



REPORT No. : SZ17070206S01

RF EXPOSURE EVALUATION REPORT

APPLICANT : Golden Mark (HK) Limited

PRODUCT NAME : Wall Switch

MODEL NAME : HS-WS200+

TRADE NAME : N/A

BRAND NAME : N/A

FCC ID : 2AMY9HSWS200

STANDARD(S) : 47CFR 2.1091
KDB 447498 D01 General RF Exposure
Guidance v06

ISSUE DATE : 2017-08-22

SHENZHEN MORLAB COMMUNICATIONS TECHNOLOGY Co., Ltd.

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DIRECTORY

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Change History		
Issue	Date	Reason for change
1.0	2017-08-22	First edition



TEST REPORT DECLARATION

Applicant	Golden Mark (HK) Limited
Applicant Address	6/F., Kimberley Plaza, 45-47 Kimberley Road, Tsim Sha Tsui, Kowloon, Hong Kong
Manufacturer	Golden Mark (HK) Limited
Manufacturer Address	6/F., Kimberley Plaza, 45-47 Kimberley Road, Tsim Sha Tsui, Kowloon, Hong Kong
Product Name	Wall Switch
Model Name	HS-WS200+
Brand Name	N/A
HW Version	N/A
SW Version	N/A
Test Standards	47CFR 2.1091; KDB 447498 D01 General RF Exposure Guidance v06
Issue Date	2017-08-21
SAR Evaluation	Not Required

Tested by

Peng Fuwei (Test engineer)

Approved by

Peng Huarui (Supervisor)



1. TECHNICAL INFORMATION

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

1.1. Identification of Applicant

Company Name:	Golden Mark (HK) Limited
Address:	6/F., Kimberley Plaza, 45-47 Kimberley Road, Tsim Sha Tsui, Kowloon, Hong Kong

1.2. Identification of Manufacturer

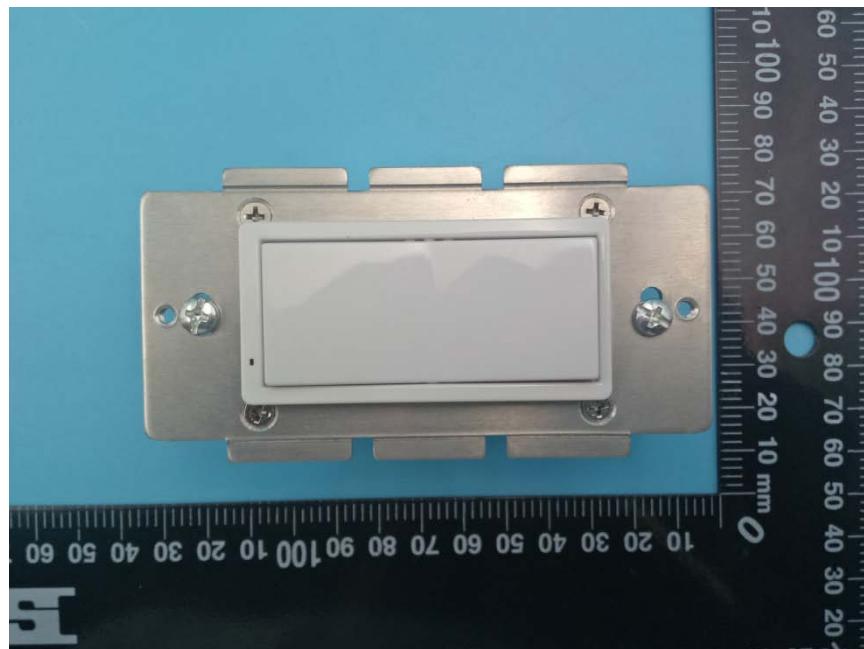
Company Name:	Golden Mark (HK) Limited
Address:	6/F., Kimberley Plaza, 45-47 Kimberley Road, Tsim Sha Tsui, Kowloon, Hong Kong

1.3. Equipment Under Test (EUT)

Model Name:	HS-WS200+
Trade Name:	N/A
Brand Name:	N/A
Hardware Version:	N/A
Software Version:	N/A
Frequency Bands:	908.4MHz;916.0MHz
Antenna type:	wire type

1.3.1. Photographs of the EUT

1. EUT front view



2. EUT rear view





1.3.2. 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#	N/A	N/A

1.4. Applied Reference Documents

Leading reference documents for testing:

No.	Identity	Document Title
1	47 CFR§2.1091	Radiofrequency Radiation Exposure Evaluation: mobile devices
2	KDB 447498 D01v06	General RF Exposure Guidance



2. DEVICE CATEGORY AND RF EXPOSURE LIMIT

Per user manual, 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 ²)	Averaging time (minutes)
(B) Limits for General Population/Uncontrolled Exposure				
0.3-1.34	614	1.63	*(100)	30
1.34-30	824/f	2.19/f	*(180/f ²)	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



3 RF EXPOSURE EVALUATION

Standalone transmission MPE evaluation

Frequency (MHz)	Max Emission (dBuV/m)	measurement distance (cm)	Time-averaging EIRP (mW)	Power density (mW/cm ²)	Limit for MPE (mW/cm ²)
908.4	79.843	20	0.0289	0.00001	0.611
916.0	80.354	20	0.0325	0.00001	0.611

1. MPE calculation method

$$\text{Power Density} = \text{EIRP}/4\pi R^2$$

$$\text{Where: EIRP} = (E^*d)^2/30$$

E = electric field strength in V/m

d = measurement distance in meters (m).

R = Separation distance (20cm)



ANNEX C GENERAL INFORMATION

1. Identification of the Responsible Testing Laboratory

Company Name:	Shenzhen Morlab Communications Technology Co., Ltd.
Department:	Morlab Laboratory
Address:	FL.3, Building A, FeiYang Science Park, No.8 LongChang Road, Block 67, BaoAn District, ShenZhen, GuangDong Province, P. R. China
Responsible Test Lab Manager:	Mr. Su Feng
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2. 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

***** END OF REPORT *****