

RF Exposure — MPE Calculator

EUT IDENTIFICATION

Customer:	Witricity AI Tech, LLC
Model:	VWL1400
FCC ID:	2BFEF-VWL1400
IC ID:	(not assigned)
Classification:	General Population / Uncontrolled
Notes:	BLE Transmitter — device is not body worn

CONSTANTS

Speed of light (for $\lambda = c / f$, f in MHz)	299.792458	MHz·m
Centimetres per inch	2.54	cm/in

INPUTS (blue / shaded cells are the only cells to edit)

Lowest Frequency	2402.000	MHz
Highest Frequency	2480.000	MHz
Power (Conducted)	0.5400	dBm
Antenna Gain	2.2300	dBi
Cable Loss	0.0000	dB
Evaluation Distance R	20.0000	cm

ANTENNA GEOMETRY / FAR-FIELD CHECK

Wavelength at lowest frequency λ	0.124810	m
Antenna aperture D (¼-wavelength radiator assumed)	0.031202	m
Far-Field (Fraunhofer) Distance $= 2 \cdot D^2 / \lambda$	1.560	cm
Is R in the far field?	YES — far-field formula valid	

EIRP AND POWER DENSITY

EIRP = Conducted Power + Antenna Gain – Cable Loss	2.7700	dBm
EIRP = $10^{\wedge} (\text{EIRP dBm} / 10)$	1.8923	mW

Power Density $S = \text{EIRP} / (4 \cdot \pi \cdot R^2)$

0.000376 mW/cm²

MPE LIMITS AND COMPLIANCE MARGIN

Standard	Limit	Units	Avg. time	Margin (×)	Margin (dB)	Result
Occupational / Controlled Exposure						
OSHA (29 CFR 1910.97)	10.000	mW/cm ²	6 min	26,563	44.2	PASS
FCC (47 CFR 1.1310, Table 1(A), 1500–100000 MHz)	5.000	mW/cm ²	6 min	13,281	41.2	PASS
ISED (RSS-102 Issue 5, Table 4)	3.164	mW/cm ²	6 min	8,403	39.2	PASS

General Population / Uncontrolled Exposure ← applicable classification

OSHA (29 CFR 1910.97 — occupational standard, shown for reference)	10.000	mW/cm ²	6 min	26,563	44.2	PASS
FCC (47 CFR 1.1310, Table 1(B), 1500–100000 MHz)	1.000	mW/cm ²	30 min	2,656	34.2	PASS
ISED (RSS-102 Issue 5, Table 5)	0.535	mW/cm ²	6 min	1,421	31.5	PASS

SUPPLEMENTARY

Evaluation distance R	20.000	cm
Evaluation distance R	7.874	in
Distance at which S would equal the FCC general-population limit	0.388	cm
Overall determination (General Population, FCC)	COMPLIES	