

# 1. MAXIMUM PERMISSIBLE EXPOSURE (MPE)

---

## 1.1 Client Information

### Client Information

Applicant: Guangzhou Weiwei electronics co.,ltd  
Address of applicant: No.3 on the second floor, No.12Yayao Middle Road,P.O. Box  
Huadu District,Guangzhou,China

Manufacturer: Guangzhou Weiwei electronics co.,ltd  
Address of manufacturer: No.3 on the second floor, No.12Yayao Middle Road,P.O. Box  
Huadu District,Guangzhou,China

### General Description of EUT

Product Name: Projector  
Trade Name: /  
Model No.: H6  
JS1, JS2, JS3, JS4, JS5, JS6, JS7, JS8, JS9,  
H80, H89, H90, H2, H3, H5, T2, T3, T5,  
T6, T9, S1, S2, S3, S5, S6, S8, S9, A6X Pro,  
CS9 Pro, V2 Pro, MX8 Pro, GX6 Pro, KS6 Pro, KS8 Pro,  
TF90 Pro, SF90 Pro, KT8 Pro, M9S Pro, MAX10 Pro,  
VR9 Pro, G9K Pro, RS8 Pro, RS9 Pro, DX9 Pro, ZX6  
Pro, ZX8 Pro, ZX9 Pro, FX8 Pro, FX9 Pro, MG8  
Pro, HS6 Pro, A6X, CS9, V2 PRO, MX8, GX6, KS6,  
KS8, TF90, SF90, KT8, M9S, MAX10, VR9, G9K,  
RS8, RS9, DX9, ZX6, ZX8, ZX9, FX8, FX9, MG8,  
HS6  
Adding Model(s):  
Rated Voltage: AC 120V/60Hz  
Power Adapter Model: /  
Serial number: S-01  
FCC ID: 2BEB4-H6

### Technical Characteristics of EUT

Support Standards: 802.11b, 802.11g, 802.11n  
Frequency Range: 2412-2462MHz for 802.11b/g/n(HT20)  
2422-2452MHz for 802.11n(HT40)  
RF Output Power: 17.41dBm (Conducted)  
Type of Modulation: DBPSK, BPSK, DQPSK, QPSK,16QAM, 64QAM  
Quantity of Channels: 11 for 802.11b/g/n(HT20); 7 for 802.11n(HT40)  
Channel Separation: 5MHz  
Type of Antenna: Integral Antenna  
Antenna Gain: 3dBi

## 1.2 Standard Applicable

According to §1.1307(b)(1) and KDB 447498 D01 General RF Exposure Guidance v06, system operating under the provisions of this section shall be operating in a manner that the public is not exposed to radio frequency energy level in excess limit for 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 Times   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
1500-100000	/	/	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 Times   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
1500-100000	/	/	1	30

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

## 1.3 MPE Calculation Method

$$S = (30 \cdot P \cdot G) / (377 \cdot R^2)$$

S = power density (in appropriate units, e.g., mW/cm<sup>2</sup>)

P = power input to the antenna (in appropriate units, e.g., mW)

G = power gain of the antenna in the direction of interest relative to an isotropic radiator, the power gain factor is normally numeric gain.

R = distance to the center of radiation of the antenna (in appropriate units, e.g., cm)

## 1.4 MPE Calculation Result

Maximum peak output power: 17.41 (dBm)

Tune-Up output power: 18(dBm), 63.10(mW)

Prediction distance: >20(cm)

Prediction frequency: 2412 (MHz)

Antenna gain: 3 (dBi)

Directional gain: 2(numeric)

The worst case is power density at prediction frequency at 20cm: 0.025(mw/cm<sup>2</sup>)

MPE limit for general population exposure at prediction frequency: 1 (mw/cm<sup>2</sup>)

$$0.025(\text{mw/cm}^2) < 1 (\text{mw/cm}^2)$$

So the transmitter complies with the RF exposure requirements and the SAR is not required.