



RF EXPOSURE Test Report

Report No.: MTi220701004-01E3

Date of issue: 2022-08-22

Applicant: D2G Group LLC

Product name: 32-Inch Digital Landscape Literature Holder

Model(s): DG32LFLR8, DG32LFLR8L, DG32LFLR8B

FCC ID: 2ASCB-DG32LFLR8

Shenzhen Microtest Co., Ltd.

<http://www.mtitest.com>

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TEST RESULT CERTIFICATION	
Applicant's name.....	D2G Group LLC
Address.....	81 Commerce Drive, Fall River, Massachusetts 02720, United States
Manufacturer's Name	GUANGZHOU YOUGUANG OPTOELECTRONICS CO., LTD.
Address.....	No.75, Pacific Ind. Zone, Xingtang Town, Zengcheng, Guangzhou, 511340 China
Product description	
Product name	32-Inch Digital Landscape Literature Holder
Trademark	N/A
Model Name	DG32LFLR8
Serial Model	DG32LFLR8L, DG32LFLR8B
Standards.....	N/A
Test procedure.....	KDB 447498 D01 v06
Date of Test	
Date (s) of performance of tests	2022-08-01 ~ 2022-08-22
Test Result.....	Pass

Testing Engineer

:

Letter Lan

(Letter Lan)

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	*300/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

2.4GWiFi:

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

802.11n HT40: 2422-2452MHz,

Power density limited: 1mW/ cm²

Antenna Type: External Antenna;

WIFI antenna gain: 1dBi

R=20cm

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

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

BR+EDR:

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	6.13	6±1	7	5.012	1	1.26	0.0013	1
2441		5.06	6±1	7	5.012	1	1.26	0.0013	1
2480		5.53	6±1	7	5.012	1	1.26	0.0013	1
2402	π/4-DQPSK	7.50	7±1	8	6.310	1	1.26	0.0016	1
2441		7.17	7±1	8	6.310	1	1.26	0.0016	1
2480		6.55	7±1	8	6.310	1	1.26	0.0016	1
2402	8DPSK	7.84	7±1	8	6.310	1	1.26	0.0016	1
2441		7.55	7±1	8	6.310	1	1.26	0.0016	1
2480		7.02	7±1	8	6.310	1	1.26	0.0016	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)
		Ant A	Ant A	(dBm)	(mW)	Numeric		
2412	802.11b	18.13	18±1	19	79.432823	1.26	0.01991	1
2437		17.03	17±1	18	63.095734	1.26	0.01582	1
2462		16.23	17±1	18	63.095734	1.26	0.01582	1
2412	802.11g	17.13	18±1	19	79.432823	1.26	0.01991	1
2437		17.30	18±1	19	79.432823	1.26	0.01991	1
2462		17.62	18±1	19	79.432823	1.26	0.01991	1
2412	802.11n H20	17.07	18±1	19	79.432823	1.26	0.01991	1
2437		17.12	18±1	19	79.432823	1.26	0.01991	1
2462		16.46	18±1	19	79.432823	1.26	0.01991	1
2422	802.11n H40	17.26	18±1	19	79.432823	1.26	0.01991	1
2437		17.36	18±1	19	79.432823	1.26	0.01991	1
2452		16.97	18±1	19	79.432823	1.26	0.01991	1

Conclusion:

So the simultaneous transmitting antenna pairs as below:

 Σ of MPE ratio= WI-FI 2.4GHz+Bluetooth=0.01991+0.0016=0.02151<1

----END OF REPORT----