



Maximum Permissible Exposure Evaluation

FCC ID: 2A56E-IPC300H

1. Client Information

Applicant	:	Nooie LLC
Address	:	1603 s main st, suite A, Milpitas, CA 95035
Manufacturer	:	Nooie LLC
Address	:	1603 s main st, suite A, Milpitas, CA 95035

2. General Description of EUT

EUT Name	:	Base station with Chime, Base station 2
Models No.	:	IPC300H, IPC300H Mini, IPC300H Pro, IPC300H Plus, IPC300H Max
Model Difference	:	All these models are identical in the same PCB, layout and electrical circuit, the only difference is model name.
Sample ID	:	202204-0043-13-1#&202204-0043-13-2#
Product Description	:	Operation Frequency: 802.11b/g/n(HT20): 2412MHz~2462MHz 802.11n(HT40):2422MHz~2452MHz U-NII-1: 5180MHz~5240MHz, U-NII-3: 5745MHz~5825MHz
Power Rating	:	Input: AC 100-240V 50/60Hz
Software Version	:	V1.0
Hardware Version	:	V1.0
Connecting I/O Port(S)	:	Please refer to the User's Manual
Remark	:	The adapter and antenna gain provided by the applicant, the verified for the RF conduction test provided by TOBY test lab.

MPE Calculations

1. Antenna Gain:

Antenna	Brand	Model Name	Type	Antenna Gain(dBi)
2.4GWiFi Ant. 1	N/A	N/A	FPC	2.76
2.4GWiFi Ant. 2	N/A	N/A	FPC	2.58
5GWiFi Ant.1	N/A	N/A	FPC	2.37dBi for 5180MHz~5240MHz
				4.81dBi for 5745MHz~5825MHz

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. Simultaneous transmission MPE Considerations

According to KDB447498: All transmitters and antennas in the host must be either evaluated for MPE compliance, by measurement or computational modeling, or qualify for the standalone MPE test exclusion in section 7.1. Simultaneous transmission MPE test exclusion applies when the sum of the MPE ratios for all simultaneous transmitting antennas incorporated in a host device, based on the calculated/estimated, numerically modeled or measured field strengths or power density, is ≤ 1.0 .

This means that:

$$\sum \text{ of MPE ratios } \leq 1.0$$

5. Standalone MPE Evaluation:

2.4G WiFi MPE Result								
Test Mode	Antenna	Channel	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]
11B	Ant1	2412	15.73	16±1	17	2.76	20	0.01883
	Ant2	2412	15.95	16±1	17	2.58	20	0.01806
	Ant1	2437	14.82	15±1	16	2.76	20	0.01495
	Ant2	2437	15.28	15±1	16	2.58	20	0.01435
	Ant1	2462	14.87	15±1	16	2.76	20	0.01495
	Ant2	2462	15.71	16±1	17	2.58	20	0.01806
11G	Ant1	2412	15.28	15±1	16	2.76	20	0.01495
	Ant2	2412	15.47	15±1	16	2.58	20	0.01435
	Ant1	2437	15.46	15±1	16	2.76	20	0.01495
	Ant2	2437	15.83	16±1	17	2.58	20	0.01806
	Ant1	2462	15.36	15±1	16	2.76	20	0.01495
	Ant2	2462	16.29	16±1	17	2.58	20	0.01806
11N20	Ant1	2412	15.23	15±1	16	2.76	20	0.01495
	Ant2	2412	15.73	16±1	17	2.58	20	0.01806
	total	2412	18.50	/	/	/	/	/
	Ant1	2437	14.30	14±1	15	2.76	20	0.01188
	Ant2	2437	15.00	15±1	16	2.58	20	0.01435
	total	2437	17.67	/	/	/	/	/
	Ant1	2462	14.14	14±1	15	2.76	20	0.01188
	Ant2	2462	15.53	16±1	17	2.58	20	0.01806
	total	2462	17.90	/	/	/	/	/
11N40	Ant1	2422	14.25	14±1	15	2.76	20	0.01188
	Ant2	2422	15.04	15±1	16	2.58	20	0.01435
	total	2422	17.67	/	/	/	/	/
	Ant1	2437	13.55	14±1	15	2.76	20	0.01188
	Ant2	2437	15.53	16±1	17	2.58	20	0.01806
	total	2437	17.66	/	/	/	/	/
	Ant1	2452	14.67	15±1	16	2.76	20	0.01495
	Ant2	2452	15.17	15±1	16	2.58	20	0.01495
	total	2452	17.94	/	/	/	/	/
Note: RF Output power specifies that Maximum Conducted Peak Output Power.								

