

# RF Exposure Evaluation Report

**Product** : Digital Photo Frame  
**Trade mark** : N/A  
**Model/Type reference** : DGF201, DGF202, DGF207, DGF208,  
DGF210, DGF213, DGF214, DGF215,  
DPF101, DPF101, Smart801, DPF701,  
Smart141, Phototen DF07 DF09 DF10  
MI86, MI706, VI86, VI706 VI106 MI106  
**Serial Number** : N/A  
**Report Number** : EED32L00227302  
**FCC ID** : 2AUKAMCX  
**Date of Issue** : Sep. 11, 2019  
**Test Standards** : IEEE C95.1 2005  
KDB 447498 D03  
47 C.F.R. Part 1, Subpart I, Section 1.1310  
47 C.F.R. Part 2, Subpart J, Section 2.1091  
**Test result** : PASS

Prepared for:

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Sep. 11, 2019

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## 2 Version

| Version No. | Date          | Description |
|-------------|---------------|-------------|
| 00          | Sep. 11, 2019 | Original    |
|             |               |             |
|             |               |             |

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## 4 General Information

### 4.1 Client Information

|                          |                                                                                        |
|--------------------------|----------------------------------------------------------------------------------------|
| Applicant:               | MAI CHUANGXIN ELECTRONIC LIMITED                                                       |
| Address of Applicant:    | Floor 6th, A building, RunFeng Industrial Zone, Gushu, Xixiang, BaoAn, Shenzhen, China |
| Manufacturer:            | MAI CHUANGXIN ELECTRONIC LIMITED                                                       |
| Address of Manufacturer: | Floor 6th, A building, RunFeng Industrial Zone, Gushu, Xixiang, BaoAn, Shenzhen, China |
| Factory:                 | MAI CHUANGXIN ELECTRONIC LIMITED                                                       |
| Address of Factory:      | Floor 6th, A building, RunFeng Industrial Zone, Gushu, Xixiang, BaoAn, Shenzhen, China |

### 4.2 General Description of EUT

|                                  |                                                                                                                                                                          |
|----------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Product Name:                    | Digital Photo Frame                                                                                                                                                      |
| Model No.(EUT):                  | DGF201, DGF202, DGF207, DGF208, DGF210, DGF213, DGF214, DGF215, DPF101, DPF101, Smart801, DPF701, Smart141, Phototen DF07 DF09 DF10 MI86, MI706, VI86, VI706 VI106 MI106 |
| Test Model No.:                  | DGF201                                                                                                                                                                   |
| Trade Mark:                      | N/A                                                                                                                                                                      |
| EUT Supports Radios application: | WiFi IEEE 802.11 /b/g/n (HT20) 2412MHz to 2462MHz                                                                                                                        |

### 4.3 Product Specification subjective to this standard

|                       |                                                                                                      |
|-----------------------|------------------------------------------------------------------------------------------------------|
| Frequency Range:      | IEEE 802.11b/g/n(HT20): 2412MHz to 2462MHz<br>IEEE 802.11n(HT40): 2422MHz to 2452MHz                 |
| Modulation Type:      | DSSS, OFDM                                                                                           |
| Number of Channels:   | IEEE 802.11b/g, IEEE 802.11n HT20: 11 Channels<br>IEEE 802.11n HT40: 7 Channels                      |
| Test Power Grade:     | 802.11b:L 63,M 40,H 30    802.11n20:L 39,M 38,H 38<br>802.11g: L 41,M 40,H 39(manufacturer declare ) |
| Test Software of EUT: | REALTEK WLAN Test Tool                                                                               |
| Antenna Type:         | Internal antenna                                                                                     |
| Antenna Specification | 2.4GHz      Antenna Gain : 4.69 dBi (Numeric gain 2.94)                                              |

|                       |                                |                             |           |             |
|-----------------------|--------------------------------|-----------------------------|-----------|-------------|
| Maximum tune up power | IEEE 802.11b Mode:             |                             | 18.11 dBm | (64.714 mW) |
|                       | IEEE 802.11g Mode:             |                             | 17.11 dBm | (51.404 mW) |
|                       | IEEE 802.11n HT 20 Mode        |                             | 16.42 dBm | (43.853 mW) |
|                       | IEEE 802.11n HT 40 Mode        |                             | 15.38 dBm | (34.514 mW) |
| Power Supply:         | Adapter:                       | AC :100-240 V 50/60 Hz 0.2A |           |             |
| Sample Received Date: | Aug. 15, 2019                  |                             |           |             |
| Sample tested Date:   | Aug. 15, 2019 to Sep. 11, 2019 |                             |           |             |

