

RF Exposure Evaluation Report

Product : Smart Wi-Fi Wall Switch
Trade mark : meross, refoss, rospick
Model/Type reference : MSS510, MSS550, MSS560, MSS570,
RSS510, RSS550, RSS560, RSS570
Serial Number : N/A
Report Number : EED32L00260002
FCC ID : 2AMUU-MSWWS01
Date of Issue : Oct. 11, 2019
Test Standards : 47 CFR Part 1.1307
47 CFR Part 1.1310
KDB447498D01v06
Test result : PASS

Prepared for:

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2 Version

Version No.	Date	Description
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4 General Information

4.1 Client Information

Applicant:	Chengdu Meross Technology Co.,Ltd.
Address of Applicant:	Room 1312, Floor 13, Building 6-1, Zone E, TianFu Software Park, GaoXin District, Chengdu, China
Manufacturer:	Chengdu Meross Technology Co.,Ltd.
Address of Manufacturer:	Room 1312, Floor 13, Building 6-1, Zone E, TianFu Software Park, GaoXin District, Chengdu, China
Factory:	CHENGDU XUGUANG TECHNOLOGY CO.,LTD.
Address of Factory:	2 Section of Park Road, Longquanyi, Chengdu, China

4.2 General Description of EUT

Product Name:	Smart Wi-Fi Wall Switch
Model No.(EUT):	MSS510, MSS550, MSS560, MSS570, RSS510, RSS550, RSS560, RSS570
Test Model No.:	MSS510
Trade Mark:	meross, refoss, rospick
EUT Supports Radios application	WiFi IEEE 802.11 /b/g/n(HT20)(HT40) 2412MHz to 2462MHz

4.3 Product Specification subjective to this standard

Frequency Range:	IEEE 802.11b/g/n(HT20): 2412MHz to 2462MHz IEEE 802.11n(HT40): 2422MHz to 2452MHz				
Modulation Type:	DSSS, OFDM				
Number of Channels:	IEEE 802.11b/g, IEEE 802.11n HT20: 11 Channels IEEE 802.11n HT40: 7 Channels				
Test Power Grade:	Mode	Channel	Frequency	Data Rate	Power Setting
	802.11b	1	2412	1 Mbps	1B
		6	2437		1A
		11	2462		1A
	802.11g	1	2412	6 Mbps	10
		6	2437		10
		11	2462		10
	802.11n(HT20)	1	2412	MCS 0	11
		6	2437		11
		11	2462		11
	802.11n(HT40)	3	2422	MCS 0	11
		6	2437		11
		9	2452		11
Test Software of EUT:	MT7682 QA 0.3.0.8				
Antenna Type:	PCB antenna				
Antenna Specification	2.4GHz	Antenna Gain :	1.50 dBi	(Numeric gain: 1.41)	
Maximum tune up power	IEEE 802.11b Mode:		18.33 dBm	(68.077 mW)	
	IEEE 802.11g Mode:		17.45 dBm	(55.590 mW)	
	IEEE 802.11n HT 20 Mode:		16.77 dBm	(47.534 mW)	
	IEEE 802.11n HT 40 Mode:		14.97 dBm	(31.405 mW)	

Power Supply:	AC120V, 60Hz
Sample Received Date:	Sep. 12, 2019
Sample tested Date:	Sep. 12, 2019 to Oct. 10, 2019
The tested sample(s) and the sample information are provided by the client. Model No.: MSS510, MSS550, MSS560, MSS570, RSS510, RSS550, RSS560, RSS570 Only the model MSS510 was tested, We the undersigned hereby confirm that any of our production units bearing the following model numbers are identical in circuitry and electrical, mechanical and physical construction; the only differences are the appearance and model no.for trading purpose	

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 / cm²

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 / cm²

IEEE 802.11b mode:

Ch.	Frq.(MHz)	P (mW)	Gain (num.)	D (cm)	Power density in mW / cm ²	Limit (mW/cm ²)
1	2412	68.077	1.41	20	0.0191	1

IEEE 802.11g mode:

Ch.	Frq.(MHz)	P (mW)	Gain (num.)	D (cm)	Power density in mW / cm ²	Limit (mW/cm ²)
6	2437	55.59	1.41	20	0.0156	1

IEEE 802.11n HT20 mode:

Ch.	Frq.(MHz)	P (mW)	Gain (num.)	D (cm)	Power density in mW / cm ²	Limit (mW/cm ²)
6	2437	47.534	1.41	20	0.0133	1

IEEE 802.11n HT40 mode:

Ch.	Frq.(MHz)	P (mW)	Gain (num.)	D (cm)	Power density in mW / cm ²	Limit (mW/cm ²)
1	2422	31.405	1.41	20	0.0088	1

PHOTOGRAPHS OF EUT Constructional Details

Refer to Report No. EED32L00260001 for EUT external and internal photos.

*** End of Report ***

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