5G Wi-Fi(U-NII-1) MPE Result

Test Mode	Antenna	Channel	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]
11A	Ant1	5180	16.06	16±1	17	2.37	20	0.01721
	Ant1	5220	16.44	16±1	17	2.37	20	0.01721
	Ant1	5240	17.29	17±1	18	2.37	20	0.02166
11N20	Ant1	5180	15.66	16±1	17	2.37	20	0.01721
	Ant1	5220	16.32	16±1	17	2.37	20	0.01721
	Ant1	5240	16.70	17±1	18	2.37	20	0.02166
11N40	Ant1	5190	16.29	16±1	17	2.37	20	0.01721
	Ant1	5230	17.95	18±1	19	2.37	20	0.02727
11AC20	Ant1	5180	15.52	16±1	17	2.37	20	0.01721
	Ant1	5220	15.96	16±1	17	2.37	20	0.01721
	Ant1	5240	16.28	16±1	17	2.37	20	0.01721
11AC40	Ant1	5190	16.01	16±1	17	2.37	20	0.01721
	Ant1	5230	16.91	17±1	18	2.37	20	0.02166
11AC80	Ant1	5210	16.90	17±1	18	2.37	20	0.02166

Note: RF Output power specifies that Maximum Conducted Peak Output Power.

5G Wi-Fi(U-NII-3) MPE Result

Test Mode	Antenna	Channel	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]
11A	Ant1	5745	17.19	17±1	18	4.81	20	0.03800
	Ant1	5785	17.25	17±1	18	4.81	20	0.03800
	Ant1	5825	16.62	17±1	18	4.81	20	0.03800
11N20	Ant1	5745	17.47	17±1	18	4.81	20	0.03800
	Ant1	5785	17.38	17±1	18	4.81	20	0.03800
	Ant1	5825	17.02	17±1	18	4.81	20	0.03800
11N40	Ant1	5755	17.30	17±1	18	4.81	20	0.03800
	Ant1	5795	17.42	17±1	18	4.81	20	0.03800
11AC20	Ant1	5745	17.06	17±1	18	4.81	20	0.03800
	Ant1	5785	17.12	17±1	18	4.81	20	0.03800
	Ant1	5825	16.81	17±1	18	4.81	20	0.03800
11AC40	Ant1	5755	17.97	18±1	19	4.81	20	0.04783
	Ant1	5795	17.82	18±1	19	4.81	20	0.04783
11AC80	Ant1	5775	17.51	18±1	19	4.81	20	0.04783

Note: RF Output power specifies that Maximum Conducted Peak Output Power.

Remark:

1. Output power including turn-up tolerance;
2. Output power was adjust to duty cycle at 100% if measured duty cycle less than 98%;
3. MPE evaluate distance is 20cm from user manual provide by manufacturer.
4. Only the worst power was evaluated for each wireless function

6. Summary simultaneous transmission information

The sample supports two antennas for 2.4GWiFi and 5GWiFi. The 2.4GWiFi and 5GWiFi can transmit simultaneous.

According to KDB447498 for Transmitters used in mobile exposure conditions for simultaneous transmission operations;

$\sum$ of MPE ratios ≤ 1.0

7. Summary simultaneous transmission results

2.4G Wifi and 5G Wifi Maximum Simultaneous transmission MPE Ratios is

$0.01883+0.01806+0.04783=0.08472 \leq 1.0$.

8. 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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