



RF EXPOSURE EVALUATION REPORT

FCC ID : 2AG7G-B3A
Equipment : SuperPod
Brand Name : Plume Design, Inc.
Model Name : B3A
Applicant : Plume Design, Inc.
325 Lytton Ave, Palo Alto , CA 94301, USA
Manufacturer : Plume Design, Inc.
325 Lytton Ave, Palo Alto , CA 94301, USA
Standard : 47 CFR Part 2.1091

We, SPORTON INTERNATIONAL INC has been evaluated this product in accordance with 47 CFR Part2.1091 and it complies with applicable limit.

Sporton Lab is accredited to ISO 17025 by Taiwan Accreditation Foundation (TAF code: 1190) and the FCC designation No. TW1190 under the FCC 2.948(e) by Mutual Recognition Agreement (MRA) in FCC evaluation.

The results in this report apply exclusively to the tested model / sample. Without written approval of SPORTON INTERNATIONAL INC. Laboratory, the test report shall not be reproduced except in full

Approved by: Cona Huang / Deputy Manager



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Table of Contents

1. DESCRIPTION OF EQUIPMENT UNDER TEST (EUT)	4
2. MAXIMUM RF AVERAGE OUTPUT POWER AMONG PRODUCTION UNITS	5
3. RF EXPOSURE LIMIT INTRODUCTION	6
4. RADIO FREQUENCY RADIATION EXPOSURE EVALUATION	7
4.1. Standalone Power Density Calculation	7



History of this test report

Report No.	Version	Description	Issued Date
FA232212B	Rev. 01	Initial issue of report	May 31, 2022



1. Description of Equipment Under Test (EUT)

Product Feature & Specification	
EUT Type	SuperPod
Brand Name	Plume Design, Inc.
Model Name	B3A
FCC ID	2AG7G-B3A
Wireless Technology and Frequency Range	WLAN 5.3GHz Band: 5250 MHz ~ 5350 MHz WLAN 5.5GHz Band: 5470 MHz ~ 5725 MHz
Mode	WLAN: 802.11a/b/g/n/ac HT20/HT40/VHT20/VHT40/VHT80 Bluetooth BR/EDR/LE
HW Version	DVT
EUT Stage	Production Unit

Remark: The above EUT's information was declared by manufacturer. Please refer to the specifications or user's manual for more detailed description.

Antenna	Support Band
1	5.5GHz WLAN
2	5.5GHz WLAN
3	5.5GHz WLAN
4	5.5GHz WLAN
5	5.3GHz WLAN
6	5.3GHz WLAN

<Antenna Gain for Non-Beamforming Mode>

Antenna Gain(dBi)					
5.3GHz WLAN		5.5GHz WLAN			
SISO Mode Ant 5	MIMO Mode Ant 5+6	SISO Mode Ant 3	MIMO Mode Ant 3+4	MIMO Mode Ant 2+3+4	MIMO Mode Ant 1+2+3+4
4	4.5	3.9	3.9	5.7	6

<Antenna Gain for Beamforming Mode>

Antenna Gain(dBi)			
5.3GHz WLAN	5.5GHz WLAN		
MIMO Mode Ant 5+6	MIMO Mode Ant 3+4	MIMO Mode Ant 2+3+4	MIMO Mode Ant 1+2+3+4
7.26	6.91	9.31	10.95

Reviewed by: Jason Wang

Report Producer: Carlie Tsai



2. Maximum RF average output power among production units

<Non-Beamforming Mode>

Maximum Average Power (dBm)					
5.3GHz WLAN		5.5GHz WLAN			
SISO Mode Ant 5	MIMO Mode Ant 5+6	SISO Mode Ant 3	MIMO Mode Ant 3+4	MIMO Mode Ant 2+3+4	MIMO Mode Ant 1+2+3+4
20	20	26.5	28	30	28.5

<Beamforming Mode>

Maximum Average Power (dBm)			
5.3GHz WLAN	5.5GHz WLAN		
MIMO Mode Ant 5+6	MIMO Mode Ant 3+4	MIMO Mode Ant 2+3+4	MIMO Mode Ant 1+2+3+4
23	27	27	25



3. RF Exposure Limit Introduction

According to ANSI/IEEE C95.1-1992, the criteria listed in Table 1 shall be used to evaluate the environmental impact of human exposure to radio frequency (RF) radiation as specified in §1.1310.

Table with 5 columns: Frequency range (MHz), Electric field strength (V/m), Magnetic field strength (A/m), Power density (mW/cm²), Averaging time (minutes). It is divided into two sections: (A) Limits for Occupational/Controlled Exposures and (B) Limits for General Population/Uncontrolled Exposure.

The MPE was calculated at 20 cm to show compliance with the power density limit.

The following formula was used to calculate the Power Density:

S = PG / (4πR²)

Where:

- S = Power Density
P = Output Power at Antenna Terminals
G = Gain of Transmit Antenna (linear gain)
R = Distance from Transmitting Antenna



4. Radio Frequency Radiation Exposure Evaluation

4.1. Standalone Power Density Calculation

<Non-Beamforming Mode>

Band	Antenna Gain (dBi)	Maximum Power (dBm)	Maximum EIRP (dBm)	Maximum EIRP (W)	Average EIRP (mW)	Power Density at 20cm (mW/cm ²)	Limit (mW/cm ²)
5.3GHz WLAN SISO Mode ANT 5	4.00	20.00	24.0	0.25	251.19	0.050	1.000
5.3GHz WLAN MIMO Mode ANT 5+6	4.50	20.00	24.5	0.28	281.84	0.056	1.000
5.5GHz WLAN SISO Mode ANT 3	3.90	26.50	30.4	1.10	1096.48	0.218	1.000
5.5GHz WLAN MIMO Mode ANT 3+4	3.90	28.00	31.9	1.55	1548.82	0.308	1.000
5.5GHz WLAN MIMO Mode ANT 2+3+4	5.70	30.00	35.7	3.72	3715.35	0.740	1.000
5.5GHz WLAN MIMO Mode ANT 1+2+3+4	6.00	28.50	34.5	2.82	2818.38	0.561	1.000

Note:

1. In the above table have assessed WLAN 5GHz by referring to their maximum power.

<Beamforming Mode>

Band	Antenna Gain (dBi)	Maximum Power (dBm)	Maximum EIRP (dBm)	Maximum EIRP (W)	Average EIRP (mW)	Power Density at 20cm (mW/cm ²)	Limit (mW/cm ²)
5.3GHz WLAN MIMO Mode ANT 5+6	7.26	23.00	30.3	1.06	1061.70	0.211	1.000
5.5GHz WLAN MIMO Mode ANT 3+4	6.91	27.00	33.9	2.46	2460.37	0.490	1.000
5.5GHz WLAN MIMO Mode ANT 2+3+4	9.31	27.00	36.3	4.28	4275.63	0.851	1.000
5.5GHz WLAN MIMO Mode ANT 1+2+3+4	10.95	25.00	36.0	3.94	3935.50	0.783	1.000

Note:

1. In the above table have assessed WLAN 5GHz by referring to their maximum power.

Conclusion:

According to 47 CFR §1.1307, the RF exposure analysis concludes that the RF Exposure is FCC compliant.