



# FCC RADIO EXPOSURE TEST REPORT

FCC ID : BKMAE-H931RX  
Equipment : LCD Projector  
Brand Name : EPSON  
Model Name : H931A  
Applicant : SEIKO EPSON CORPORATION  
3-3-5 Owa Suwa-shi Nagano-Ken 392-8502, Japan  
Manufacturer : SEIKO EPSON CORPORATION Toyoshina office  
6925 Tazawa, Toyoshina Azumino-shi, Nagano  
399-8285 Japan  
Standard : 47 CFR Part 2.1091

The product was received on Sep. 01, 2018, and testing was started from Sep. 01, 2018 and completed on Sep. 13, 2018. We, SPORTON INTERNATIONAL INC. EMC & Wireless Communications Laboratory, would like to declare that the tested sample has been evaluated in accordance with the procedures given in 47 CFR Part 2.1091 and shown compliance with the applicable technical standards.

The report must not be used by the client to claim product certification, approval, or endorsement by TAF or any agency of government.

The test 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: Cliff Chang

**SPORTON INTERNATIONAL INC. EMC & Wireless Communications Laboratory**  
No. 52, Huaya 1st Rd., Guishan Dist., Taoyuan City, Taiwan (R.O.C.)



## Table of Contents

<b>History of this test report</b> .....	<b>3</b>
<b>Summary of Test Result</b> .....	<b>4</b>
<b>1 General Description</b> .....	<b>5</b>
1.1 EUT General Information .....	5
1.2 Testing Location .....	5
<b>2 Maximum Permissible Exposure</b> .....	<b>6</b>
2.1 Limit of Maximum Permissible Exposure .....	6
2.2 MPE Calculation Method .....	6
2.3 Calculated Result and Limit.....	7
<b>Photographs of EUT v01</b>	



### History of this test report

Report No.	Version	Description	Issued Date
FA872105	01	Initial issue of report	Oct. 04, 2018



## Summary of Test Result

Report Clause	Ref Std. Clause	Test Items	Result (PASS/FAIL)	Remark
2	-	Exposure evaluation	PASS	-

Reviewed by: Sam Chen

Report Producer: Cindy Peng



# 1 General Description

## 1.1 EUT General Information

The Channel Plan(s)		
Evaluation Mode	Operating Frequency (GHz)	Modulation Type
Low-rate PHY (LRP) Band	Channel 2 LRP: 60.163-60.797 GHz Channel 3 LRP: 62.323-62.957 GHz	BPSK

## 1.2 Testing Location

Testing Location		
<input type="checkbox"/>	HWA YA	ADD : No. 52, Huaya 1st Rd., Guishan Dist., Taoyuan City, Taiwan (R.O.C.) TEL : 886-3-327-3456 FAX : 886-3-327-0973
<input checked="" type="checkbox"/>	JHUBEI	ADD : No.8, Lane 724, Bo-ai St., Jhubei City, HsinChu County 302, Taiwan, R.O.C. TEL : 886-3-656-9065 FAX : 886-3-656-9085



## 2 Maximum Permissible Exposure

### 2.1 Limit of Maximum Permissible Exposure

(A) Limits for Occupational / Controlled Exposure

Frequency Range (MHz)	Electric Field Strength (E) (V/m)	Magnetic Field Strength (H) (A/m)	Power Density (S) (mW/ cm <sup>2</sup> )	Averaging Time  E  <sup>2</sup> , H  <sup>2</sup> or S (minutes)
0.3-3.0	614	1.63	(100)*	6
3.0-30	1842 / f	4.89 / f	(900 / f)*	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

Frequency Range (MHz)	Electric Field Strength (E) (V/m)	Magnetic Field Strength (H) (A/m)	Power Density (S) (mW/ cm <sup>2</sup> )	Averaging Time  E  <sup>2</sup> , H  <sup>2</sup> or S (minutes)
0.3-1.34	614	1.63	(100)*	30
1.34-30	824/f	2.19/f	(180/f)*	30
30-300	27.5	0.073	0.2	30
300-1500			F/1500	30
1500-100,000			1.0	30

Note: f = frequency in MHz ; \*Plane-wave equivalent power density

### 2.2 MPE Calculation Method

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:

$$E \text{ (V/m)} = \frac{\sqrt{30 \times P \times G}}{d} \qquad \text{Power Density: } Pd \text{ (W/m}^2\text{)} = \frac{E^2}{377}$$

**E** = Electric field (V/m)

**P** = RF output power (W)

**G** = EUT Antenna numeric gain (numeric)

**d** = Separation distance between radiator and human body (m)

The formula can be changed to

$$Pd = \frac{30 \times P \times G}{377 \times d^2}$$



### 2.3 Calculated Result and Limit

This device contains transmitter module FCC ID: BKMAE-E207 (Bluetooth).

Simultaneous Transmission Analysis Mode: Radio CH2: 60HHZ + Radio CH3: 60HHZ + Bluetooth

Mode	DG (dBi)	Power (dBm)	EIRP (dBm)	Tolerance (dB)	Tune-up EIRP (dBm)	Tune-up EIRP (W)	Distance (cm)	S (mW/cm <sup>2</sup> )	S Limit (mW/cm <sup>2</sup> )	Ratio (S/Limit)
Radio CH2: 60HHZ	6.00	7.04	13.04	0.50	13.54	0.02259	20	0.00449	1	0.00449
Radio CH3: 60HHZ	6.00	6.65	12.65	0.50	13.15	0.02065	20	0.00411	1	0.00411
Bluetooth	4.80	2.55	7.35	0.50	7.85	0.00610	20	0.00121	1	0.00121
									Sum Ratio	0.00981
									Ratio Limit	1

—————THE END—————