RF EXPOSURE EVALUATION

FCC ID : 2AS8LUWM210
IC : 25119-UWM210

Standard Requirement

-The following FCC Rule Parts and procedures are applicable :

Part 1.1310 Radiofrequency radiation exposure limits
Part 2.1091 Radiofrequency radiation exposure evaluation : Mobile device
KDB447498 D01 v06 Mobile and Portable Devices RF Exposure Procedures and Equipment Authorization Policies

Table 1 below sets forth limits for Maximum Permissible Exposure (MPE) to radiofrequency electromagnetic fields.

Table 1—Limits for Maximum Permissible Exposure (MPE)

Frequency range (MHz)	Electric field strength (V/m)	Magnetic field strength (A/m)	Power density (mW/cm^2)	Averaging time (minutes)
(A) Limits for Occupational/Controlled Exposure				
0.3-3.0	614	1.63	*100	6
3.0-30	1842/f	4.89/f	$*900/f^2$	6
30-300	61.4	0.163	1.0	6
300-1,500			f/300	6
1,500-100,000			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	$*180/f^2$	30
30-300	27.5	0.073	0.2	30
300-1,500			f/1500	30
1,500-100,000			**1.0**	30

*f = frequency in MHz * = Plane-wave equivalent power density*

-RSS-102(Issue5) 2.5.2 Exemption Limits for Routine Evaluation – RF Exposure Evaluation

RF exposure evaluation is required if the separation distance between the user and/or bystander and the device's radiating element is greater than 20 cm, except when the device operates as follows:

- below 20 MHz and the source-based, time-averaged maximum e.i.r.p. of the device is equal to or less than 1W (adjusted for tune-up tolerance);
- at or above 20 MHz and below 48 MHz and the source-based, time-averaged maximum e.i.r.p. of the device is equal to or less than $4.49/f^{0.5}$W (adjusted for tune-up tolerance), where f is in MHz;
- at or above 48 MHz and below 300 MHz and the source-based, time-averaged maximum e.i.r.p. of the device is equal to or less than 0.6 W (adjusted for tune-up tolerance);
- at or above 300 MHz and below 6 GHz and the source-based, time-averaged maximum e.i.r.p. of the device is equal to or less than $1.31 \times 10^{-2} f^{0.6834}$W(adjusted for tune-up tolerance), where f is in MHz;
- at or above 6 GHz and the source-based, time-averaged maximum e.i.r.p. of the device is equal to or less than 5 W (adjusted for tune-up tolerance).

In these cases, the information contained in the RF exposure

Limit : $1.31 \times 10^{-2} \times f^{0.6834}$W ($f$: 2 402 MHz)(2.676 W)
Limit : above 6 GHz(5 W)

MPE calculation

$S = EIRP / (4\pi R^2)$
Where S : Power density
EIRP : P x G
P : Maximum transmitter power
G : Antenna gain
R : distance to the centre of radiation of the antenna

EUT RF Exposure(BLE)

P : 6.409 dBm (4.594mW)
G : 4.5 dBi (2.818)
R : 20 cm

S = 0.002 45 mW/cm²
EIRP = 12.328 mW

EUT RF Exposure(UWB)(EIRP)

EIRP =-52.3 dBm/MHz(Maximum power)

Conclusion

This confirms compliance to the required Radio frequency radiation exposure limit.

The UWB output powers is both less than 1mW according to Part1.1307, the RF exposure testing is exempt.