

RF EXPOSURE Test Report

Report No. : MTi260528004-0105E4
Date of issue : 2026-07-15
Applicant : Shenzhen Kerchan Star Technology Co., Ltd
Product : alarm clock
Model(s) : C16A
FCC ID : 2A7FC-C16A

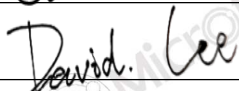
Shenzhen Microtest Co., Ltd.

TEST REPORT

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Test Result Certification		
Applicant	Shenzhen Kerchan Star Technology Co., Ltd	
Applicant Address	7th Floor, Building B, Huafeng International Robot Industrial Park, Hangcheng Road, Bao'an District, Shenzhen	
Manufacturer	Shenzhen Kemei Vision Technology Co.,Ltd	
Manufacturer Address	5F Building B shuangjinhui Industrial Park Fu hai street Yonghe road 8 Fu'yong,Baoan Shenzhen China 518103	
Factory	Shenzhen Kemei Vision Technology Co.,Ltd	
Factory Address	5F Building B shuangjinhui Industrial Park Fu hai street Yonghe road 8 Fu'yong,Baoan Shenzhen China 518103	
Product description		
Product name	alarm clock	
Trademark	ANJANK	
Model name	C16A	
Series Model(s)	N/A	
Standards	47 CFR Part 2.1091	
Test method	KDB 447498 D01 v06	
Testing Information		
Date of test	2026-06-09 to 2026-06-11	
Test Result	Pass	
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Reviewed by:	David Lee	
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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: $P_d = (P_{out} \cdot G) / (4 \cdot \pi \cdot R^2)$

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.

2 Measurement Result

BT:

Operation Frequency: 2402-2480MHz,
Power density limited: 1mW/ cm²

Antenna Type: PCB Antenna

Antenna gain: 2.499dBi

R=20cm

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

Antenna gain Numeric= $10^{(dBi/10)}=10^{(2.499/10)}=1.78$

BT:

Channel Freq. (MHz)	modulation	conducted power	Tune-up power (dBm)	Max		Antenna		Evaluation result	Power density Limits
		(dBm)		tune-up power		Gain			
				(dBm)	(dBm)	(mW)	(dBi)	Numeric	(mW/cm ²)
2402	GFSK	2.41	2±1	3	1.995	2.499	1.78	0.0007	1
2441		2.38	2±1	3	1.995	2.499	1.78	0.0007	1
2480		2.84	2±1	3	1.995	2.499	1.78	0.0007	1
2402	π/4-DQPSK	3.29	3±1	4	2.512	2.499	1.78	0.0009	1
2441		3.19	3±1	4	2.512	2.499	1.78	0.0009	1
2480		3.72	3±1	4	2.512	2.499	1.78	0.0009	1

BLE:

Operation Frequency: 2402-2480MHz,
Power density limited: 1mW/ cm²

Antenna Type: Rod-shaped antenna

Antenna gain: 2.499dBi

R=20cm

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

Antenna gain Numeric= $10^{(dBi/10)}=10^{(2.499/10)}=1.78$

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	GFSK-1M	2.00	2±1	3	1.995	2.499	1.78	0.0007	1
2440		2.28	2±1	3	1.995	2.499	1.78	0.0007	1
2480		2.58	2±1	3	1.995	2.499	1.78	0.0007	1
2402	GFSK-2M	2.25	2±1	3	1.995	2.499	1.78	0.0007	1
2440		2.74	2±1	3	1.995	2.499	1.78	0.0007	1
2480		3.03	3±1	4	2.512	2.499	1.78	0.0009	1

2.4G WIFI:

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

Power density limited: 1mW/ cm²

Antenna Type: Rod-shaped antenna

Antenna gain: 2.499dBi

R=20cm

mW=10^{^(dBi/10)}

Antenna gain Numeric=10^{^(dBi/10)}= 10^{^(2.499/10)}=1.78

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	12.61	12±1	13	19.953	1.78	0.00706	1
2437		11.01	11±1	12	15.849	1.78	0.00561	1
2462		10.66	10±1	11	12.589	1.78	0.00445	1
2412	802.11g	15.16	15±1	16	39.811	1.78	0.01408	1
2437		15.13	15±1	16	39.811	1.78	0.01408	1
2462		14.89	14±1	15	31.623	1.78	0.01118	1
2412	802.11n H20	15.25	15±1	16	39.811	1.78	0.01408	1
2437		15.36	15±1	16	39.811	1.78	0.01408	1
2462		15.06	15±1	16	39.811	1.78	0.01408	1

Conclusion:

SIMULTANEOUS TRANSMISSIONS

When a number of sources at different frequencies, and/or broadband sources, contribute to the total exposure, it becomes necessary to weigh each contribution relative to the MPE. To comply with the MPE, the fraction of the MPE in terms of E₂, H₂ (or power density) incurred within each frequency interval should be determined and the sum of all such fractions should not exceed unity. In order to ensure compliance with the MPE for a controlled environment, the sum of the ratios of the power density to the corresponding MPE should not exceed unity. That is

$$\sum_{i=1}^n \frac{S_i}{MPE_i} \leq 1$$

Simultaneous transmit:

Operating Band	The MPE ratio
BR&EDR	0.0009
BLE	0.0009
2.4G WIFI	0.01408

So the simultaneous transmitting antenna pairs as below:

BR&EDR +2.4G WIFI = 0.0009+0.01408 = 0.01498

For the max result: 0.01498 ≤ 1.0, No SAR is required.

Statement

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