



RF Exposure Evaluation Report

Equipment : WirelessHD Transmitter
Brand Name : EPSON
Model No. : WIT4S-G0
FCC ID : BKMAE-WIT4SG0
Standard : 47 CFR Part 2.1091
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

The product sample received on May 27, 2016 and completely tested on Jun. 21, 2016. We, SPORTON, would like to declare that the tested sample has been evaluated in accordance with 47 CFR Part 2.1091, and pass the limit.

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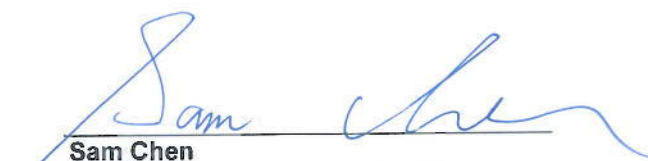

Sam Chen
SPORTON INTERNATIONAL INC.





TABLE OF CONTENTS

1	GENERAL DESCRIPTION	4
1.1	EUT General Information	4
1.2	Testing Location	4
2	MAXIMUM PERMISSIBLE EXPOSURE	5
2.1	Limit of Maximum Permissible Exposure	5
2.2	MPE Calculation Method	5
2.3	Calculated Result and Limit.....	6

REVISION HISTORY

[illegible]

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: 60.16-60.80 Channel 3 LRP: 62.32-62.96	BPSK
Middle-rate PHY (MRP) Band	Channel 2 MRP: 60.48 Channel 3 MRP: 62.64	QPSK
High-rate PHY (HRP) Band	Channel 2 HRP: 60.48 Channel 3 HRP: 62.64	QPSK, 16-QAM

1.2 Testing Location

Testing Location		
☐	HWA YA	ADD : No. 52, Hwa Ya 1st Rd., Kwei-Shan Hsiang, Tao Yuan Hsien, Taiwan, R.O.C. TEL : 886-3-327-3456 FAX : 886-3-327-0973
☒	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 ²)	Averaging Time E ² , H ² 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 ²)	Averaging Time E ² , H ² 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:

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

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

Exposure Environment			General Population / Uncontrolled Exposure					
Temp			22°C		Humidity	54%		
Test Engineer			Lucas Huang		Test Date	Jun. 07, 2016 ~ Jun. 21, 2016		
Test results								
Maximum EIPR Power of Test Frequency (GHz)			Average EIRP Power (dBm)	Average EIRP Power (mW)	Power Density (S) (mW/cm²)	Separation Distance (cm)	Limit of Power Density (S) (mW/cm²)	
LRP	60.16	GHz	24.32	270.53	0.054	20	1.00	
MRP	60.48	GHz	33.30	2138.39	0.426	20	1.00	
HRP	62.64	GHz	27.52	565.47	0.113	20	1.00	