

## RF Exposure Evaluation

### FCC ID: XHW-EWT147

#### 1. Client Information

<b>Applicant</b>	:	E-matic
<b>Address</b>	:	3435 Ocean Park Blvd #107 PMB # 444, Santa Monica CA 90405, Los Angeles, California, United States
<b>Manufacturer</b>	:	Shaghal Ltd
<b>Address</b>	:	2231 Colby Ave. L.A., C.A., 90064 U.S.A

#### 2. General Description of EUT

<b>EUT Name</b>	:	Tablet PC	
<b>Models No.</b>	:	EWT147, EWT147BL, EWT147BU, EWT147PR, EWT147PN , EWT147R	
<b>Model Difference</b>	:	All these models are identical in the same PCB layout and electrical circuit, the only difference is appearance and color.	
<b>Product Description</b>	:	Operation Frequency:	802.11b/g/n(HT20): 2412MHz~2462MHz 802.11n(HT40): 2422MHz~2452MHz Bluetooth 4.0(BLE): 2402MHz~2480MHz
		RF Output Power:	802.11b: 8.969 dBm 802.11g: 8.887 dBm 802.11n (HT20): 8.651dBm 802.11n (HT40): 7.895 dBm Bluetooth 4.0(BLE): -0.752 dBm
		Antenna Gain:	2dBi FPC Antenna
<b>Power Supply</b>	:	Adapter(TEKA018-050200UK): Input: AC:100V~240V,50/60Hz , 0.5A Output: DC 5V, 2.5A DC 3.8V by 10000mAh 38Wh Rechargeable Li-ion Battery.	
<b>Software Version</b>	:	windows 10.1	
<b>Hardware Version</b>	:	N/A	
<b>Connecting I/O Port(S)</b>	:	Please refer to the User's Manual	

**Note:** More test information about the EUT please refer the RF Test Report.



## SAR Test Exclusion Calculations

1. FCC: According to KDB 447498 D01 Mobile and Portable Devices RF Exposure Procedures and Equipment Authorization Policies v06.

(1) Clause 4.3: General SAR test reduction and exclusion guidance

Sub clause 4.31: Standalone SAR test exclusion considerations

1) The 1-g and 10-g SAR test exclusion thresholds for 100 MHz to 6GHz at test separation distance  $\leq 5$  mm are determined by:

$[(\text{max. power of channel, including tune-up tolerance, mW}) / (\text{min. test separation, mm})] * [\sqrt{f_{(\text{GHz})}}] \leq 3.0$  for 1-g SAR

$[(\text{max. power of channel, including tune-up tolerance, mW}) / (\text{min. test separation, mm})] * [\sqrt{f_{(\text{GHz})}}] \leq 7.5.0$  for 10-g SAR

2.  
Calculation:

Test separation: 5mm						
2.4G WiFi Mode(802.11b)						
Frequency (GHz)	Conducted Power (dBm)	Turn-up Power Tolerance (dB)	Max power of tune up tolerance (dbm)	Max power of tune up tolerance (mw)	Calculation Value	Threshold Value
2.412	8.969	8±1	9	7.943	2.467	3.0
2.437	8.613	8±1	9	7.943	2.480	3.0
2.462	8.937	8±1	9	7.943	2.493	3.0
2.4G WiFi Mode(802.11g)						
Frequency (GHz)	Conducted Power (dBm)	Turn-up Power Tolerance (dB)	Max power of tune up tolerance (dbm)	Max power of tune up tolerance (mw)	Calculation Value	Threshold Value
2.412	8.585	8±1	9	7.943	2.467	3.0
2.437	8.887	8±1	9	7.943	2.480	3.0
2.462	8.628	8±1	9	7.943	2.493	3.0
2.4G WiFi Mode(802.11n(HT20))						
Frequency (GHz)	Conducted Power (dBm)	Turn-up Power Tolerance (dB)	Max power of tune up tolerance (dbm)	Max power of tune up tolerance (mw)	Calculation Value	Threshold Value
2.412	8.219	8±1	9	7.943	2.467	3.0
2.437	8.538	8±1	9	7.943	2.480	3.0
2.462	8.651	8±1	9	7.943	2.493	3.0
2.4G WiFi Mode(802.11n(HT40))						
Frequency (GHz)	Conducted Power (dBm)	Turn-up Power Tolerance (dB)	Max power of tune up tolerance (dbm)	Max power of tune up tolerance (mw)	Calculation Value	Threshold Value
2.422	7.674	8±1	9	7.943	2.472	3.0
2.437	7.790	8±1	9	7.943	2.480	3.0
2.452	7.895	8±1	9	7.943	2.488	3.0
BLE Mode (GFSK)						
Frequency (GHz)	Conducted Power (dBm)	Turn-up Power Tolerance (dB)	Max power of tune up tolerance (dbm)	Max power of tune up tolerance (mw)	Calculation Value	Threshold Value
2.402	-1.389	-1±1	0	1.000	0.310	3.0
2.442	-0.752	-1±1	0	1.000	0.313	3.0
2.480	-0.974	-1±1	0	1.000	0.315	3.0



Test separation: 5mm			
The worst RF Exposure Evaluation			
Worst Calculation Value		Total Calculation Value	Threshold Value
2.4G WiFi Mode	Bluetooth Mode		
2.493	0.315	2.808	3.0

Because the 2.4G WiFi and Bluetooth can be operated simultaneously, So the worst RF Exposure Evaluation is calculated as  $2.493+0.315=2.808 / cm^2 < limit 3.0$ , So standalone SAR measurements are not required.

-----END OF REPORT-----