MPE Evaluation According To EN62311: 2008

Applicant	:	Hisense Electric Co., Ltd. No. 218 Qianwangang Road, Economy & Technology Development Zone, Qingdao China
Manufacturer 1	:	Hisense Electric Co., Ltd. No. 218 Qianwangang Road, Economy & Technology Development Zone, Qingdao China
Manufacturer 2	:	Hisense Czech s.r.o. U Nove Hospody 1164/4 301 00 Plzen Czech Republic
Product Name	:	LED Backlight TV
Type/Model	:	HE65A7000EUWTS, H65B8*****, H65BE8*****, 65B7*****, H65U7*****, 65U7***** (The symbol "*" can be 0-9 or A-Z or blank, which is for different market and not influencing on safety.)
Ratings	:	100-240V~, 50/60Hz, 200W, Class II

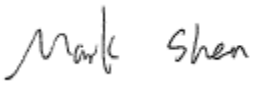
The equipment complies with the requirements of RE Directive 2014/53/EU (Article 3.1a, human exposure to Electromagnetic Fields) on base of:

1999/519/EC: COUNCIL RECOMMENDATION of 12 July 1999 on the limitation of exposure of the general public to electromagnetic fields (0 Hz to 300 GHz)

EN62311: 2008: Assessment of electronic and electrical equipment related to human exposure restrictions for electromagnetic fields (0 Hz - 300 GHz)

Date of issue: January 25, 2019

Prepared by:



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Reviewed by:

Daniel Zhao (*Reviewer*)

Revision History Record

Issue No.	Version	Description	Date Issued
181201410SHA-002	Rev.01	Initial issue of report	January 25, 2019

According to assessment method & relevant limit showed in Appendix II of this report, the MPE limit for the frequency higher than 2GHz is 10W/m^2 (namely 1mW/cm^2).

Power density (S) is calculated according to the formula:
$S = P / (4\pi R^2)$
Where S = power density in mW/cm^2
P = Radiated transmit power in mW
G = numeric gain of transmit antenna
R = distance (cm)

As we can see from the test report 171001526SHA-003, and 171001526SHA-004:

Mode	Frequency Bands (MHz)	P (dBm)	P (mW)	R (cm)	S (mW/cm^2)	Limit (mW/cm^2)
WiFi	2400 ~ 2483.5	19.62	91.62	20	0.0182	1
	5150 ~ 5725	19.43	87.70	20	0.0175	1

Conclusion: This device complies with requirements of 2014/53/EU (Article 3.1a, human exposure to Electromagnetic Fields).

Notes: 1: Determination of the test conclusion is based on IEC Guide 115 in consideration of measurement uncertainty.
2: Additions, Deviations and Exclusions from Standards: None.
3: Additions, Deviations and Exclusions from Standards: None.

Appendix I

Definition below must be outlined in the User Manual:

To satisfy RF exposure requirements, a separation distance of ***20 cm*** or more should be maintained between this device and persons during device operation.
To ensure compliance, operations at closer than this distance is not recommended. The antenna used for this transmitter must not be co-located in conjunction with any other antenna or transmitter.

Appendix II

Assessment methods & Limit for Electromagnetic Exposure Evaluation

Assessment methods:

☒ Far field calculation
☐ Near field calculation
☐ Simulation with/without a phantom
☐ Numerical modeling
☐ Body/limb current
☐ SAR
☐ E and H measurement
☐ Source modeling
☐ Direct measurement of physical properties: Contact current

Reference levels for electric, magnetic and electromagnetic fields (Table 2 of 1999/519/EC)

Frequency range	E-field strength (V/m)	H-field strength (A/m)	B-field (uT)	Equivalent plane wave power density S_{eq} (W/m^2)
0-1 Hz	-	$3{,}2 \times 10^4$	4×10^4	-
1-8 Hz	10 000	$3{,}2 \times 10^4/f^2$	$4 \times 10^4/f^2$	-
8-25 Hz	10 000	4 000/f	5 000/f	-
0,025-0,8 kHz	250/f	4/f	5/f	-
0,8-3 kHz	250/f	5	6,25	-
3-150 kHz	87	5	6,25	-
0,15-1 MHz	87	0,73/f	0,92/f	-
1-10 MHz	$87/f^{1/2}$	0,73/f	0,92/f	-
10-400 MHz	28	0,073	0,092	2
400-2 000 MHz	$1{,}375\ f^{1/2}$	$0{,}0037\ f^{1/2}$	$0{,}0046\ f^{1/2}$	f/200
2-300 GHz	61	0,16	0,20	10

Notes:

1. *f as indicated in the frequency range column.*
2. *For frequencies between 100 kHz and 10 GHz, S_{eq}, E^2, H^2, and B^2 are to be averaged over any six-minute period.*
3. *For frequencies exceeding 10 GHz, S_{eq}, E^2, H^2, and B^2 are to be averaged over any $68/f^{1.05}$ - minute period (f in GHz).*
4. *No E-field value is provided for frequencies < 1 Hz, which are effectively static electric fields. For most people the annoying perception of surface electric charges will not occur at field strengths less than 25 kV/m. Spark discharges causing stress or annoyance should be avoided.*
5. *The shading grid stands for the applied limit in this report.*