

FCC 47 CFR MPE REPORT

CHOICE FORTUNE HOLDINGS LIMITED

LED TV

Model Number: SC-55UK700N

FCC ID: 2AMYC-SC-55UK700N

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Report Number:	ESTE-R1708120
Date of Test:	June 22~June 30, 2017
Date of Report:	July 02, 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/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

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

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

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

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	10.11	10.257	10 ± 1	2.94	1.968
	2437	10.68	11.695	10 ± 1	2.94	1.968
	2462	10.20	10.471	10 ± 1	2.94	1.968
IEEE 802.11g	2412	7.19	5.236	7 ± 1	2.94	1.968
	2437	7.41	5.508	7 ± 1	2.94	1.968
	2462	7.10	5.129	7 ± 1	2.94	1.968
IEEE 802.11n HT20	2412	7.13	5.164	7 ± 1	2.94	1.968
	2437	7.41	5.508	7 ± 1	2.94	1.968
	2462	6.98	4.989	6 ± 1	2.94	1.968
IEEE 802.11n HT40	2422	5.55	3.589	5 ± 1	2.94	1.968
	2437	5.14	3.266	5 ± 1	2.94	1.968
	2452	5.55	3.589	5 ± 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	10.60	11.482	10 ± 1	2.94	1.968
	2437	11.02	12.647	11 ± 1	2.94	1.968
	2462	10.04	10.093	10 ± 1	2.94	1.968
IEEE 802.11g	2412	6.95	4.955	6 ± 1	2.94	1.968
	2437	7.20	5.248	7 ± 1	2.94	1.968
	2462	7.21	5.260	7 ± 1	2.94	1.968
IEEE 802.11n HT20	2412	6.98	4.989	6 ± 1	2.94	1.968
	2437	6.94	4.943	6 ± 1	2.94	1.968
	2462	7.00	5.012	7 ± 1	2.94	1.968
IEEE 802.11n HT40	2422	4.53	2.838	4 ± 1	2.94	1.968
	2437	4.84	3.048	4 ± 1	2.94	1.968
	2452	4.75	2.985	4 ± 1	2.94	1.968

4、Calculated Result and Limit

4.1 Antenna 0

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	11	2.94	1.968	0.00493	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

4.2 Antenna 1

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	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	5	2.94	1.968	0.00124	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	0.00247	0.00247	0.00494	1	Compiles
IEEE 802.11n HT40	0.00156	0.00124	0.00280	1	Compiles