

## FCC RF Exposure

EUT Description:speaker

ModelNo.:AUD-X770,AUD-X755,AUD-X760,AUD-X765,AUD-X780,AUD-X785,AUD-X800,AUD-X805,AUD-X810,AUD-X815,AUD-X820,AUD-X825,AUD-X890,AUD-X895,AUD-X900,AUD-X905,AUD-X910,AUD-X915,AUD-X920,AUD-X925,AUD-X930,AUD-X935,AUD-X940,AUD-X945

FCC ID: 2ATWN-AUDX770

Equipment type: mobile device

Test procedures according to the technical standards: KDB 447498 D01 V06 andFCC 2.1091.

### 1. Limits

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)

#### Limits for Maximum Permissible Exposure (MPE)

Frequency range (MHz)	Electric field strength (V/m)	Magnetic field strength (A/m)	Power density (mW/cm <sup>2</sup> )	Averaging time (minutes)
(A) Limits for Occupational/Controlled Exposures				
0.3–3.0	614	1.63	*(100)	6
3.0–30	1842/f	4.89/f	*(900/f <sup>2</sup> )	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				
0.3–1.34	614	1.63	*(100)	30
1.34–30	824/f	2.19/f	*(180/f <sup>2</sup> )	30
30–300	27.5	0.073	0.2	30
300–1500			f/1500	30
1500–100,000			1.0	30

F = frequency in MHz

Formula:  $P_d = (P_{out} * G) / (4 * \pi * r^2)$

Where :

$P_d$  = power density in mW/cm<sup>2</sup>,

$P_{out}$  = output power to antenna in mW;

G = gain of antenna in linear scale,

$\pi$  = 3.14;

R = distance between observation point and center of the radiator in cm

$P_d$  is the limit of MPE, 1 mW/cm<sup>2</sup>. If we know the maximum gain of the antenna and the total power input to the antenna, through the calculation, we will know the distance r where the MPE limit is reached.

### 2. Test Procedure

Software provided by client enabled the EUT to transmit and receive data at lowest, middle and highest channel individually.

### 3. Test Result of RF Exposure Evaluation

#### ANT 1

Output power(dBm)	Max tune-up(mW)	Antenna Gain(dBi)	Power Density at R=20cm (mW/cm <sup>2</sup> )	Limit (mW/cm <sup>2</sup> )	Result
10.91	12.33	-0.58	0.00215	1.0	Pass
10.55	11.35	-0.58	0.00198	1.0	Pass
9.67	9.27	-0.58	0.00161	1.0	Pass

#### ANT 2

Output power(dBm)	Max tune-up(mW)	Antenna Gain(dBi)	Power Density at R=20cm (mW/cm <sup>2</sup> )	Limit (mW/cm <sup>2</sup> )	Result
11.49	14.09	-0.58	0.00245	1.0	Pass
10.93	12.39	-0.58	0.00216	1.0	Pass
9.82	9.59	-0.58	0.00167	1.0	Pass

$$\text{ANT1}+\text{ANT2}=0.00215+0.00245=0.00460<1.0$$

Conclusion: No SAR is required