FCC 47 CFR MPE REPORT

Chunghsin Technology Group CO., LTD

32inch HD DLED TV

Model Number: WD32HBB101

Additional Model: WD32HBR105

FCC ID: 2AE2W-WD32HBB101

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Report Number:	ESTE-R1709076
Date of Test:	July 02,~09, 2017
Date of Report:	July 10, 2017

Maximum Permissible Exposure

1、Applicable Standard

Systems operating under the provisions of this section shall be operated in a manner that ensures that the public is not exposed to radio frequency energy level in excess limit for maximum permissible exposure. In accordance with 47 CFR FCC Part 2 Subpart J, section 2.1091 this device has been defined as a mobile device whereby a distance of 0.2m normally can be maintained between the user and the device.

(a)、Limits for Occupational / Controlled Exposure

Frequency Range (MHz)	Electric Field Strength E) (V/m)	Magnetic Field Strength (H) (A/m)	Power Density (S) (mW/cm2)	Averaging Times｜E｜2 , ｜H｜2 or S (minutes)
0.3-3.0	614	1.63	(100)*	6
3.0-30	1842/f	4.89/f	(900/f)*	6
30-300	61.4	0.163	1.0	6
300-1500			F/300	6
1500-10000			5	6

(b)、Limits for General Population / Uncontrolled Exposure

Frequency Range (MHz)	Electric Field Strength E) (V/m)	Magnetic Field Strength (H) (A/m)	Power Density (S) (mW/cm2)	Averaging Times｜E｜2 , ｜H｜2 or S (minutes)
0.3-1.34	614	1.63	(100)*	30
1.34-30	824/f	2.19/f	(180/f)*	30
30-300	27.5	0.073	0.2	30
300-1500			F/1500	30
1500-10000			1.o	30

Note: f=frequency in MHz; *Plane-wave equivalent power density

2、MPE Calculation Method

E (V/m) = (30*P*G) 0.5/d Power Density: Pd (W/m2) = E2/377

E = Electric Field (V/m)

P = Peak RF output Power (W)

G = EUT Antenna numeric gain (numeric)

d = Separation distance between radiator and human body (m)

The formula can be changed to

Pd = (30*P*G) / (377*d2)

From the peak EUT RF output power, the minimum mobile separation distance, d=0.2m, as well as the gain of the used antenna, the RF power density can be obtained

3、Conducted Power Result

Mode	Frequency (MHz)	Peak output power (dBm)	Peak output power (mW)	Target power（dBm）	Antenna gain	
					(dBi)	(Linear)
IEEE 802.11b	2412	14.94	31.189	14±1	2	1.58
	2437	15.74	37.497	15±1	2	1.58
	2462	16.61	45.814	16±1	2	1.58
IEEE 802.11g	2412	9.81	9.572	9±1	2	1.58
	2437	11.04	12.706	11±1	2	1.58
	2462	11.61	14.488	11±1	2	1.58
IEEE 802.11n HT20	2412	9.36	8.630	9±1	2	1.58
	2437	10.46	11.117	10±1	2	1.58
	2462	11.50	14.125	11±1	2	1.58
IEEE 802.11n HT40	2422	4.86	3.062	4±1	2	1.58
	2437	5.53	3.573	5±1	2	1.58
	2452	6.71	4.688	6±1	2	1.58

4、Calculated Result and Limit

Mode	Target power（dBm）	Antenna gain		Power Density (S) (mW /cm2)	Limited of Power Density (S) (mW /cm2)	Test Result
		(dBi)	(Linear)			
2.4G Band						
IEEE 802.11b	17	2	1.58	0.01580	1	Compiles
IEEE 802.11g	12	2	1.58	0.00500	1	Compiles
IEEE 802.11n HT20	12	2	1.58	0.00500	1	Compiles
IEEE 802.11n HT40	7	2	1.58	0.00158	1	Compiles