



Maximum Permissible Exposure Evaluation

FCC ID: 2A56E-NPF01

1. Client Information

Applicant	:	Nooie LLC
Address	:	2555 SAN BRUNO AVE, SAN FRANCISCO, CA, US, 94134
Manufacturer	:	Nooie LLC
Address	:	2555 SAN BRUNO AVE, SAN FRANCISCO, CA, US, 94134

2. General Description of EUT

EUT Name	:	Nooie Pet Feeder	
Models No.	:	NPF01	
Model Different	:	----	
Brand Name	:	Nooie	
Product Description	:	Operation Frequency:	Bluetooth 4.2(BLE): 2402MHz~2480MHz 802.11b/g/n(HT20): 2412MHz~2462MHz
	:	Number of Channel:	Bluetooth 4.2(BLE): 40 channels 802.11b/g/n(HT20):11channels
	:	RF Output Power:	Bluetooth: 1.26dBm (Max) 2.4G WIFI: 17.86dBm (Max)
	:	Antenna Gain:	2.5dBi PCB Antenna
Power Rating	:	Adapter(XH-UL0501000-A1) Input:100-240V~ 50/60Hz 0.3A Max Output: 5V1000mA	
Software Version	:	V1.0	
Hardware Version	:	V1.0	
Connecting I/O Port(S)	:	Please refer to the User's Manual	
Remark	:	the MPE report used the EUT-2(RW-C-202203-0202-7-2#).	

MPE Calculations for Bluetooth&2.4G WIFI

1. Antenna Gain:

PCB Antenna: 2.5dBi.

2. EUT Operation Condition:

Software provided by client enabled the EUT to transmit and receive data at lowest, middle and highest channel individually.

3. Exposure Evaluation:

Equation from page 18 of OET Bulletin 65, Edition 97-01

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

Where

S: power density

P: power input to the antenna

G: power gain of the antenna in the direction of interest relative to an isotropic radiator.

R: distance to the center of radiation of the antenna

4. Test Result:

Bluetooth LE MPE Result								
Mode	N _{TX}	Freq. (MHz)	Conducted Power(max) (dBm)	Turn-up Power (dB)	Max tune up power (dBm) [P]	ANT Gain (dBi) [G]	Distance (cm) [R]	Power Density (mW/cm ²) [S]
Bluetooth LE	1	2402	0.95	0±1	1	2.5	20	0.0004
		2440	1.26	1±1	2	2.5	20	0.0005
		2480	0.84	0±1	1	2.5	20	0.0004

Note:
 N_{TX}= Number of Transmit Antennas
 RF Output power specifies that Maximum Conducted Peak Output Power.

2.4G WiFi MPE Result								
Mode	N _{TX}	Freq. (MHz)	Conducted Power(max) (dBm)	Turn-up Power (dB)	Max tune up power (dBm) [P]	ANT Gain (dBi) [G]	Distance (cm) [R]	Power Density (mW/cm ²) [S]
802.11b	1	2412	16.30	16±1	17	2.5	20	0.0177
		2437	16.09	16±1	17	2.5	20	0.0177
		2462	16.14	16±1	17	2.5	20	0.0177
802.11g	1	2412	16.48	16±1	17	2.5	20	0.0177
		2437	16.63	16±1	17	2.5	20	0.0177
		2462	16.77	16±1	17	2.5	20	0.0177
802.11n20	1	2412	17.66	17±1	18	2.5	20	0.0223
		2437	17.86	17±1	18	2.5	20	0.0223
		2462	16.79	16±1	17	2.5	20	0.0177

Note:
 N_{TX}= Number of Transmit Antennas
 RF Output power specifies that Maximum Conducted Peak Output Power.

5. Conclusion:

As specified in Table 1B of 47 CFR 1.1310- Limits for Maximum Permissible Exposure (MPE),

Limits for General Population/ Uncontrolled Exposure

Frequency Range (MHz)	Power density (mW/ cm ²)
300-1,500	F/1500
1,500-100,000	1.0

For 2.4 WIFI:2412~2462MHz

Bluetooth LE:2402~2480MHz

MPE limit S: 1mW/ cm²

The MPE is calculated as ***0.0223mW / cm² < limit 1mW / cm²***. So, RF exposure limit warning or SAR test are not required.

The EUT will only be used with a separation of 20cm or greater between the antenna and nearby persons and can therefore be considered a mobile transmitter per 47 CFR2.1091 (b).

The RF Exposure Information page from the manual is included here for reference.

Note

For a more detailed features description, please refer to the RF Test Report.

6. Conclusion:

The measurement results comply with the FCC Limit per 47 CFR 2.1091 for the uncontrolled RF Exposure of mobile device.

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