#### 4.4 Test Location

All tests were performed at:

Centre Testing International Group Co., Ltd

Building C, Hongwei Industrial Park Block 70, Bao'an District, Shenzhen, China

Telephone: +86 (0) 755 33683668 Fax:+86 (0) 755 33683385

No tests were sub-contracted.

FCC Designation No.: CN1164

#### 4.5 Deviation from Standards

None.

#### 4.6 Abnormalities from Standard Conditions

None.

#### 4.7 Other Information Requested by the Customer

None.

## 5 RF Exposure Evaluation

### 5.1 RF Exposure Compliance Requirement

Given  $E = \frac{\sqrt{30 \times P \times G}}{d}$  &  $S = \frac{E^2}{377}$

Where  $E$  = Field strength in Volts / meter

$P$  = Power in Watts

$G$  = Numeric antenna gain

$d$  = Distance in meters

$S$  = Power density in milliwatts / square centimeter

Combining equations and re-arranging the terms to express the distance as a function of the remaining variables yields:

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

Changing to units of mW and cm, using:

$$P \text{ (mW)} = P \text{ (W)} / 1000 \text{ and}$$

$$d \text{ (cm)} = d \text{ (m)} / 100$$

Yields

$$S = \frac{30 \times (P/1000) \times G}{377 \times (d/100)^2} = 0.0796 \times \frac{P \times G}{d^2} \quad \text{Equation 1}$$

Where  $d$  = Distance in cm

$P$  = Power in mW

$G$  = Numeric antenna gain

$S$  = Power density in mW / cm<sup>2</sup>

## 5.2 Maximum Permissible Exposure

Substituting the MPE safe distance using  $d = 20$  cm into Equation 1:

$$S = 0.000199 \times P \times G$$

Where  $P$  = Power in mW

$G$  = Numeric antenna gain

$S$  = Power density in mW / cm<sup>2</sup>

### IEEE 802.11b mode:

| Ch. | Frq.(MHz) | P (mW) | Gain (num.) | D (cm) | Power density in mW / cm <sup>2</sup> | Limit (mW/cm2) |
|-----|-----------|--------|-------------|--------|---------------------------------------|----------------|
| 11  | 2462      | 64.714 | 2.94        | 20     | 0.0379                                | 1              |

### IEEE 802.11g mode:

| Ch. | Frq.(MHz) | P (mW) | Gain (num.) | D (cm) | Power density in mW / cm <sup>2</sup> | Limit (mW/cm2) |
|-----|-----------|--------|-------------|--------|---------------------------------------|----------------|
| 1   | 2412      | 51.404 | 2.94        | 20     | 0.0301                                | 1              |

### IEEE 802.11n HT20 mode:

| Ch. | Frq.(MHz) | P (mW) | Gain (num.) | D (cm) | Power density in mW / cm <sup>2</sup> | Limit (mW/cm2) |
|-----|-----------|--------|-------------|--------|---------------------------------------|----------------|
| 11  | 2462      | 43.853 | 2.94        | 20     | 0.0257                                | 1              |

### IEEE 802.11n HT40 mode:

| Ch. | Frq.(MHz) | P (mW) | Gain (num.) | D (cm) | Power density in mW / cm <sup>2</sup> | Limit (mW/cm2) |
|-----|-----------|--------|-------------|--------|---------------------------------------|----------------|
| 3   | 2422      | 34.514 | 2.94        | 20     | 0.0202                                | 1              |

## PHOTOGRAPHS OF EUT Constructional Details

Refer to Report No. EED32L00227301 for EUT external and internal photos.

\*\*\* End of Report \*\*\*

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