

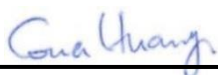
RF EXPOSURE EVALUATION REPORT

FCC ID : 2AEUPBHAF031
Equipment : Floodlight Cam Wired Pro
Brand Name : Ring
Model Name : 5B28S4
Applicant : Ring LLC
1523 26th St Santa Monica, CA 90404 USA
Manufacturer : Ring LLC
1523 26th St Santa Monica, CA 90404 USA
Standard : 47 CFR Part 2.1091

We, SPORTON INTERNATIONAL INC has been evaluated this product in accordance with 47 CFR Part 2.1091 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. EMC & Wireless Communications Laboratory, the test report shall not be reproduced except in full



Approved by: Cona Huang / Deputy Manager



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History of this test report

Report No.	Version	Description	Issued Date
FA120337	Rev. 01	Initial issue of report	May 17, 2021

**1. Description of Equipment Under Test (EUT)**

Product Feature & Specification	
EUT Type	Floodlight Cam Wired Pro
Brand Name	Ring
Model Name	5B28S4
FCC ID	2AEUPBHAFL031
Wireless Technology and Frequency Range	WLAN 2.4GHz Band: 2400 MHz ~ 2483.5 MHz WLAN 5.2GHz Band: 5150 MHz ~ 5250 MHz WLAN 5.3GHz Band: 5250 MHz ~ 5350 MHz WLAN 5.6GHz Band: 5470 MHz ~ 5725 MHz WLAN 5.8GHz Band: 5725 MHz ~ 5825 MHz Bluetooth: 2400 MHz ~ 2483.5 MHz LoRa: 902MHz ~ 928 MHz 24GHz Radar: 24MHz ~ 24.25MHz
Mode	WLAN: 802.11a/b/g/n/ac HT20/HT40/VHT20/VHT40/VHT80 Bluetooth LE LoRa: DTS/FHSS 24GHz Radar: FMCW
EUT Stage	Identical Prototype

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

Reviewed by: Jason Wang

Report Producer: Daisy Peng



2. Maximum RF average output power among production units

Mode	Tune-Up Limit
24GHz Radar	3.7

Mode	Channel	Frequency (MHz)	Tune-Up Limit
LoRa(DTS)	Ch 1	902.5MHz	25.50
LoRa(DTS)	Ch 16	914.5MHz	25.50
LoRa(DTS)	Ch 31	926.5MHz	25.00
BT5.0	CH 00	2402 MHz	10.50
BT5.0	CH 19	2440 MHz	10.50
BT5.0	CH 39	2480 MHz	10.50
BT5.0	CH 00	2402 MHz	10.50
BT5.0	CH 19	2440 MHz	11.00
BT5.0	CH 39	2480 MHz	10.50

Band	Channel	Frequency	tune up
802.11b	CH 01	2412 MHz	21.50
802.11b	CH 06	2437 MHz	20.50
802.11b	CH 11	2462 MHz	23.50
802.11g	CH 01	2412 MHz	21.00
802.11g	CH 06	2437 MHz	23.00
802.11g	CH 11	2462 MHz	21.00
802.11n HT20	CH 01	2412 MHz	20.00
802.11n HT20	CH 06	2437 MHz	22.00
802.11n HT20	CH 11	2462 MHz	19.50
802.11a	CH 036	5180 MHz	19.50
802.11a	CH 044	5220 MHz	19.00
802.11a	CH 048	5240 MHz	19.00
802.11n HT20	CH 036	5180 MHz	19.50
802.11n HT20	CH 044	5220 MHz	19.50
802.11n HT20	CH 048	5240 MHz	19.50
802.11n HT40	CH 038	5190 MHz	18.00
802.11n HT40	CH 046	5230 MHz	19.50
802.11ac VHT20	CH 036	5180 MHz	19.50
802.11ac VHT20	CH 044	5220 MHz	19.50
802.11ac VHT20	CH 048	5240 MHz	19.50
802.11ac VHT40	CH 038	5190 MHz	18.00
802.11ac VHT40	CH 046	5230 MHz	19.50
802.11ac VHT80	CH 042	5210 MHz	13.50



