

## RF Exposure Report

**Report No.:** FCC\_RF\_SL20040701-FLU-002A1\_Bridge\_MPE

**FCC ID:** 2AOX8-F2200  
2AHMR-ESP12S

**Test Model:** F2200

**Series Model:** N/A

**Received Date:** 04/06/2020

**Test Date:** 04/08/2020-04/28/2020

**Issued Date:** 06/01/2020

**Applicant:** Flume Inc

**Address:** 75 Higuera St Suite 120, San Luis Obispo, CA-93405

**Manufacturer:** Flume Inc

**Address:** 75 Higuera St Suite 120, San Luis Obispo, CA-93405

**Issued By:** Bureau Veritas Consumer Products Services, Inc.

**Lab Address:** 775 Montague Expressway, Milpitas, CA 95035

**Test Location (1):** 775 Montague Expressway, Milpitas, CA 95035

**FCC Registration /  
Designation Number:** 540430



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### Release Control Record

Issue No.	Description	Date Issued
FCC_RF_SL20040701-FLU-002A1_Bridge_MPE	Initial Release	06/01/2020

## 1 Certificate of Conformity

**Product:** Flume Bridge

**Brand:** Flume

**Test Model:** F2200

**Sample Status:** Engineering sample

**Applicant:** Flume Inc

**Test Date:** 04/08/2020-04/28/2020

**Standards:** FCC Part 2 (Section 2.1093)

KDB 447498 D01 General RF Exposure Guidance v06

IEEE C95.1-1992

The above equipment has been tested by **Bureau Veritas Consumer Products Services, Inc., Milpitas Branch**, and found compliance with the requirement of the above standards. The test record, data evaluation & Equipment Under Test (EUT) configurations represented herein are true and accurate accounts of the measurements of the sample's EMC characteristics under the conditions specified in this report.

**Prepared by :**




**Date:**

06/01/2020

Deon Dai / Test Engineer

**Approved by :**



**Date:**

06/01/2020

Chen Ge / Engineer Reviewer

## 2 RF Exposure

### 2.1 Limits for Maximum Permissible Exposure (MPE)

Frequency Range (MHz)	Electric Field Strength (V/m)	Magnetic Field Strength (A/m)	Power Density (mW/cm <sup>2</sup> )	Average Time (minutes)
Limits For General Population / Uncontrolled Exposure				
0.3-1.34	614	1.63	(100)*	30
1.34-30	824/f	2.19/f	(180/f <sup>2</sup> )*	30
30-300	27.5	0.073	0.2	30
300-1500	...	...	f/1500	30
1500-100,000	...	...	1.0	30

f = Frequency in MHz; \*Plane-wave equivalent power density

### 2.2 MPE Calculation Formula

$$P_d = (P_{out} \cdot G) / (4 \cdot \pi \cdot r^2)$$

Where

$P_d$  = power density in mW/cm<sup>2</sup>

$P_{out}$  = output power to antenna in mW

$G$  = gain of antenna in linear scale

$\pi$  = 3.1416

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

### 2.3 Classification

The antenna of this product, under normal use condition, is at least 20cm away from the body of the user.  
So, this device is classified as Mobile Device.

### 2.4 Antenna Gain

The antenna type is Inverted F antenna with 0.9 dBi gain.

## 2.5 Calculation Result of Maximum Conducted Power

Type	Max Power (dBm)	Max Power (mW)	Turn-Up Tolerance	Antenna Gain (dBi)	Distance (cm)	Power Density (mW/cm <sup>2</sup> )	Limit (mW/cm <sup>2</sup> )
FHSS	16.153	41.24	± 1dB	0.9	20	0.013	0.6
WIFI	11.55	14.289	± 1dB	3	20	0.00568	1

Note:

1. Determining compliance based on the results of the compliance measurement, not taking into account measurement instrumentation uncertainty.

## 3 Conclusion

### Conclusion:

The formula of calculated the MPE is:

$CPD1 / LPD1 + CPD2 / LPD2 + \dots \text{etc.} < 1$

CPD = Calculation power density

LPD = Limit of power density

Total: FHSS + WIF =  $0.013 + 0.00568 = 0.01868 < 0.6$

**Therefore the maximum calculations of above situations are less than the “0.6” limit.**

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