Prediction of MPE Limit
47 CFR § 2.1091

$$S_{20} = \frac{P_A G_N}{4\pi R_{20}^2} \qquad S_C = \frac{P_A G_N}{4\pi R_C^2} \qquad R_C = \sqrt{\frac{P_A G_N}{4\pi S_L}}$$

$$S_L = \frac{f}{1500} \text{ (mW/cm}^2\text{)}$$

S_{20} = Power Density of the Device at 20cm
S_L = Power Density Limit
S_C = Power Density of the Device at the Compliance Distance R_C
R_{20} = 20cm
R_c = Minimum Distance to the Radiating Element to Meet Compliance
P_T = Power Input to Antenna
P_A = Adjust Power
G_N = Numeric Gain of the Antenna
f = Transmit Frequency

Transmit Duty Cycle = 100%

Use Group = General Popuation

FCC ID:				
2AC7Z-ESPWROOM32UE	S_{20} at 20cm =	0.0895	(mW/cm^2)	See Page 2
	+			
2AFJT-11390A (912MHz)	S_{20} at 20cm =	0.0002	(mW/cm^2)	See Page 3
2AFJT-11390A	S_{20} at 20cm =	0.0897	(mW/cm^2)	
	S_L =	0.6083	(mW/cm^2)	

Power Density of Host = Sum of all simultaneous Power Densities
Power Density Limit = Lowest Limit Based on Frequency

FCC ID:	2AFJT-11390A	RESULT:	PASS

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

S = power density
P = power input to the 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

Use Group: ◉ General Pop ○ Occupational

Transmit Duty Cycle:	100.00	(%)
Tx Frequency:	2412.0000	(MHz)
RF Output Power at Antenna Input Terminal:	263.00	(mW)
Antenna gain:	2.33	(dBi)
Cable or other Loss:	0.00	(dB)
G =	1.71	(numeric)
Duty Cycle/Loss Adjusted Power P =	263.00	(mW)

FCC

S Limit =	1.0000	(mW/cm^2)
R =	5.982	(cm)
S at 20cm:	0.089	(mW/cm^2)

IC

S Limit =	5.3660	(W/m^2)
R =	8.167	(cm)
S at 20cm:	0.895	(W/m^2)

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

S = power density
P = power input to the 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

Use Group: (•) General Pop ( ) Occupational

Transmit Duty Cycle:	100.00	(%)
Tx Frequency:	912.0000	(MHz)
RF Output Power at Antenna Input Terminal:	1.00	(mW)
Antenna gain:	0.00	(dBi)
Cable or other Loss:	0.00	(dB)
G =	1.00	(numeric)
Duty Cycle/Loss Adjusted Power P =	1.00	(mW)

FCC		
S Limit =	0.6083	(mW/cm^2)
R =	0.362	(cm)
S at 20cm:	0.000	(mW/cm^2)

IC		
S Limit =	2.7606	(W/m^2)
R =	0.537	(cm)
S at 20cm:	0.002	(W/m^2)