FCC 47 CFR MPE REPORT

Shenyang Tongfang Multimedia Co., Limited

LED TV

Model Number: WD32FC2240

Additional Model: WD32FC2300

FCC ID: 2ACWIWD32FC224

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Report Number: ESTE-R1506036
Date of Test : May 13~June 10, 2015
Date of Report : June 13, 2015

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、Calculated Result and Limit

Mode	Frequency (MHz)	output power (dBm)	output power (mW)	Target power（dBm）	Antenna gain		Power Density (S) (mW /cm2)	Limited of Power Density (S) (mW /cm2)	Test Result
					(dBi)	(Linear)			
IEEE 802.11b	2412	14.02	25.24	14±1	2	1.59	0.00997	1	Compiles
	2442	14.56	28.58	14±1	2	1.59	0.00997	1	Compiles
	2472	13.91	24.60	14±1	2	1.59	0.00997	1	Compiles
IEEE 802.11g	2412	9.96	9.91	10±1	2	1.59	0.00397	1	Compiles
	2442	10.25	10.59	10±1	2	1.59	0.00397	1	Compiles
	2472	10.49	11.19	10±1	2	1.59	0.00397	1	Compiles
IEEE 802.11n HT20	2412	10.34	10.81	10±1	2	1.59	0.00397	1	Compiles
	2442	9.67	9.27	10±1	2	1.59	0.00397	1	Compiles
	2472	9.58	9.08	10±1	2	1.59	0.00397	1	Compiles
IEEE 802.11n HT40	2422	7.27	5.33	7±1	2	1.59	0.00200	1	Compiles
	2442	7.12	5.15	7±1	2	1.59	0.00200	1	Compiles
	2462	7.31	5.38	7±1	2	1.59	0.00200	1	Compiles