## RF EXPOSURE EVALUATION

According to FCC 1.1310: The criteria listed in the following table shall be used to evaluate the environment impact of human exposure to radio frequency(RF) Radiation as specified in §1.1307(b)

FCC ID：**2ACWISE32HY19A**

## EUT Specification

| | |
|---|---|
| **EUT** | **LED TV** |
| **Frequency band (Operating)** | ☒WLAN: 2.412GHz ~ 2.462GHz<br>☐WLAN: 5.18GHz ~ 5.32GHz / 5.50GHz ~ 5.70GHz<br>☐WLAN: 5.745GHz ~ 5825GHz<br>☐Others |
| **Device category** | ☐Portable (<20cm separation)<br>☒Mobile (>20cm separation)<br>☐Others ___ |
| **Exposure classification** | ☐Occupational/Controlled exposure (S = 5mW/cm2)<br>☒General Population/Uncontrolled exposure (S=1mW/cm2) |
| **Antenna diversity** | ☒Single antenna<br>☐Multiple antennas<br>☐Tx diversity<br>☐Rx diversity<br>☐Tx/Rx diversity |
| **Max. output power** | 15.68dBm for 802.11b<br>20.74dBm for 802.11g<br>19.95dBm for 802.11n(H20)<br>19.69dBm for 802.11n(H40) |
| **Antenna gain (Max)** | 2dBi |
| **Evaluation applied** | ☒MPE Evaluation<br>☐SAR Evaluation |

Limits for Maximum Permissible Exposure(MPE)

| Frequency Range(MHz) | Electric Field Strength(V/m) | Magnetic Field Strength(A/m) | Power Density($mW/cm^2$) | Average Time |
|---|---|---|---|---|
| **(A) Limits for Occupational/Control Exposures** | | | | |
| **300-1500** | **--** | **--** | **F/300** | **6** |
| **1500-100000** | **--** | **--** | **5** | **6** |
| **(B) Limits for General Population/Uncontrol Exposures** | | | | |
| **300-1500** | **--** | **--** | **F/1500** | **6** |
| **1500-100000** | **--** | **--** | **1** | **30** |

## Friis transmission formula: Pd=(Pout*G)\(4*pi*R2)

Where
Pd= Power density in $mW/cm^2$
Pout=output power to antenna in Mw
G= gain of antenna in linear scale
Pi=3.1416
R= distance between observation point and center of the radiator in cm
Pd the limit of MPE, 1mW/cm2. If we know the maximum gain of the antenna and total power input to the antenna, through the calculation, we will know the distance where the MPE limit is reached.

## Measurement Result

| Operating Mode | Test Channel | Output Peak power (dBm) | Output Peak power (mW) | Antenna Gain (dBi) | Antenna Gain (numeric) | Power density at 20cm (mW/ cm2 ) | Power density Limits ($mW/cm^2$ ) |
|---|---|---|---|---|---|---|---|
| 802.11b | 1 | 14.36 | 27.290 | 2 | 1.585 | 0.0086052 | 1 |
| | 6 | 15.68 | 36.983 | 2 | 1.585 | 0.0116617 | 1 |
| | 11 | 15.61 | 36.392 | 2 | 1.585 | 0.0114753 | 1 |
| 802.11g | 1 | 19.83 | 96.161 | 2 | 1.585 | 0.0303220 | 1 |
| | 6 | 20.71 | 117.761 | 2 | 1.585 | 0.0371330 | 1 |
| | 11 | 20.74 | 118.577 | 2 | 1.585 | 0.0373903 | 1 |
| 802.11n (H20) | 1 | 18.46 | 70.146 | 2 | 1.585 | 0.0221188 | 1 |
| | 6 | 19.48 | 88.716 | 2 | 1.585 | 0.0279744 | 1 |
| | 11 | 19.95 | 98.855 | 2 | 1.585 | 0.0311715 | 1 |
| 802.11n (H40) | 3 | 18.62 | 72.778 | 2 | 1.585 | 0.0229487 | 1 |
| | 6 | 19.33 | 85.704 | 2 | 1.585 | 0.0270246 | 1 |
| | 9 | 19.69 | 93.111 | 2 | 1.585 | 0.0293602 | 1 |

Signature:

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