



RF EXPOSURE Test Report

Report No.: MTi210330008-05E3

Date of issue: July 30, 2021

Applicant: EKEN GROUP LIMITED

Product name: Smart Video Doorbell

Model(s): T8, K8, K6, K7, K9, V8, T6, T9,
V6, V9

FCC ID: 2ADDG-T8

Shenzhen Microtest Co., Ltd.

<http://www.mtitest.com>



Instructions

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TEST RESULT CERTIFICATION

Applicant's name.....: EKEN GROUP LIMITED

Address.....: Room 2511-2512, Meilan Business Center Qianjin Two Road, XiXiang, Baoan District Shenzhen, Guangdong China

Manufacturer's Name: Shenzhen Puge Electronics Co., Ltd.

Address.....: 2F Building E, No. 1 LingXia Road, FengHuang Community, FuYong Street, BaoAn District, Shenzhen.

Product description

Product name: Smart Video Doorbell

Trademark: N/A

Model Name: T8

Serial Model: K8, K6, K7, K9, V8, T6, T9, V6, V9

Standards.....: N/A

Test procedure: KDB 447498 D01 v06

Date of Test

Date (s) of performance of tests: May 10, 2021 ~ July 20, 2021

Test Result.....: Pass

This device described above has been tested by Shenzhen Microtest Co., Ltd. and the test results show that the equipment under test (EUT) is in compliance with the FCC requirements. And it is applicable only to the tested sample identified in the report.

Testing Engineer

:

Danny Xu

(Danny Xu)

Technical Manager

:

Leo Su

(Leo Su)

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

2.4GWiFi:

Operation Frequency: WIFI 802.11b/g/n HT20: 2412-2462MHz,
802.11n HT40: 2422-2452MHz,

Antenna Type: monopole Antenna;
WIFI antenna gain: 1dBi

433.92MHz:

Operation Frequency: 433.92MHz
Power density limited: 1mW/ cm²

Antenna Type: spring Antenna;
WIFI antenna gain: 1dBi

R=20cm

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

antenna gain Numeric= $10^{(dBi/10)}=10^{(1/10)}=1.26$

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)
		Ant A	Ant A	(dBm)	(mW)	Numeric		
2412	802.11b	14.89	15±1	16	39.810717	1.26	0.00998	1
2437		15.11	15±1	16	39.810717	1.26	0.00998	1
2462		14.57	15±1	16	39.810717	1.26	0.00998	1
2412	802.11g	11.30	11±1	12	15.848932	1.26	0.00397	1
2437		13.21	13±1	14	25.118864	1.26	0.00630	1
2462		12.39	13±1	14	25.118864	1.26	0.00630	1
2412	802.11n H20	11.27	11±1	12	15.848932	1.26	0.00397	1
2437		13.24	13±1	14	25.118864	1.26	0.00630	1
2462		12.65	13±1	14	25.118864	1.26	0.00630	1
2422	802.11n H40	12.23	12±1	13	19.952623	1.26	0.00500	1
2437		12.39	12±1	13	19.952623	1.26	0.00500	1
2452		12.27	12±1	13	19.952623	1.26	0.00500	1



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	Ant A	
433.92	ASK	-6	-6±1	-5	0.316	1.26	0.0001	1

Conclusion:

For the max result: $0.00998+0.0001=0.01008 \leq 1.0$ for 1g SAR, No SAR is required.

----END OF REPORT----