



中国认可
国际互认
检测
TESTING
CNAS L5313



RF Exposure Evaluation Declaration

Product Name : Wireless SPI transceiver module

Model No. : LCR1-1276H

FCC ID : 2AQXP-LCR1-1276H

Applicant : Shanghai leeyz Electronic Technology Co., Ltd.

Address : Room 205, 2588 Jinhai Road, Pudong New Area,
Shanghai

Date of Receipt : Aug. 13, 2018

Test Date : Aug. 14, 2018~ Aug. 28, 2018

Issued Date : Aug. 31, 2018

Report No. : 1882082R-RF-US-P20V01

Report Version : V1.0

The test results relate only to the samples tested.

The test results shown in the test report are traceable to the national/international standard through the calibration of the equipment and evaluated measurement uncertainty herein.

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Test Report Certification

Issued Date : Aug. 31, 2018
Report No. : 1882082R-RF-US-P20V01



Product Name : Wireless SPI transceiver module
Applicant : Shanghai leeyz Electronic Technology Co., Ltd.
Address : Room 205, 2588 Jinhai Road, Pudong New Area, Shanghai
Manufacturer : Shanghai leeyz Electronic Technology Co., Ltd.
Address : Room 205, 2588 Jinhai Road, Pudong New Area, Shanghai
Model No. : LCR1-1276H
FCC ID : 2AQXP-LCR1-1276H
EUT Voltage : DC 3.3V
Brand Name : N/A
Applicable Standard : KDB 447498D01V06
Test Result : FCC Part1.1310(b)
Performed Location : Complied
DEKRA Testing & Certification (Suzhou) Co., Ltd.
No.99 Hongye Rd., Suzhou Industrial Park, Suzhou, 215006,
Jiangsu, China

TEL: +86-512-6251-5088 / FAX: +86-512-6251-5098
FCC Registration Number: CN1199;

Documented By :



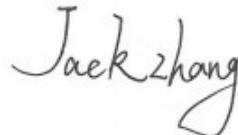
(Project Assistant: Kitty Li)

Reviewed By :



(Senior Project Manager: Frank He)

Approved By :



(Engineering Supervisor: Jack Zhang)

1. RF Exposure Evaluation

1.1. Limits

According to FCC 1.1310: The criteria listed in the following table shall be used to evaluate the environment impact of human exposure to radio frequency (RF) radiation as specified in 1.1307(b)

LIMITS FOR MAXIMUM PERMISSIBLE EXPOSURE (MPE)

Frequency Range (MHz)	Electric Field Strength (V/m)	Magnetic Field Strength (A/m)	Power Density (mW/cm ²)	Average Time (Minutes)
(A) Limits for Occupational/ Control Exposures				
300-1500	--	--	F/300	6
1500-100,000	--	--	5	6
(B) Limits for General Population/ Uncontrolled Exposures				
300-1500	--	--	F/1500	6
1500-100,000	--	--	1	30

F= Frequency in MHz

Friis Formula

Friis transmission formula: $P_d = (P_{out} \cdot G) / (4 \cdot \pi \cdot r^2)$

Where

P_d = power density in mW/cm²

P_{out} = output power to antenna in mW

G = gain of antenna in linear scale

π = 3.1416

r = distance between observation point and center of the radiator in cm

P_d is the limit of MPE, 0.601mW/cm². If we know the maximum gain of the antenna and the total power input to the antenna, through the calculation, we will know the distance r where the MPE limit is reached.

1.2. Test Procedure

Software provided by client enabled the EUT to transmit and receive data at lowest, middle and highest channel individually.

The temperature and related humidity: 18 °C and 78% RH.

1.3. Test Result of RF Exposure Evaluation

Product	:	Wireless SPI transceiver module
Test Item	:	RF Exposure Evaluation
Test Site	:	AC-6

● Antenna Information

Model No.	N/A					
Antenna manufacturer	N/A					
Antenna Delivery	<input checked="" type="checkbox"/>	1*TX+1*RX	<input type="checkbox"/>	2*TX+2*RX	<input type="checkbox"/>	3*TX+3*RX
Antenna technology	<input checked="" type="checkbox"/>	SISO				
	<input type="checkbox"/>	MIMO	<input type="checkbox"/>	Basic		
	<input type="checkbox"/>		<input type="checkbox"/>	CDD		
	<input type="checkbox"/>		<input type="checkbox"/>	Sectorized		
	<input type="checkbox"/>		<input type="checkbox"/>	Beam-forming		
Antenna Type	<input checked="" type="checkbox"/>	External	<input checked="" type="checkbox"/>	Dipole		
	<input type="checkbox"/>		<input type="checkbox"/>	Sectorized		
	<input type="checkbox"/>	Internal	<input type="checkbox"/>	PIFA		
	<input type="checkbox"/>		<input type="checkbox"/>	PCB		
	<input type="checkbox"/>		<input type="checkbox"/>	helical antenna		
	<input type="checkbox"/>		<input type="checkbox"/>	Ceramic Chip Antenna		
	<input type="checkbox"/>		<input type="checkbox"/>	Metal plate type F antenna		
Antenna Technology	Ant Gain (dBi)					
<input checked="" type="checkbox"/> SISO	2.0					

- Output Power into Antenna & RF Exposure Evaluation Distance:

Frequency Band (MHz)	Maximum Output Power to Antenna (dBm)	Antenna Gain (dBi)	Power Density at R = 20 cm (mW/cm ²)	Limit of Power Density S(mW/cm ²)
902~928MHz	13.86	2.0	0.0077	1.0

Note: The power density is 0.0077mW/cm² for Wireless SPI transceiver module without any other radio equipment.

 The End