

MPE REPORT

Report No.: SRTC2022-9004(F)-22051103 (I)
Product Name: Wi-Fi Module
Model Name: ZDRK8812CU
Applicant: Hisense Communication Co., Ltd.
FCC ID: SARZDRK8812CU

Reference Specification
FCC Part §1.1310

The State Radio_monitoring_center Testing Center (SRTC)

15th Building, No.30 Shixing Street, ShijingshanDistrict, Beijing,P.R.China

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1 GENERAL INFORMATION

1.1 Notes of the test report

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The certification and accreditation identifiers used in this report shall not be applicable to the tested or calibrated samples thereof. The manufacturer shall not mark the tested samples or items (or a separate part of the item) with the identifiers of certification and accreditation to mislead relevant parties about the tested samples or items.

1.2 Information about the testing laboratory

Company:	The State Radio_monitoring_center Testing Center (SRTC)
Designation number:	CN1267
Registration number:	239125
Certificate Number:	5055.02
Address:	15th Building, No.30 Shixing Street, Shijingshan District, Beijing P.R.China
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1.3 Applicant's details

Company:	Hisense Communication Co., Ltd.
Address:	218 Qianwangang Road, Economic & Technological Development Zone, Qingdao, Shandong Province, P.R. China

1.4 Manufacturer's details

Company:	Hisense Communication Co., Ltd.
Address:	218 Qianwangang Road, Economic & Technological Development Zone, Qingdao, Shandong Province, P.R. China

1.5 Test environment

Testing Start Date:	2022/08/09
Testing End Date:	2022/08/15

Environmental Data:	Temperature (°C)	Humidity (%)
Ambient:	22	35

2 DESCRIPTION OF THE EQUIPMENT UNDER TEST

2.1 Final equipment build status

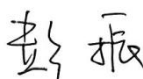

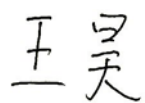
Frequency Range:	WIFI2.4GHz: 2400MHz – 2483.5MHz WIFI5GHz UNII-1: 5150MHz – 5250MHz WIFI5GHz UNII-2A: 5250MHz – 5350MHz WIFI5GHz UNII-2C: 5470MHz – 5725MHz WIFI5GHz UNII-3: 5725MHz – 5850MHz
Mode:	WIFI2.4GHz: 802.11b/g/n HT20/n HT40 WIFI5GHz: 802.11a/n HT20/n HT40 /ac VHT20/ac VHT40/ac VHT80/
Antenna gain:	WLAN2.4GHz Ant1:3.72dBi/ Ant2:2.0dBi WLAN5GHz Ant1:4.07dBi/ Ant2:2.5 dBi
Hardware Version:	V1.00
Software Version:	NA
IMEI/SN:	#1

3 SPECIFICATION

Specification	Version	Title
Part 1.1310	Latest	Radio frequency radiation exposure limits.

4 RESULT SUMMARY

Case	Verdict
MPE	Pass

This Test Report Is Issued by: Mr. Peng Zhen 	Checked by: Mr. Li Bin 
Tested by: Mr. Wang Hao 	Issued date: 2022/08/16

5 CALCULATION RESULT

5.1 Average output power

Mode	Maximum Average power(dBm)
WiFi2.4GHz	20.0
WiFi5.2GHz	19.5
WiFi5.3GHz	19.0
WiFi5.6GHz	21.0
WiFi5.8GHz	20.0

5.2 Maximum permissible exposure (MPE)

Limit:

(A) Limits for Occupational/Controlled Exposure

Frequency Range (MHz)	Electric Field Strength (E) (V/m)	Magnetic Field Strength (H) (A/m)	Power Density (S) (mW/cm ²)	Averaging Time E ² , H ² or S (minutes)
0.3-3.0	614	1.63	*100	6
3.0-30	1842/f	4.89/f	*900/f ²	6
30-300	61.4	0.163	1.0	6
300-1500	--	--	f/300	6
1500-100,000	--	--	5	6

(B) Limits for General Population/Uncontrolled Exposure

Frequency Range (MHz)	Electric Field Strength (E) (V/m)	Magnetic Field Strength (H) (A/m)	Power Density (S) (mW/cm ²)	Averaging Time E ² , H ² or S (minutes)
0.3-1.34	614	1.63	*100	30
1.34-30	824/f	2.19/f	*180/f ²	30
30-300	27.5	0.073	0.2	30
300-1500	--	--	f/1500	30
1500-100,000	--	--	1.0	30

f = frequency in MHz *Plane-wave equivalent power density

Result:

According to §1.1310, systems operating under the provisions of this section shall be operated in a manner that ensures that the public is not exposed to radio frequency energy levels in excess of the Commission’s guidelines.

The MPE was calculated at 20 cm to show compliance with the power density limit.

The following formula was used to calculate the Power Density:

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

Where S = power density in mW/cm²

P = transmit power in mW

G = numeric gain of transmit antenna

R = distance (cm)

Standalone Transmission Result

Band	Freq. (MHz)	Average Power (dBm)	Average EIRP (dBm)	Average EIRP (mW)	Power Density at 20cm (mW/cm ²)	Limit (mW/cm ²)	Power Density/ Limit
WLAN2.4GHz Band	2462	20.0	23.72	235.50	0.047	1.0	0.047
WLAN5.2GHz Band	5180	19.5	23.57	227.51	0.045	1.0	0.045
WLAN5.3GHz Band	5280	19.0	23.07	202.77	0.040	1.0	0.040
WLAN5.6GHz Band	5700	21.0	25.07	321.37	0.064	1.0	0.064
WLAN5.8GHz Band	5785	20.0	24.07	255.27	0.051	1.0	0.051