



Report No.: SZ13090014S01

# RF EXPOSURE EVALUATION REPORT

Issued to

**SZ DJI TECHNOLOGY CO., LTD**

For

**5.8G Transmitter**

Model Name : PVT581  
 Trade Name : DJI  
 Brand Name : DJI  
 FCC ID : SS3-201309581  
 Standard : 47CFR 2.1091  
                   KDB 447498 D01 General RF  
                   Exposure Guidance v05r01  
 Test date : 2013-10-8  
 Issue date : 2013-10-10

by

**Shenzhen MORLAB Communication Technology Co., Ltd.**



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Date 2013.10.10

Date 2013.10.10

Date 2013.10.10



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Change History		
Issue	Date	Reason for change
1.0	Oct. 10, 2013	First edition

## **1. Testing Laboratory**

### **1.1. Identification of the Responsible Testing Location**

Name: Shenzhen Morlab Communications Technology Co., Ltd.  
Morlab Laboratory

Address: FL.3, Building A, FeiYang Science Park, No.8 LongChang  
Road, Block 67, BaoAn District, ShenZhen, GuangDong  
Province, P. R. China 518101

FCC Registration Number: 695796

### **1.2. Accreditation Certificate**

Accredited Testing Laboratory: No. CNAS L3572

## 2. Technical Information

Note: the following data is based on the information by the applicant.

### 2.1. Identification of Applicant

Company Name: SZ DJI TECHNOLOGY CO., LTD  
Address: Room 613、614, 6/F, HKUST SZ IER Bldg, No.9 Yuexing 1st Rd  
Hi-Tech Park(south), Nanshan District, Shenzhen, Guangdong,  
China

### 2.2. Identification of Manufacturer

Company Name: SZ DJI TECHNOLOGY CO., LTD (Baoan Branch)  
Address: Room 311~320, Office Bldg., Zhongyuntai Industrial Park, Songbai  
Rd., Shiyuan Town, Bao'an District, Shenzhen, Guangdong, China

### 2.3. Equipment Under Test (EUT)

Model Name: PVT581  
Trade Name: DJI  
Brand Name: DJI  
Hardware Version: V2.0  
Software Version: V1.0  
Frequency Bands: 5.8GHz: 5728-5844 MHz  
Modulation Mode: 5.8GHz : GFSK  
Antenna type: External Monopole Antenna  
Development Stage: Identical prototype

#### 2.3.1. Photographs of the EUT

Please see for photographs of the EUT.

#### 2.3.2. Identification of all used EUT

The EUT identity consists of numerical and letter characters, the letter character indicates the test sample, and the following two numerical characters indicate the software version of the test sample.

EUT Identity	Hardware Version	Software Version
1#	V2.0	V1.0

## 2.4. Applied Reference Documents

Leading reference documents for testing:

No.	Identity	Document Title
1	<b>47 CFR§2.1091</b>	Radiofrequency Radiation Exposure Evaluation: mobile devices
2	<b>KDB 447498 D01</b>	General RF Exposure Guidance V05r01

### 3. Device Category and RF Exposure Limit

Per user manual, this device is a wireless remote controller. Based on 47CFR 2.1091, this device belongs to mobile device category with General Population/Uncontrolled exposure.

#### Mobile Devices:

47CFR 2.1091(b)

For purposes of this section, a mobile device is defined as a transmitting device designed to be used in other than fixed locations and to generally be used in such a way that a separation distance of at least 20 centimeters is normally maintained between the transmitter's radiating structure(s) and the body of the user or nearby persons. In this context, the term “fixed location” means that the device is physically secured at one location and is not able to be easily moved to another location.

Transmitting devices designed to be used by consumers or workers that can be easily re-located, such as wireless devices associated with a personal computer, are considered to be mobile devices if they meet the 20 centimeter separation requirement.

#### GENERAL POPULATION / UNCONTROLLED EXPOSURE

The general population/uncontrolled exposure limits are applicable to situations in which the general public may be exposed or in which persons who are exposed as a consequence of their employment may not be made fully aware of the potential for exposure or cannot exercise control over their exposure. Members of the general public would come under this category when exposure is not employment-related; for example, in the case of a wireless transmitter that exposes persons in its vicinity. Warning labels placed on low-power consumer devices such as cellular telephones are not considered sufficient to allow the device to be considered under the occupational/controlled category, and the general population/uncontrolled exposure limits apply to these devices.

**TABLE 1—LIMITS FOR MAXIMUM PERMISSIBLE EXPOSURE (MPE)**

Frequency range (MHz)	Electric field strength (V/m)	Magnetic field strength (A/m)	Power density (mW/cm <sup>2</sup> )	Averaging time (minutes)
<b>(B) Limits for General Population/Uncontrolled Exposure</b>				
0.3-1.34	614	1.63	*(100)	30
1.34-30	824/f	2.19/f	*(180/f <sup>2</sup> )	30
30-300	27.5	0.073	0.2	30
300-1500			f/1500	30
1500-100,000			1.0	30

f = frequency in MHz

\* = Plane-wave equivalent power density

#### 4. Measurement Of Conducted Peak Output Power.

1. 5.8GHz Conducted average output power

Band	Channel	Frequency (MHz)	Output Power(dBm)
			GFSK
5.8GHz	1	5728	17.26
	8	5784	17.39
	16	5844	17.69

## 5. RF Exposure Evaluation

### Standalone transmission MPE evaluation

Bands	Frequency (MHz)	Antenna Gain (dBi)	Conducted Average Power (dBm)	Time-averaging EIRP (mW)	Calculated to ERP (mW)
5.8GHz	5844	2.00	17.69	93.111	56.754

Note:

Per 47CFR 2.1091(c)

Mobile device are subject to routine environmental evaluation for RF exposure prior to equipment authorization or use if they operate at frequencies of 1.5 GHz or below and their effective radiated power (ERP) is 1.5 watts or more, or if they operate at frequencies above 1.5 GHz and their ERP is 3 watts or more.

So standalone MPE evaluation is not required for 5.8GHz antenna.

$EIRP=P*G$ ,  $ERP=EIRP-2.15dB$

### Simultaneous transmission MPE evaluation

There are only one 5.8GHz transmitter incorporated in this remote controller, so simultaneous transmission is not required.