

FCC 47 CFR MPE REPORT

CHOICE FORTUNE HOLDINGS LIMITED

LED TV

Model Number: SC-32HK700N

FCC ID: 2AMYC-SC-32HK700N

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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/cm ²)	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/cm ²)	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			1.0	30

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

2、MPE Calculation Method

$$E \text{ (V/m)} = (30 \cdot P \cdot G)^{0.5} / d \quad \text{Power Density: } Pd \text{ (W/m}^2\text{)} = E^2 / 377$$

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

$$Pd = (30 \cdot P \cdot G) / (377 \cdot d^2)$$

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

3.1 Antenna 0

Mode	Frequency (MHz)	Peak output power (dBm)	Peak output power (mW)	Target power (dBm)	Antenna gain	
					(dBi)	(Linear)
IEEE 802.11b	2412	12.20	16.596	12±1	2.94	1.968
	2437	10.09	10.209	10±1	2.94	1.968
	2462	11.76	14.997	11±1	2.94	1.968
IEEE 802.11g	2412	9.02	7.980	9±1	2.94	1.968
	2437	6.35	4.315	6±1	2.94	1.968
	2462	7.74	5.943	7±1	2.94	1.968
IEEE 802.11n HT20	2412	8.94	7.834	8±1	2.94	1.968
	2437	6.07	4.046	6±1	2.94	1.968
	2462	7.53	5.662	7±1	2.94	1.968
IEEE 802.11n HT40	2422	7.08	5.105	7±1	2.94	1.968
	2437	3.74	2.366	3±1	2.94	1.968
	2452	4.11	2.576	4±1	2.94	1.968

3.2 Antenna 1

Mode	Frequency (MHz)	Peak output power (dBm)	Peak output power (mW)	Target power (dBm)	Antenna gain	
					(dBi)	(Linear)
IEEE 802.11b	2412	11.42	13.868	11±1	2.94	1.968
	2437	9.96	9.908	9±1	2.94	1.968
	2462	11.79	15.101	11±1	2.94	1.968
IEEE 802.11g	2412	7.22	5.272	7±1	2.94	1.968
	2437	5.52	3.565	5±1	2.94	1.968
	2462	7.60	5.754	7±1	2.94	1.968
IEEE 802.11n HT20	2412	7.05	5.070	7±1	2.94	1.968
	2437	5.60	3.631	5±1	2.94	1.968
	2462	7.35	5.433	7±1	2.94	1.968
IEEE 802.11n HT40	2422	5.21	3.319	5±1	2.94	1.968
	2437	3.50	2.239	3±1	2.94	1.968
	2452	3.93	2.472	3±1	2.94	1.968

4、Calculated Result and Limit

4.1 Antenna 0

Mode	Target power (dBm)	Antenna gain		Power Density (S) (mW/cm ²)	Limited of Power Density (S) (mW/cm ²)	Test Result
		(dBi)	(Linear)			
2.4G Band						
IEEE 802.11b	13	2.94	1.968	0.00781	1	Compiles
IEEE 802.11g	10	2.94	1.968	0.00391	1	Compiles
IEEE 802.11n HT20	9	2.94	1.968	0.00311	1	Compiles
IEEE 802.11n HT40	8	2.94	1.968	0.00247	1	Compiles

4.2 Antenna 1

Mode	Target power (dBm)	Antenna gain		Power Density (S) (mW/cm ²)	Limited of Power Density (S) (mW/cm ²)	Test Result
		(dBi)	(Linear)			
2.4G Band						
IEEE 802.11b	12	2.94	1.968	0.00620	1	Compiles
IEEE 802.11g	8	2.94	1.968	0.00247	1	Compiles
IEEE 802.11n HT20	8	2.94	1.968	0.00247	1	Compiles
IEEE 802.11n HT40	6	2.94	1.968	0.00156	1	Compiles

4.3 Antenna 0+1

Mode	Power Density (S) (mW /cm ²) Antenna 0	Power Density (S) (mW /cm ²) Antenna 1	Power Density (S) (mW /cm ²) Total	Limited of Power Density (S) (mW /cm ²)	Test Result
2.4G Band					
IEEE 802.11n HT20	0.00311	0.00247	0.00558	1	Compiles
IEEE 802.11n HT40	0.00247	0.00156	0.00403	1	Compiles