

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: [2ABC5-E0016](#)

EUT Specification

| | |
|-----------------------------------|---|
| EUT | Android Tablet |
| Frequency band (Operating) | <input checked="" type="checkbox"/> WLAN: 2.412GHz ~ 2.462GHz <input type="checkbox"/> WLAN: 5.18GHz ~ 5.32GHz / 5.50GHz ~ 5.70GHz <input type="checkbox"/> WLAN: 5.745GHz ~ 5825GHz <input checked="" type="checkbox"/> Others: BLE: 2402-2480MHz |
| Device category | <input type="checkbox"/> Portable (<20cm separation) <input checked="" type="checkbox"/> Mobile (>20cm separation) <input type="checkbox"/> Others ____ |
| Exposure classification | <input type="checkbox"/> Occupational/Controlled exposure (S = 5mW/cm ²) <input checked="" type="checkbox"/> General Population/Uncontrolled exposure (S=1mW/cm ²) |
| Antenna diversity | <input checked="" type="checkbox"/> Single antenna <input type="checkbox"/> Multiple antennas <input type="checkbox"/> Tx diversity <input type="checkbox"/> Rx diversity <input type="checkbox"/> Tx/Rx diversity |
| Max. output power | BLE: 3.12 dBm (0.0021W) WiFi2.4G: 15.20 dBm (0.0331W) |
| Antenna gain (Max) | 1.5 dBi |
| Evaluation applied | <input checked="" type="checkbox"/> MPE Evaluation <input type="checkbox"/> 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: $P_d = \frac{P_{out} * G}{4 * \pi * R^2}$

Where

P_d = Power density in mW/cm^2

P_{out} = 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

P_d the limit of MPE, $1mW/cm^2$. 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 | Channel Frequency (MHz) | Maximum output power (dBm) | Tune up tolerance (dBm) | Max. Tune up Power (dBm) | Antenna Gain (dBi) | Power density at 20cm (mW/ cm ²) | Power density Limits (mW/cm ²) |
|----------------|-------------------------|----------------------------|-------------------------|--------------------------|--------------------|--|--|
| BLE | 2402 | 3 | 3 ± 1 | 4.00 | 1.5 | 0.0007 | 1 |
| | 2440 | 2.42 | 2.42 ± 1 | 3.42 | 1.5 | 0.0006 | 1 |
| | 2480 | 3.12 | 3.12 ± 1 | 4.12 | 1.5 | 0.0007 | 1 |
| 802.11b | 2412 | 14.64 | 14.64 ± 1 | 15.64 | 1.5 | 0.0103 | 1 |
| | 2437 | 15.12 | 15.12 ± 1 | 16.12 | 1.5 | 0.0115 | 1 |
| | 2462 | 15.2 | 15.2 ± 1 | 16.20 | 1.5 | 0.0117 | 1 |
| 802.11g | 2412 | 14.12 | 14.12 ± 1 | 15.12 | 1.5 | 0.0091 | 1 |
| | 2437 | 14.29 | 14.29 ± 1 | 15.29 | 1.5 | 0.0095 | 1 |
| | 2462 | 14.47 | 14.47 ± 1 | 15.47 | 1.5 | 0.0099 | 1 |
| 802.11n (HT20) | 2412 | 14.35 | 14.35 ± 1 | 15.35 | 1.5 | 0.0096 | 1 |
| | 2437 | 14.35 | 14.35 ± 1 | 15.35 | 1.5 | 0.0096 | 1 |
| | 2462 | 14.6 | 14.6 ± 1 | 15.60 | 1.5 | 0.0102 | 1 |
| 802.11n (HT40) | 2422 | 11.74 | 11.74 ± 1 | 12.74 | 1.5 | 0.0053 | 1 |
| | 2437 | 12.14 | 12.14 ± 1 | 13.14 | 1.5 | 0.0058 | 1 |
| | 2452 | 12.5 | 12.5 ± 1 | 13.50 | 1.5 | 0.0063 | 1 |