



RADIO TEST REPORT

Report No: STS2110094H02

Issued for

Nexgrill Industries, Inc.

14050 Laurelwood PL, Chino, California United States 91710

Product Name:	Oakford Pellet Grills
Brand Name:	Nexgrill
Model Name:	910-05002
Series Model:	N/A
FCC ID:	2A3GE910-05002
Test Standard:	FCC 47CFR §2.1091

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Test Report Certification

Applicant's Name : Nexgrill Industries, Inc.
 Address : 14050 Laurelwood PL, Chino, California United States 91710
Manufacturer's Name..... : Jieyang Coopway Industries Co., Ltd
 Address : West of Jingfu Road, South of Jinping Street, Industrial Park, Jieyang, Guangdong, China

Product Description

Product Name : Oakford Pellet Grills
 Brand Name : Nexgrill
 Model Name..... : 910-05002
 Series Model : N/A

Standards : FCC 47CFR §2.1091

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Date of Test..... :
 Date of receipt of test item..... : 23 Oct. 2021
 Date (s) of performance of tests..... : 23 Oct. 2021 ~ 05 Nov. 2021
 Date of Issue : 05 Nov. 2021
 Test Result : **Pass**

Testing Engineer : *Chris Chen*

 (Chris Chen)

Technical Manager : *Sean She*

 (Sean she)

Authorized Signatory : *Vita Li*

 (Vita Li)





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Revision History

Rev.	Issue Date	Report No.	Effect Page	Contents
00	05 Nov. 2021	STS2110094H02	ALL	Initial Issue





1. GENERAL INFORMATION

1.1 GENERAL DESCRIPTION OF THE EUT

Product Name	Oakford Pellet Grills	
Brand Name	Nexgrill	
Model Name	910-05002	
Series Model	N/A	
Model Difference	N/A	
Product Description	The EUT is Oakford Pellet Grills	
	Operation Frequency:	BT/BLE: 2402~2480 MHz 2.4G WLAN: 802.11b/g/n 20: 2412~2462 MHz 802.11n(40MHz):2422~2452MHz
	Modulation Type:	BT: GFSK(1Mbps), $\pi/4$ -DQPSK(2Mbps), 8DPSK(3Mbps) BLE: GFSK 2.4G WLAN: 802.11b(DSSS):CCK,DQPSK,DBPSK 802.11g(OFDM): BPSK,QPSK,16-QAM,64-QAM 802.11n(OFDM): BPSK,QPSK,16-QAM,64-QAM
	Antenna gain:	BT/BLE: 3dBi 2.4G WIFI: 2.33dBi
	Antenna Designation:	PIFA Antenna
Rating	Input: AC 110-120V 60Hz 250W	
Hardware Version Number	ESP32-WROOM-32U Version 2.2	
Software Version Number	3.0.1	

1.2 TEST FACTORY

SHENZHEN STS TEST SERVICES CO., LTD

Add. : A 1/F, Building B, Zhuoke Science Park, No.190 Chongqing Road, HepingShequ, Fuyong Sub-District, Bao'an District, Shenzhen, Guang Dong, China

FCC test Firm Registration Number: 625569

IC test Firm Registration Number: 12108A

A2LA Certificate No.: 4338.01



2. FCC 47CFR §2.1091 REQUIREMENT

2.1 TEST STANDARDS

The limit for Maximum Permissible Exposure (MPE) specified in FCC 1.1310 is followed. The gain of the antennas used in the product is extracted from the Antenna data sheets provided and also the maximum total power input to the antenna is measured. Through the Friis transmission formula and the maximum gain of the antenna, we can calculate the distance, away from the product, where the limit of MPE is reached.

Although the Friis Transmission formula is far field assumption, the calculated result of that is an over-prediction for near field power density. It is taken as worst case to specify the safety range.

2.2 LIMIT

According to FCC 1.1310: The criteria listed in the following table shall be used to evaluate the environmental impact of the human exposure to radio-frequency (RF) radiation as specified in 1.1307 (b)

Limits for Maximum Permissible Exposure (MPE)

Frequency Range (MHz)	Electric Field Strength (V/m)	Magnetic Field Strength (A/m)	Power Density (mW/cm ²)
Limits for Occupational / controlled Exposures			
300 - 1500	--	--	F/300
1500 – 100000	--	--	5.0
Limits for General population / Uncontrolled Exposure			
300 - 1500	--	--	F/1500
1500 – 100000	--	--	1.0

F= Frequency in MHz

Friss Formula

Friss Transmission Formula: $Pd = (Pout * G) / (4*pi*r^2)$

Where

Pd = power density in mW/cm²

Pout = output power to antenna in mW

G = gain of antenna in linear scale

Pi = 3.1416

R = Distance between observation point and the center of radiator in cm

If we know the maximum gain of the antenna and the total output power to the antenna, through calculation, we will know MPE value at distance 20cm.

2.3 EUT OPERATION CONDITION

EUT was enabled to transmit and receive at lowest, middle and highest channels.

2.4 CLASSIFICATION

The antenna of this product, under normal use condition, is at least 20cm away from the body of the user. Warning statement to the user for keeping at least 20cm or more separation distance from the antenna should be included in the User manual. So, this device is classified as Mobile device.



2.5 TEST RESULT

Turn up

Mode	Detector	Turn up Power
BT	AV	-1±1dBm
BLE	AV	0±1dBm
2.4G WLAN	AV	12±1dBm

ANT Gain (G)

2402-2483.5MHz:

BT/BLE: 3dBi (gain of antenna in linear scale=1.710)

2.4G WLAN: 2.33dBi (gain of antenna in linear scale=1.995)

Protocol	Max Turn up Power (dBm)	Max Turn up Power (mW)	ANT Gain(gain of antenna in linear scale)	Power Density (mW/cm ²)	Limit (mW/cm ²)	Ratio	Result
BT	0	1	1.710	0.0003	1	0.0003	Pass
BLE	1	1.2589	1.710	0.0004	1	0.0004	Pass
2.4G WLAN	13	19.9526	1.995	0.0079	1	0.0079	Pass

Note: The Bluetooth and WLAN can't simultaneous transmission at the same time.

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