listed the worst results in this report.
Rating:	AC 120V, 60Hz, 1800W
Category of EUT:	Class B
EUT type:	☒ Table top ☐ Floor standing
Software Version:	/
Hardware Version:	/
Sample received date:	0240618-03-002
Date of test:	June 18, 2024
	June 18, 2024 ~ July 9, 2024

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:	FPC Antenna 1, gain is 5.21dBi, FPC Antenna 2, gain is 3.94dBi

Frequency Band:	2402MHz to 2480MHz
Support Standards:	Bluetooth Low Energy
Type of Modulation:	GFSK
Channel Number:	40
Data Rate	1Mbps
Channel Separation:	2MHz
Antenna Information:	FPC Antenna, gain is 5.41dBi

Frequency Range:	5150 ~ 5250MHz 5250 ~ 5350MHz 5470 ~ 5725MHz 5725 ~ 5850MHz
Support Standards:	802.11a, 802.11n(HT20), 802.11n(HT40)
Type of Modulation:	OFDM (BPSK, QPSK, 16QAM, 64QAM, 256QAM)
Channel Number:	For 5150 ~ 5250MHz band: Channel 36 - 48 For 5250 ~ 5350MHz Band: Channel 52 - 64 For 5470 ~ 5725MHz Band: Channel 100 - 140 For 5725 ~ 5850MHz band: Channel 149 - 165
Antenna Information:	FPC Antenna 1, gain is 5.37dBi; FPC Antenna 2, gain is 5.46dBi

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

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**

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/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 240600137SHA-001, 240600137SHA-002, 240600137SHA-003:

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/cm2)	(mW/cm2)
Bluetooth	2402 -2480	2.13	5.41	20	0.0011	1
WIFI 2.4G	2412-2462	16.44	4.62	20	0.0254	1
WIFI 5G	5180 – 5825	13.06	5.41	20	0.0140	1

Note: 1 mW/cm2 from 1.310 Table 1

The sum of the MPE ratios for all simultaneously transmitting:

Bluetooth and 2.4G WIFI can simultaneous transmitting, so the maximum rate of MPE is,
0.0011/1+0.0254/1=0.0265< 1.0

Bluetooth and 5G WIFI can simultaneous transmitting, so the maximum rate of MPE is,
0.0011/1+0.0140/1=0.0151< 1.0

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

TEST REPORT

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 **********