

RF EXPOSURE EVALUATION

1. PRODUCT INFORMATION

Product Description	M5AtomS3U
Model Name	AtomS3U,boksLINKV2
FCC ID	2AN3WM5ATOMS3U

2. EVALUATION METHOD AND LIMIT

Human exposure to RF emissions from mobile devices (47 CFR §2.1091) may be evaluated based on the MPE limits adopted by the FCC for electric and magnetic field strength and/or power density, as appropriate, since exposures are assumed to occur at distances of 20 cm or more from persons.

LIMITS FOR GENERAL POPULATION / UNCONTROLLED EXPOSURE

Frequency Range (MHz)	E-field Strength (E) (V/m)	Magnetic Field Strength (H) (A/m)	Power Density (S) (mW/cm ²)	Averaging Time E ² , H ² or S (Minutes)
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 -- 1500	--	--	f/1500	30
1500 -- 100,000	--	--	1.0	30

*Note:

1. f= Frequency in MHz * Plane-wave Equivalent Power Density
2. The averaging time for General Population/Uncontrolled exposure to fixed transmitters is not applicable for mobile and portable transmitters. See 47 CFR §§2.1091 and 2.1093 on source-based time-averaging requirement for mobile and portable transmitters.

$$S = PG / 4\pi R^2$$

Where:

S=power density

P=power input to 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

CALCULATION

Predication of MPE limit at a given distance

Equation from page 18 of OET Bulletin 65, Edition 97-01

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Where: S=power density

P=power input to 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. Manufacturing Tolerance

Mode	Max. Peak Conducted Output Power (dBm)	Max. tune-up
BLE	1.33	1 ± 1
WIFI	14.94	15 ± 1

5. Standalone MPE Result

Mode	Max. output power including tune up		Antenna Gain (dBi)	Antenna Gain (linear)	MPE (mW/cm ²)	MPE Limits (mW/cm ²)
	dBm	mW				
BLE	3	1.585	2.46	1.762	0.00056	1.0000
WIFI	16	39.811	2.46	1.762	0.01395	1.0000

Note:

1. Only the worst case recorded.
2. BT&WIFI cannot transmit synchronously.

6. Conclusion :

Compliance the RF exposure requirement