Maximum Permissible Exposure Evaluation

FCC ID: Y34-UITBSM

1. Client Information

Applicant	:	Outform Ltd
Address	:	R405, East, Buliding 203, Tai Ran Industrial Zone, Chengongmiao, Futian, Shenzhen, China
Manufacturer	:	Outform Ltd
Address	:	R405, East, Buliding 203, Tai Ran Industrial Zone, Chengongmiao, Futian, Shenzhen, China

2. General Description of EUT

EUT Name	:	32''IDISPLAY	
Models No.	:	UIT232B-B06, UIT232X-XYY, UIT213X-XYY, UIT310X-XYY, UIT306X-XYY, UIT332X-XYY, UIT432X-XYY (The 1st X is "A" or "B" represents the software version; The 2nd X is A-Z represents the color; YY is client number from "01" to "50".)	
Model Difference	:	They are identical in circuitry design, PCB layout, electrical components used, internal wiring and functions, only different on color.	
Product Description	:	Operation Frequency: WIFI 802.11b/g/n(H20): 2412MHz~2462MHz 802.11n(H40): 2422MHz~2452MHz BLE: 2402MHz~2480MHz	
		Number of Channel:	Bluetooth 4.0 (BLE): 40 channels WIFI: 802.11b/g/n(HT20):11channels 802.11n(HT40): 7 channels
		Output Power:	Bluetooth 4.0 (BLE): -0.114 dBm WIFI: 802.11b: 19.64dBm 802.11g: 18.02dBm 802.11n (HT20): 16.95dBm 802.11n (HT40): 14.23dBm
		Antenna Gain:	2.12 dBi Embedded Antenna
		Modulation Type:	BLE: GFSK 802.11b:DSSS(CCK, DQPSK, DBPSK)

1A/F., Bldg.6, Yusheng Industrial Zone, The National Road No.107 Xixiang Section 467, Xixiang, Bao'an, Shenzhen, China
Tel: +86 75526509301 Fax: +86 75526509195

			802.11g/n:OFDM(BPSK,QPSK,16QAM,64QAM)
Power Supply	:	DC power supplied by Switching Adapter.	
Power Rating	:	Switching Adapter: Input:100~240V, 50/60Hz 1.5A Max Output:12V, 5000mA	
Connecting I/O Port(S)	:	Please refer to the User's Manual	
Note: More detail information about Equipment, please refer to User's manual, more information about the RF, please refer to test report.			

1A/F., Bldg.6, Yusheng Industrial Zone, The National Road No.107 Xixiang Section 467, Xixiang, Bao'an, Shenzhen, China
Tel: +86 75526509301 Fax: +86 75526509195

MPE Calculations for WIFI

1. **Antenna Gain:**
   Embedded Antenna: 2.12 dBi.

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

3. **Exposure Evaluation:**
   Equation from page 18 of OET Bulletin 65, Edition 97-01
   $S=(PG)/4\Pi r^2$
   Where
   S: power density
   P: power input to the antenna
   G: power gain of the antenna in the direction of interest relative to an isotropic radiator.
   R: distance to the center of radiation of the antenna

4. **Test Result:**

Worst Maximum MPE Result							
Mode	N_{TX}	Frequency (MHz)	Power (dBm) [P]	ANT Gain (dBi) [G]	Turn-up Power Tolerance (dB)	Distance (cm) [R]	Power Density (Mw/ cm^2) [S]
2.4G							
802.11b	1	2462	19.64	2.12	±1	20	0.037562
802.11g	1	2437	18.02	2.12	±1	20	0.025867
802.11n (HT20)	1	2412	16.95	2.12	±1	20	0.020218
802.11n (HT40)	1	2412	14.23	2.12	±1	20	0.010808
BLE	1	2442	-0.114	2.12	±1	20	0.000398

Note:
(1) N_{TX}= Number of Transmit Antennas
(2) RF Output power specifies that Maximum Conducted Peak Output Power.

5. Conclusion:

As specified in Table 1B of 47 CFR 1.1310- Limits for Maximum Permissible Exposure (MPE),

Limits for General Population/ Uncontrolled Exposure

Frequency Range (MHz)	Power density (mW/cm^2)
300-1,500	F/1500
1,500-100,000	1.0

For 802.11b/g/n(2412~2462 MHz) and Bluetooth 4.0(BLE)
MPE limit S: 1 mW/cm^2
The MPE is calculated as 0.037562 mW/cm^2 < limit 1 mW/cm^2. So, RF exposure limit warning or SAR test are not required.

The EUT will only be used with a separation of 20cm or greater between the antenna and nearby persons and can therefore be considered a mobile transmitter per 47 CFR2.1091 (b).

The RF Exposure Information page from the manual is included here for reference.

Note

For a more detailed features description, please refer to the RF Test Report.