



RF EXPOSURE Test Report

Report No.: MTi220223005-03E3

Date of issue: 2022-05-12

Applicant: Shenzhen Suntek Intelligent Technology Co., Ltd

Product name: WiFi Trail camera

Model(s): WiFi900Pro, WiFi301, WiFi810, WiFi801,
WiFi900, WiFi830Plus, WiFi801Plus,
WiFi900Plus, WiFi830Pro, WiFi801Pro,
WiFi940Pro, WiFi940Pro-Li, WiFi812Pro

FCC ID: 2A5AR-WIFI900PRO

Shenzhen Microtest Co., Ltd.

<http://www.mtitest.com>



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TEST RESULT CERTIFICATION	
Applicant's name.....:	Shenzhen Suntek Intelligent Technology Co., Ltd
Address.....:	10/F, Building 2, Xinlikang Industrial Park, No.6 Lianli East Road, Xialilang Community, Longgang District, Shenzhen, China
Manufacturer's Name	Shenzhen Suntek Intelligent Technology Co., Ltd
Address.....:	10/F, Building 2, Xinlikang Industrial Park, No.6 Lianli East Road, Xialilang Community, Longgang District, Shenzhen, China
Product description	
Product name	WiFi Trail camera
Trademark	N/A
Model Name	WiFi900Pro
Serial Model	WiFi301, WiFi810, WiFi801, WiFi900, WiFi830Plus, WiFi801Plus, WiFi900Plus, WiFi830Pro, WiFi801Pro, WiFi940Pro, WiFi940Pro-Li, WiFi812Pro
Standards.....:	N/A
Test procedure	KDB 447498 D01 v06
Date of Test	
Date (s) of performance of tests	2022-02-23 ~ 2022-05-12
Test Result.....:	Pass

Testing Engineer

:

Yanice Xie

(Yanice Xie)

Technical Manager

:

Leon Chen

(Leon Chen)

Authorized Signatory

:

Tom Xue

(Tom Xue)



RF EXPOSURE EVALUATION

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)	Averaging time (minutes)
(A) Limits for Occupational/Controlled Exposure				
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
300-1,500			f/300	6
1,500-100,000			5	6
(B) Limits for General Population/Uncontrolled Exposure				
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
300-1,500			f/1500	30
1,500-100,000			1.0	30

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

MPE Calculation Method

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 = Numeric gain of the antenna relative to isotropic antenna

π = 3.1415926

R = distance between observation point and center of the radiator in cm(20cm)

P_d the limit of MPE, 1mW/cm². If we know the maximum gain of the antenna and total power input to the antenna, through the calculation, we will know the distance where the MPE limit is reached.

Measurement Result

BLE:

Operation Frequency: 2402-2480MHz,

Power density limited: 1mW/ cm²

2.4GWiFi:

Operation Frequency: WIFI 802.11b/g/n HT20: 2412-2462MHz,

Power density limited: 1mW/ cm²

Antenna Type: FPC Antenna;

WIFI antenna gain: 0dBi

R=20cm

$mW=10^{(dBm/10)}$

antenna gain Numeric= $10^{(dBi/10)}=10^{(0/10)}=1.00$

BLE:

Chann el Freq. (MHz)	modulation	conducte d power	Tune- up power (dBm)	Max		Antenna		Evaluation result	Power density Limits
		(dBm)		tune-up power		Gain		(mW/cm2)	(mW/cm 2)
				(dBm)	(mW)	(dBi)	Num eric		
2402	GFSK	-1.89	(-2)±1	-1	0.794	0	1.00	0.0002	1
2440		-5.07	(-5)±1	-4	0.398	0	1.00	0.0001	1
2480		-4.12	(-5)±1	-4	0.398	0	1.00	0.0001	1



2.4GWiFi:

Channel Freq. (MHz)	modulation	conducted power	Tune-up power	Max		Antenna	Evaluation result at 20cm	Power density Limits
		(dBm)	(dBm)	tune-up power		Gain	Power density(mW/cm2)	(mW/cm2)
				(dBm)	(mW)	Numeric		
		Ant A	Ant A	Ant A	Ant A	Ant A		
2412	802.11b	15.97	16±1	17	50.118723	1	0.00997	1
2437		16	16±1	17	50.118723	1	0.00997	1
2462		16.58	16±1	17	50.118723	1	0.00997	1
2412	802.11g	14.07	15±1	16	39.810717	1	0.00792	1
2437		14.63	15±1	16	39.810717	1	0.00792	1
2462		14.65	15±1	16	39.810717	1	0.00792	1
2412	802.11n H20	14	14±1	15	31.622777	1	0.00629	1
2437		13.62	14±1	15	31.622777	1	0.00629	1
2462		13.47	14±1	15	31.622777	1	0.00629	1

Simultaneous transmit

BLE+2.4GWiFi=0.0002+0.00997=0.01017

Conclusion:

Result is pass.

----END OF REPORT----