

## FCC 47 CFR MPE REPORT

CHOICE FORTUNE HOLDINGS LIMITED

LED TV

Model Number: SC-70UK850N

FCC ID: 2AMYC-SC-70UK850N

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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 <sup>2</sup> )	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 <sup>2</sup> )	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	15.95	39.355	15±1	2.94	1.968
	2437	15.12	32.509	15±1	2.94	1.968
	2462	13.45	22.131	13±1	2.94	1.968
IEEE 802.11g	2412	12.86	19.320	12±1	2.94	1.968
	2437	12.01	15.885	12±1	2.94	1.968
	2462	9.44	8.790	9±1	2.94	1.968
IEEE 802.11n HT20	2412	12.39	17.338	12±1	2.94	1.968
	2437	11.79	15.101	11±1	2.94	1.968
	2462	9.32	8.551	9±1	2.94	1.968
IEEE 802.11n HT40	2422	9.97	9.931	9±1	2.94	1.968
	2437	9.37	8.650	9±1	2.94	1.968
	2452	9.09	8.110	9±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	15.19	33.037	15±1	2.94	1.968
	2437	15.02	31.769	15±1	2.94	1.968
	2462	13.33	21.528	13±1	2.94	1.968
IEEE 802.11g	2412	11.22	13.243	11±1	2.94	1.968
	2437	11.08	12.823	11±1	2.94	1.968
	2462	9.09	8.110	9±1	2.94	1.968
IEEE 802.11n HT20	2412	10.68	11.695	10±1	2.94	1.968
	2437	11.16	13.062	11±1	2.94	1.968
	2462	9.01	7.962	9±1	2.94	1.968
IEEE 802.11n HT40	2422	8.59	7.228	8±1	2.94	1.968
	2437	8.47	7.031	8±1	2.94	1.968
	2452	8.41	6.934	8±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 <sup>2</sup> )	Limited of Power Density (S) (mW/cm <sup>2</sup> )	Test Result
		(dBi)	(Linear)			
Wi-Fi						
IEEE 802.11b	16	2.94	1.968	<b>0.01559</b>	1	Compiles
IEEE 802.11g	13	2.94	1.968	<b>0.00781</b>	1	Compiles
IEEE 802.11n HT20	13	2.94	1.968	<b>0.00781</b>	1	Compiles
IEEE 802.11n HT40	10	2.94	1.968	<b>0.00391</b>	1	Compiles

##### 4.2 Antenna 1

Mode	Target power (dBm)	Antenna gain		Power Density (S) (mW/cm <sup>2</sup> )	Limited of Power Density (S) (mW/cm <sup>2</sup> )	Test Result
		(dBi)	(Linear)			
Wi-Fi						
IEEE 802.11b	16	2.94	1.968	<b>0.01559</b>	1	Compiles
IEEE 802.11g	12	2.94	1.968	<b>0.00620</b>	1	Compiles
IEEE 802.11n HT20	12	2.94	1.968	<b>0.00620</b>	1	Compiles
IEEE 802.11n HT40	9	2.94	1.968	<b>0.00311</b>	1	Compiles

4.3 Antenna 0+1

Mode	Power Density (S) (mW /cm2) Antenna 0	Power Density (S) (mW /cm2) Antenna 1	Power Density (S) (mW /cm2) Total	Limited of Power Density (S) (mW /cm2)	Test Result
Wi-Fi					
IEEE 802.11n HT20	<b>0.00781</b>	<b>0.00620</b>	<b>0.01401</b>	1	Compiles
IEEE 802.11n HT40	<b>0.00391</b>	<b>0.00311</b>	<b>0.00702</b>	1	Compiles