

TEST REPORT

Reference No. : WTS20S04018065W002
FCC ID..... : 2AV6X-65T7U
Applicant : Makena Electronic(Shenzhen) Co.,Ltd
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Baoan District, Shenzhen 518104, China
Manufacturer : Makena Electronic(Shenzhen) Co.,Ltd
Address : Block B, New Sanyo Industrial Park, Nanhuan Rd, Shajing Town,
Baoan District, Shenzhen 518104, China
Product..... : LED TV
Model(s)..... : 65T7U, FDUS65M7A
Brand Name(s)..... : Polaroid, FURRION
Standards..... : FCC CFR47 Part 2 Section 2.1091:2019
Date of Receipt sample.. : 2020-04-13
Date of Test..... : 2020-04-20 to 2020-05-06
Date of Issue : 2020-05-07
Test Result : **Pass**

Remarks:

The results shown in this test report refer only to the sample(s) tested, this test report cannot be reproduced, except in full, without prior written permission of the company.
The report would be invalid without specific stamp of test institute and the signatures of compiler and approver.

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2 Revision History

Test Report No.	Date of Receipt Sample	Date of Test	Date of Issue	Purpose	Comment	Approved
WTS20S04018065W002	2020-04-13	2020-04-20 to 2020-05-06	2020-05-07	Original	-	Valid

3 General Information

3.1 General Description of E.U.T.

Product:	LED TV
Model(s):	65T7U, FDUS65M7A
Model Description:	Only the model names and brand names are different. The model 65T7U is the tested sample.
Operation Frequency:	802.11b/g/n HT20: 2412MHz ~ 2462MHz, 802.11n HT40: 2422MHz~2452MHz
Antenna installation:	Internal Integrated Antenna
Antenna Gain:	ANT1 2.4GHz Wi-Fi: 4.77 dBi ANT2 2.4GHz Wi-Fi: 4.77 dBi
Type of modulation:	IEEE 802.11b (CCK/QPSK/BPSK,11Mbps max.) IEEE 802.11g (BPSK/QPSK/16QAM/64QAM,54Mbps max.) IEEE 802.11n (BPSK/QPSK/16QAM/64QAM,HT20:72Mbps max., HT40:150Mbps max.)
Number of transmitter chains:	Wi-Fi:2T2R (MIMO)

The device supports MIMO 2T2R, and the MIMO works with STBC(Space-Time Block Coding).
The antenna is omnidirectional, does not support any directional gain in any modes.
TX power for MIMO rate, the Wi-Fi chip has a power/rate table that controls TX power from chipout, it's preset in nvram, FW don't need to calculate it again when MIMO rate is fixed. Of course the real radiation power is also related to antenna efficient.

Two transmitter signals are not correlated with each other.

MIMO is only supported for 802.11 n mode, and not supported for 802.11b and 802.11g mode.

3.2 Details of E.U.T

Ratings:	Input: AC 100-120V~, 50/60Hz, 198W
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4 Test Facility

FCC Designation No.: CN1201. Test Firm Registration No.: 523476.
ISED CAB identifier: CN0013. Test Firm Registration No.: 7760A.

5 FCC ID: 2AV6X-65T7U RF Exposure Report

Test Requirement: FCC Part 1.1307

Evaluation Method: FCC Part 2.1091 & KDB 447498 D01 General RF Exposure Guidance v06

5.1 Requirements

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 levels 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 0.2 m normally can be maintained between the user and the device.

5.2 The procedures / limit

(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 Time 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
1500-100,000			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 Time 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
1500-100,000			1.0	30

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

5.3 Evaluation Result

$$S = \frac{P \times G}{4 \times \pi \times R^2}$$

S = power density (in appropriate units, e.g. mW/cm²)

P = output power to the antenna (in appropriate units, e.g., mW).

G = power gain of the antenna in the direction of interest relative to an isotropic radiator, the power gain factor, is normally numeric gain.

R = distance to the center of radiation of the antenna (appropriate units, e.g., cm)

From the peak EUT RF output power, the minimum mobile separation distance, R=20cm, as well as the gain of the used antenna, the RF power density can be obtained

ANT1

Antenna Gain (dBi)	Antenna Gain (numeric)	Max. conducted Output Power (dBm)	Max. conducted Output Power (mW)	Power Density (mW/cm ²)	Limit of Power Density (mW/cm ²)	Result
4.77	3.00	15.45	35.08	0.0209	1	Compliance

ANT2

Antenna Gain (dBi)	Antenna Gain (numeric)	Max. conducted Output Power (dBm)	Max. conducted Output Power (mW)	Power Density (mW/cm ²)	Limit of Power Density (mW/cm ²)	Result
4.77	3.00	15.33	34.12	0.0204	1	Compliance

ANT1+ANT2

Antenna Gain (dBi)	Antenna Gain (numeric)	Max. conducted Output Power (dBm)	Max. conducted Output Power (mW)	Power Density (mW/cm ²)	Limit of Power Density (mW/cm ²)	Result
4.77	3.00	14.56	28.58	0.0171	1	Compliance

5.4 Result: Compliance

No SAR measurement is required.

=====End of Report=====