RF Exposure Evaluation Report

Product	:	Smart Wi-Fi Dimmer Switch
Trade mark	:	Meross, Refoss, Flysocks
Model/Type reference	:	MSS560, MSS565, MSS570, MSS565MA, MSS565RE, MSS570MA, MSS570AD
Serial Number	:	N/A
Report Number	:	EED32M00314802
FCC ID	:	2AMUU-MSWWS03
Date of Issue	:	Nov. 26, 2020
Test Standards	:	47 CFR Part 1.1307 47 CFR Part 2.1091 KDB447498D01v06
Test result	:	PASS

Prepared for:

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Date: Nov. 26, 2020

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2 Version

Version No.	Date	Description
00	Nov. 26, 2020	Original

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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, Sichuan, 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, Sichuan, 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 Dimmer Switch
Model No.(EUT):	MSS560, MSS565, MSS570, MSS565MA, MSS565RE, MSS570MA, MSS570AD
Test Model No.:	MSS560
Trade Mark:	Meross, Refoss, Flysocks
EUT Supports Radios application	IEEE 802.11 b/g/n(HT20)(HT40): 2412MHz to 2462MHz

4.3 Product Specification subjective to this standard

Frequency Range:	2412MHz to 2462MHz		
Modulation Type:	IEEE for 802.11b: DSSS(CCK,DQPSK,DBPSK) IEEE for 802.11g :OFDM(64QAM, 16QAM, QPSK, BPSK) IEEE for 802.11n(HT20 and HT40) : OFDM (64QAM, 16QAM,QPSK,BPSK		
Number of Channels:	IEEE 802.11b/g, IEEE 802.11n HT20: 11 Channels IEEE 802.11n HT40: 7 Channels		
Test Power Grade:	Default		
Test Software of EUT:	QATool_Dbg.exe		
Antenna Type:	PCB antenna		
Antenna Specification	1.5 dBi		
Maximum tune up power	IEEE 802.11b Mode:	14.70 dBm	(29.512 mW)
	IEEE 802.11g Mode:	14.96 dBm	(31.333 mW)
	IEEE 802.11n HT 20 Mode:	13.83 dBm	(24.155 mW)
	IEEE 802.11n HT 40 Mode:	12.50 dBm	(17.783 mW)
Power Supply:	AC 120V		
Sample Received Date:	Sep. 29, 2020		
Sample tested Date:	Sep. 29, 2020 to Oct. 21, 2020		

Company Name and Address shown on Report, the sample(s) and sample Information was/ were provided by the applicant who should be responsible for the authenticity which CTI hasn't verified.

Model No.: MSS560, MSS565, MSS570, MSS565MA, MSS565RE, MSS570MA, MSS570AD.

Only the model MSS560 was tested, since the electrical circuit design, layout, components used and internal wiring were identical for the above models, with difference the model numberof market reason.

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 (mW) = P (W) / 1000 and

d (cm) = d(m) / 100

Yields

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

Where d = Distance in cm

P = Power in mW

G = Numeric antenna gain

S = Power density in mW / cm^2

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^2

IEEE 802.11b mode:

Ch.	Frq.(MHz)	P (mW)	Gain (num.)	D (cm)	Power density in mW / cm^2	Limit (mW/cm2)
1	2412	29.51	1.41	20	0.0083	1

IEEE 802.11g mode:

Ch.	Frq.(MHz)	P (mW)	Gain (num.)	D (cm)	Power density in mW / cm^2	Limit (mW/cm2)
6	2437	31.33	1.41	20	0.0088	1

IEEE 802.11n HT20 mode:

Ch.	Frq.(MHz)	P (mW)	Gain (num.)	D (cm)	Power density in mW / cm^2	Limit (mW/cm2)
6	2437	24.15	1.41	20	0.0068	1

IEEE 802.11n HT40 mode:

Ch.	Frq.(MHz)	P (mW)	Gain (num.)	D (cm)	Power density in mW / cm^2	Limit (mW/cm2)
7	2452	17.78	1.41	20	0.0050	1

PHOTOGRAPHS OF EUT Constructional Details

Refer to Report No. EED32M00314801for EUT external and internal photos.

*** End of Report ***