Intradin (Shanghai) Machinery Co., Ltd.

MPE ASSESSMENT REPORT

Report Type:
FCC MPE assessment report

Model:
GUR036, GUT059, GUT060

REPORT NUMBER:
200702555SHA-002

ISSUE DATE:
September 21, 2020

DOCUMENT CONTROL NUMBER:
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TEST REPORT

Report no.: 200702555SHA-002

Applicant:	Intradin (Shanghai) Machinery Co., Ltd. No. 118, Duhui Road, Minhang District, Shanghai, China.
Manufacturer:	Intradin (Shanghai) Machinery Co., Ltd. No. 118, Duhui Road, Minhang District, Shanghai, China.
Factory:	Intradin (HuZhou) Precision Technology Co., Ltd. 1088 GanShan Road, Wuxing District, HuZhou, Zhejiang Province, 313005 China.
FCC ID:	2AW8R-GUR036
IC:	26378-GUR036

SUMMARY:

The equipment complies with the requirements according to the following standard(s) or Specification:
KDB447498 D01 General RF Exposure Guidance v06 FCC Part2.1091, FCC Part2.1093 FCC Part1.1307(b)

PREPARED BY:	**REVIEWED BY:**
Project Engineer Eric Li	Reviewer Daniel Zhao

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Revision History

Report No.	Version	Description	Issued Date
200702555SHA-002	Rev. 01	Initial issue of report	September 21, 2020

1 GENERAL INFORMATION

1.1 Description of Equipment Under Test (EUT)

Product name:	Intelligent Socket
Type/Model:	GUR036, GUT059, GUT060
Description of EUT:	EUT is an Intelligent Socket with WiFi function, and there are three models, they are same except Brand name & Model No. We test GUR036 as representative and list the worst results in this report.
Rating:	120VAC60Hz,15A
Category of EUT:	Class B
EUT type:	☒ Table top ☐ Floor standing
Software Version:	/
Hardware Version:	/
Sample received date:	September 10, 2020
Date of test:	September 12, 2020 ~ September 17, 2020

1.2 Technical Specification

Frequency Range:	2412MHz ~ 2462MHz for 802.11 b, g, n(HT20) 2422MHz ~ 2452MHz for 802.11 n(HT40)
Support Standards:	IEEE 802.11b, IEEE 802.11g, IEEE 802.11n(HT20), IEEE 802.11n(HT40)
Type of Modulation:	IEEE 802.11b: DSSS (CCK, DQPSK, DBPSK) IEEE 802.11g: OFDM (64-QAM, 16-QAM, QPSK, BPSK) IEEE 802.11n(HT20): OFDM (64-QAM, 16-QAM, QPSK, BPSK) IEEE 802.11n(HT40): OFDM (64-QAM, 16-QAM, QPSK, BPSK)
Channel Number:	11 Channels for 802.11b, 802.11g and 802.11n(HT20) 7 Channels for 802.11n(HT40)
Channel Separation:	5 MHz
Antenna Information:	PCB Antenna Antenna gain: 2.5dBi

1.3 Description of Test Facility

Name:	Intertek Testing Services Shanghai
Address:	Building 86, No. 1198 Qinzhou Road(North), Shanghai 200233, P.R. China
Telephone:	86 21 61278200
Telefax:	86 21 54262353

The test facility is recognized, certified, or accredited by these organizations:	CNAS Accreditation Lab Registration No. CNAS L0139
	FCC Accredited Lab Designation Number: CN1175
	IC Registration Lab Registration code No.: 2042B-1
	VCCI Registration Lab Registration No.: R-4243, G-845, C-4723, T-2252
	A2LA Accreditation Lab Certificate Number: 3309.02

2 MPE Assessment

Test result: Pass

2.1 MPE Assessment Limit

Mobile device exposure for standalone operations:

Frequency range	E-field strength (V/m)	H-field strength (A/m)	B-field (uT)	Equivalent plane wave power density S_{eq} (W/m^2)
0-1 Hz	-	$3,2 \times 10^4$	4×10^4	-
1-8 Hz	10 000	$3,2 \times 10^4/f^2$	$4 \times 10^4/f^2$	-
8-25 Hz	10 000	4 000/f	5 000/f	-
0,025-0,8 kHz	250/f	4/f	5/f	-
0,8-3 kHz	250/f	5	6,25	-
3-150 kHz	87	5	6,25	-
0,15-1 MHz	87	0,73/f	0,92/f	-
1-10 MHz	$87/f^{1/2}$	0,73/f	0,92/f	-
10-400 MHz	28	0,073	0,092	2
400-2 000 MHz	$1,375\ f^{1/2}$	$0,0037\ f^{1/2}$	$0,0046\ f^{1/2}$	f/200
2-300 GHz	61	0,16	0,20	10

Mobile device exposure for simultaneous transmission operations: **the sum of the MPE ratios for all simultaneously transmitting antennas incorporated in a host device is ≤ 1.0**

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2.2 Assessment Results

Power density (S) is calculated according to the formula:

$S = P / (4\pi R^2)$

Where S = power density in mW/cm^2

P = Radiated transmit power in mW

G = numeric gain of transmit antenna

R = distance (cm)

As we can see from the test report 200702555SHA-001:
The maximum radiated power = 22.25dBm = 167.88 mW;
Here R is chosen to be 20cm,

$S = P / (4\pi R^2) = 167.88 / (4 * 3.14 * 20 * 20) = 0.0334\ mW/cm^2 < 1\ mW/cm^2$

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Appendix I

Definition below must be outlined in the User Manual:

To satisfy FCC RF exposure requirements, a separation distance of 20 cm or more should be maintained between the antenna of this device and persons during device operation.
To ensure compliance, operations at closer than this distance is not recommended.

********** END **********