RF EXPOSURE Test Report

Report No.	:	**MTi250610003-0101E3**
Date of Issue	:	**2025-08-05**
Applicant	:	**Shanghai Zhen Anjie Intelligent Technology Co., Ltd.**
Product	:	**Video smart lock**
Model(s)	:	**S398**
FCC ID	:	**2BP99-S398**

Shenzhen Microtest Co., Ltd.

TEST REPORT

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Test Result Certification		
Applicant	Shanghai Zhen Anjie Intelligent Technology Co., Ltd.	
Applicant Address	Room 201, 2nd Floor, 625 Zhangjiang Road, Pudong New District, Shanghai	
Manufacturer	Shanghai Zhen Anjie Intelligent Technology Co., Ltd.	
Manufacturer Address	Room 201, 2nd Floor, 625 Zhangjiang Road, Pudong New District, Shanghai	
Factory	Dongguan Lingdu Electronic Technology Co., Ltd.	
Factory Address	Longcheng Street, Qingxi Town, Dongguan City,Guangdong Province	
Product description		
Product name	Video smart lock	
Trademark	Smrtiplx	
Model name	S398	
Series Model(s)	N/A	
Standards	47 CFR Part 2.1091	
Test method	KDB 447498 D01 v06	
Testing Information		
Date of test	2025-07-03 to 2025-08-05	
Test Result	Pass	
Prepared by	James Qin	
Reviewed by	David Lee	
Approved by	Leon Chen	

1 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: $Pd= (Pout*G)\ (4*pi*R^2)$

Where

Pd= Power density in mW/cm^2

Pout=output power to antenna in mW

G= Numeric gain of the antenna relative to isotropic antenna

Pi=3.1415926

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

Pd the limit of MPE, $1mW/cm^2$. 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.

2 Measurement Result

BLE:
Operation Frequency: 2402-2480MHz,
Power density limited: 1mW/ cm^2
2.4GWiFi:
Operation Frequency: WIFI 802.11b/g/n/ax20:: 2412-2462MHz,
802.11n40/ax: 2422-2452MHz,
Power density limited: 1mW/ cm^2

Antenna Type: FPC Antenna;

Antenna gain: 2.66dBi

R=20cm

mW=10^(dBm/10)

Antenna gain Numeric=10^(dBi/10)= 10^(2.66/10)=1.85

BLE:

Channel Freq. (MHz)	modulation	conducted power	Tune-up power (dBm)	Max		Antenna		Evaluation result	Power density Limits
		(dBm)		tune-up power		Gain		(mW/cm^2)	(mW/cm^2)
				(dBm)	(mW)	(dBi)	Numeric		
2402	BLE-1M	6.43	6±1	7	5.012	2.66	1.85	0.0018	1
2440		6.19	6±1	7	5.012	2.66	1.85	0.0018	1
2480		6.37	6±1	7	5.012	2.66	1.85	0.0018	1
2402	BLE-2M	6.16	6±1	7	5.012	2.66	1.85	0.0018	1
2440		5.88	5±1	6	3.981	2.66	1.85	0.0015	1
2480		6.62	6±1	7	5.012	2.66	1.85	0.0018	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/cm^2)	(mW/cm^2)
				(dBm)	(mW)	Numeric		
2412	802.11b	16.50	16±1	17	50.119	1.85	0.01840	1
2437		17.20	17±1	18	63.096	1.85	0.02316	1
2462		17.73	17±1	18	63.096	1.85	0.02316	1
2412	802.11g	15.45	15±1	16	39.811	1.85	0.01461	1
2437		15.80	15±1	16	39.811	1.85	0.01461	1
2462		15.39	15±1	16	39.811	1.85	0.01461	1
2412	802.11n H20	15.05	15±1	16	39.811	1.85	0.01461	1
2437		15.85	15±1	16	39.811	1.85	0.01461	1
2462		15.52	15±1	16	39.811	1.85	0.01461	1
2422	802.11n H40	15.44	15±1	15	31.623	1.85	0.01161	1
2437		16.16	16±1	17	50.119	1.85	0.01840	1
2452		16.19	16±1	17	50.119	1.85	0.01840	1
2412	802.11nax20	16.39	16±1	17	50.119	1.85	0.01840	1
2437		16.88	16±1	17	50.119	1.85	0.01840	1
2462		16.47	16±1	17	50.119	1.85	0.01840	1
2422	802.11nax40	15.87	15±1	16	39.811	1.85	0.01461	1
2437		16.44	16±1	17	50.119	1.85	0.01840	1
2452		16.52	16±1	17	50.119	1.85	0.01840	1

Conclusion:

Simultaneous transmit:
BLE+2.4G WIFI =0.0018+0.02316=0.02496

For the max result: 0.02496≤ 1.0 SAR, No SAR is required.

Statement

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****** END OF REPORT ******