



RF EXPOSURE Test Report

Report No.: MTi240103011-04E3
Date of issue: 2024-03-28
Applicant: Dongguan Lingdu Electronic Technology Co.,Ltd
Product: Dash Cam
Model(s): LD06-2CH, LD06-3CH, LD06-1CH, LD08-3CH, AM100-3CH, AM100, LD06, LD08, B25
FCC ID: 2BEAP-LD06-2CH

Shenzhen Microtest Co., Ltd.

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Test Result Certification	
Applicant:	Dongguan Lingdu Electronic Technology Co.,Ltd
Address:	No.1, Longcheng Street, Qingxi Town, Dongguan City, Guangdong Province, China
Manufacturer:	Dongguan Lingdu Electronic Technology Co.,Ltd
Address:	No.1, Longcheng Street, Qingxi Town, Dongguan City, Guangdong Province, China
Product description	
Product name:	Dash Cam
Trademark:	AZDOME
Model name:	LD06-2CH
Series Model:	LD06-3CH, LD06-1CH, LD08-3CH, AM100-3CH, AM100, LD06, LD08, B25
Standards:	N/A
Test procedure:	KDB 447498 D01 v06
Date of Test	
Date of test:	2024-03-13 to 2024-03-25
Test result:	Pass

Test Engineer	:	<i>Yanice Xie</i>
		(Yanice.Xie)
Reviewed By	:	<i>Leon Chen</i>
		(Leon Chen)
Approved By	:	<i>Tom Xue</i>
		(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: $P_d = (P_{out} * G) / (4 * \pi * R^2)$

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

BT:

Operation Frequency: 2402-2480MHz,

Power density limited: 1mW/ cm²

Antenna gain: 4.28 dBi

R=20cm

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

Antenna gain Numeric= $10^{(dBi/10)}=10^{(4.28/10)}=2.68$

5GWiFi:

802.11a: 20 MHz

802.11n: 20 MHz, 40 MHz

802.11ac: 20 MHz, 40 MHz, 80MHz

Antenna Type: PIFA Antenna;

Antenna gain:

U-NII 1: 2.32dBi; U-NII 3:4.28dBi

R=20cm

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

U-NII 1: antenna gain Numeric= $10^{(dBi/10)}=10^{(2.32/10)}=1.71$

U-NII 3: antenna gain Numeric= $10^{(dBi/10)}=10^{(4.28/10)}=2.68$

BT:

Channel Freq. (MHz)	modulation	conducted power (dBm)	Tune-up power (dBm)	Max		Antenna		Evaluation result (mW/cm ²)	Power density Limits (mW/cm ²)
				tune-up power		Gain			
				(dBm)	(mW)	(dBi)	Numeric		
2402	GFSK	7.01	7±1	8	6.310	4.28	2.68	0.0034	1
2441		6.47	7±1	8	6.310	4.28	2.68	0.0034	1
2480		5.50	6±1	7	5.012	4.28	2.68	0.0027	1
2402	π/4-DQPSK	8.26	8±1	9	7.943	4.28	2.68	0.0042	1
2441		7.68	8±1	9	7.943	4.28	2.68	0.0042	1
2480		6.34	7±1	8	6.310	4.28	2.68	0.0034	1
2402	8DPSK	8.66	8±1	9	7.943	4.28	2.68	0.0042	1
2441		8.10	8±1	9	7.943	4.28	2.68	0.0042	1
2480		6.87	7±1	8	6.310	4.28	2.68	0.0034	1



5G WIFI: UNII-1

Channel Freq. (MHz)	modulation	Conducted power (dBm)	Tune-up power (dBm)	Max		Antenna Gain Numeric	Evaluation result at 20cm Power density(mW/cm ²)	Power density Limits (mW/cm ²)
				tune-up power				
				(dBm)	(dBm)	(dBm)	(mW)	
5180	11a	14.64	14±1	15	31.623	2.02	0.01273	1
5200	11a	13.19	14±1	15	31.623	2.02	0.01273	1
5240	11a	12.06	13±1	14	25.119	2.02	0.01011	1
5180	11n (VHT20)	13.15	13±1	14	25.119	2.02	0.01011	1
5200	11n (VHT20)	12.53	13±1	14	25.119	2.02	0.01011	1
5240	11n (VHT20)	11.53	12±1	13	19.953	2.02	0.00803	1
5190	11n (VHT40)	4.91	5±1	6	3.981	2.02	0.00160	1
5230	11n (VHT40)	4.47	5±1	6	3.981	2.02	0.00160	1
5180	11ac (VHT20)	9.68	10±1	11	12.589	2.02	0.00507	1
5200	11ac (VHT20)	11.82	12±1	13	19.953	2.02	0.00803	1
5240	11ac (VHT20)	9.75	9±1	10	10.000	2.02	0.00402	1
5190	11ac (VHT40)	6.81	7±1	8	6.310	2.02	0.00254	1
5230	11ac (VHT40)	4.24	5±1	6	3.981	2.02	0.00160	1
5210	11ac (VHT80)	4.38	5±1	6	3.981	2.02	0.00160	1

5G WIFI: UNII-3

Channel Freq. (MHz)	modulation	Conducte d power (dBm)	Tune-up power (dBm)	Max		Antenna Gain Numeric	Evaluation result at 20cm Power density(mW/cm ²)	Power density Limits (mW/cm ²)
				tune-up power				
				(dBm)	(dBm)	(dBm)	(mW)	
5745	11a	9.13	10±1	11	12.589	2.68	0.00671	1
5785	11a	7.99	8±1	9	7.943	2.68	0.00423	1
5825	11a	7.39	8±1	9	7.943	2.68	0.00423	1
5745	11n (VHT20)	8.98	9±1	10	10.000	2.68	0.00533	1
5785	11n (VHT20)	7.86	8±1	9	7.943	2.68	0.00423	1
5825	11n (VHT20)	7.26	8±1	9	7.943	2.68	0.00423	1
5755	11n (VHT40)	8.85	9±1	10	10.000	2.68	0.00533	1
5795	11n (VHT40)	7.68	8±1	9	7.943	2.68	0.00423	1
5745	11ac (VHT20)	8.90	9±1	10	10.000	2.68	0.00533	1
5785	11ac (VHT20)	7.82	8±1	9	7.943	2.68	0.00423	1
5825	11ac (VHT20)	7.19	8±1	9	7.943	2.68	0.00423	1
5755	11ac (VHT40)	8.86	9±1	10	10.000	2.68	0.00533	1
5795	11ac (VHT40)	7.71	8±1	9	7.943	2.68	0.00423	1
5775	11ac (VHT80)	8.43	9±1	10	10.000	2.68	0.00533	1

Conclusion:

For the max result: 0.01273≤ 1.0 test exclusion threshold, No SAR is required.

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