

RADIO FREQUENCY EXPOSURE EVALATION

General Information

Applicant : Savant Technologies LLC, dba GE Lighting, a Savant company
EUT Description : CYNCR Shoplight
Model No. : CFIXSHP46CDMAT
Radio Tech : BLE, WIFI2.4G
Frequency : 2402MHz-2480MHz, 2412MHz-2462MHz

Description of Test Facility

Name of Firm : Audix Technology (Shanghai) Co., Ltd.
Site Location : 3F, Building 34, No. 680 Guiping Rd.,
Caohejing, Hi-Tech Park, Shanghai 200233, China
NVLAP, Lab Code : 200371-0
FCC Designation Number : CN5027
Test Firm Registration Number: 954668

Results

The EUT is operated as one mobile device with separation distance is 20 cm, and it is compliant with the RF Exposure Exemption.



For and on behalf of
Audix Technology (Shanghai) Co., Ltd.

Producer :

Huimin Yan

HUIMIN YAN / Assistant

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Authorized Signature(s).

Jarey Lu

JAREY LU / Deputy Assistant Manager

Evaluation Method

KDB 447498 D04 Interim General RF Exposure Guidance v01

Applicable Standard:

FCC CFR 47 §1.1307(b)(3)(i)(B):

A single RF source is exempt if the available maximum time-averaged power or effective radiated power (ERP), whichever is greater, is less than or equal to the threshold P_{th} (mW) described in the following formula. This method shall only be used at separation distances (cm) from 0.5 centimeters to 40 centimeters and at frequencies from 0.3 GHz to 6 GHz (inclusive). P_{th} is given by:

$$P_{th} \text{ (mW)} = \begin{cases} ERP_{20 \text{ cm}} (d/20 \text{ cm})^x & d \leq 20 \text{ cm} \\ ERP_{20 \text{ cm}} & 20 \text{ cm} < d \leq 40 \text{ cm} \end{cases}$$

Where

$$x = -\log_{10} \left(\frac{60}{ERP_{20 \text{ cm}} \sqrt{f}} \right) \text{ and } f \text{ is in GHz;}$$

and

$$ERP_{20 \text{ cm}} \text{ (mW)} = \begin{cases} 2040f & 0.3 \text{ GHz} \leq f < 1.5 \text{ GHz} \\ 3060 & 1.5 \text{ GHz} \leq f \leq 6 \text{ GHz} \end{cases}$$

d = the separation distance (cm);

RF Exposure Evaluation:

Mode	Frequency	Max output power		Ant. Gain	Max E.I.R.P		P _{th}	Verdict
	MHz	dBm	mW	dBi	dBm	mW	mW	
BLE	2442	4.157	2.60	0.5	4.657	2.922	3060	Compliant
802.11b	2462	15.51	35.56	0.5	16.01	39.902	3060	Compliant
802.11g	2462	13.28	21.28	0.5	13.78	23.878	3060	Compliant
802.11n20	2462	12.46	17.62	0.5	12.96	19.770	3060	Compliant
802.11n40	2452	11.57	14.35	0.5	12.07	16.106	3060	Compliant

Note1: For this EUT, and the separation distance is 20 cm. And the Bluetooth and WIFI can not transmit at the same time.

Note2: The Conducted output power and Maximum EIRP both no greater than the threshold P_{th}, that meets the exemption, the RF exposure evaluation is not required.

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