# FCC RF Exposure

EUT Description:Wireless monitoring system
Model No.: RW2090 2 waist bags 550.1~599.85（CYS）,RW2090 4 waist bags 550.1~599.85（CYS）
RW2090 5 waist bags 550.1~599.85（CYS）,RW2090 6 waist bags 550.1~599.85（CYS）
RW2090 8 waist bags 550.1~599.85（CYS）,RW2090 10 waist bags 550.1~599.85（CYS）
FCC ID: 2BDIS-RW2090
Equipment type: fixed equipment

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 ($mW/cm^3$) | 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) | 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/) | 30 |
| 30-300 | 27.5 | 0.073 | 0.2 | 30 |
| 300-1500 | | | f/1500 | 30 |
| 1500-100,000 | | | f/1500 | 30 |

F = frequency in MHz
Formula: $Pd = (Pout*G)/(4*\pi*r^2)$
Where :
Pd = power density in $mW/cm^2$,
Pout = 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
Pd id the limit of MPE, 1 mW/cm2. 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 | |
|---|---|
| CH/Frequency | Output power（dBm/mW） |
| Channel 21<br>599.85MHz | 3.12/2.05 |

| ANT 2 | |
|---|---|
| CH/Frequency | Output power（dBm/mW） |
| Channel 21<br>575.15MHz | 3.38/2.18 |

| | Output power（dBm/ mW） | Antenna Gain(dBi) | Power Density at R=20cm ($mW/cm^2$) | Limit ($mW/cm^2$) | Result |
|---|---|---|---|---|---|
| ANT1 | 3.12/2.05 | -2.09 | 0.00025 | 0.3667 | Pass |
| ANT2 | 3.38/2.18 | -2.09 | 0.00027 | 0.3667 | Pass |

| Frequency(MHz) | Field strength(dBuV/m) | EIRP(dBm) | Max tune-up(mW) | Antenna Gain(dBi) | Power Density at R=20cm (mW/cm2) | Limit (mW/cm2) |
|---|---|---|---|---|---|---|
| 2402 | 93.61 | - 1.5476 | 0.7002 | 1.7 | 0.00021 | 1.0 |
| 2440 | 93.52 | - 1.6376 | 0.6859 | 1.7 | 0.00020 | 1.0 |
| 2480 | 91.82 | -3.3376 | 0.4637 | 1.7 | 0.00014 | 1.0 |

BT+ANT1+ANT2=0.00025/0.367+0.00027/0.367+0.00021/1=0.00163 ≤1

Conclusion: No SAR is required