

**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 <sup>2</sup> )	Averaging Time  E  <sup>2</sup> ,  H  <sup>2</sup> or S (Minutes)
0.3 -- 1.34	614	1.63	(100)*	30
1.34 -- 30	824/f	2.19/f	(180/f <sup>2</sup> )*	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.

$$S = \frac{PG}{4\pi R^2}$$

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

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**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 <sup>2</sup> )	MPE Limits (mW/cm <sup>2</sup> )
	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