Band	Channel	Frequency	tune up
802.11a	CH 052	5260 MHz	19.00
802.11a	CH 060	5300 MHz	19.50
802.11a	CH 064	5320 MHz	19.50
802.11n HT20	CH 052	5260 MHz	19.50
802.11n HT20	CH 060	5300 MHz	19.00
802.11n HT20	CH 064	5320 MHz	19.00
802.11n HT40	CH 054	5270 MHz	19.00
802.11n HT40	CH 062	5310 MHz	18.50
802.11ac VHT20	CH 052	5260 MHz	19.00
802.11ac VHT20	CH 060	5300 MHz	19.00
802.11ac VHT20	CH 064	5320 MHz	19.00
802.11ac VHT40	CH 054	5270 MHz	19.00
802.11ac VHT40	CH 062	5310 MHz	18.50
802.11ac VHT80	CH 058	5290 MHz	15.00

Band	Channel	Frequency	tune up
802.11a	CH 100	5500 MHz	19.50
802.11a	CH 116	5580 MHz	19.50
802.11a	CH 140	5700 MHz	17.50
802.11a	CH 144	5720 MHz	19.00
802.11n HT20	CH 100	5500 MHz	19.50
802.11n HT20	CH 116	5580 MHz	19.50
802.11n HT20	CH 140	5700 MHz	17.00
802.11n HT20	CH 144	5720 MHz	19.00
802.11n HT40	CH 102	5510 MHz	18.00
802.11n HT40	CH 110	5550 MHz	19.50
802.11n HT40	CH 134	5670 MHz	19.50
802.11n HT40	CH 142	5710 MHz	19.50
802.11ac VHT20	CH 100	5500 MHz	19.50
802.11ac VHT20	CH 116	5580 MHz	19.50
802.11ac VHT20	CH 140	5700 MHz	17.00
802.11ac VHT20	CH 144	5720 MHz	19.00
802.11ac VHT40	CH 102	5510 MHz	18.00
802.11ac VHT40	CH 110	5550 MHz	19.50
802.11ac VHT40	CH 134	5670 MHz	19.50
802.11ac VHT40	CH 142	5710 MHz	19.50
802.11ac VHT80	CH 106	5530 MHz	15.00
802.11ac VHT80	CH 122	5610 MHz	19.00
802.11ac VHT80	CH 138	5690 MHz	19.00



Band	Channel	Frequency	tune up
802.11a	CH 149	5745 MHz	21.00
802.11a	CH 157	5785 MHz	21.00
802.11a	CH 165	5825 MHz	21.00
802.11n HT20	CH 149	5745 MHz	19.50
802.11n HT20	CH 157	5785 MHz	19.50
802.11n HT20	CH 165	5825 MHz	20.00
802.11n HT40	CH 151	5755 MHz	20.00
802.11n HT40	CH 159	5795 MHz	20.00
802.11ac VHT20	CH 149	5745 MHz	19.50
802.11ac VHT20	CH 157	5785 MHz	19.50
802.11ac VHT20	CH 165	5825 MHz	19.50
802.11ac VHT40	CH 151	5755 MHz	20.00
802.11ac VHT40	CH 159	5795 MHz	19.50
802.11ac VHT80	CH 155	5775 MHz	19.50



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.

Frequency range (MHz)	Electric field strength (V/m)	Magnetic field strength (A/m)	Power density (mW/cm ²)	Averaging time (minutes)
(A) Limits for Occupational/Controlled Exposures				
0.3-3.0	614	1.63	*(100)	6
3.0-30	1842/f	4.89/f	*(900/f ²)	6
30-300	61.4	0.163	1.0	6
300-1500			f/300	6
1500-100,000			5	6
(B) 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 ²)	30
30-300	27.5	0.073	0.2	30
300-1500			f/1500	30
1500-100,000			1.0	30

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:

$$S = \frac{PG}{4\pi R^2}$$

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

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)
WLAN2.4GHz Band	3.21	23.50	26.71	0.47	468.81	0.093	1.000
WLAN5GHz Band	5.60	21.00	26.60	0.46	457.09	0.091	1.000
Bluetooth	3.21	11.00	14.21	0.03	26.36	0.005	1.000
LoRa	-0.83	25.50	24.67	0.29	293.09	0.058	0.601
24GHz Radar	2.00	3.70	5.70	0.00	3.72	0.001	0.313

Conclusion:

According to 47 CFR §2.1091, the RF exposure analysis concludes that the RF Exposure is FCC compliant.