

MPE CALCULATION (FCC ID: 2AS9Q-R290)

RF Exposure Requirements:	47 CFR §1.1307(b)
RF Radiation Exposure Limits:	47 CFR §1.1310
RF Radiation Exposure Guidelines:	FCC OST/OET Bulletin Number 65
EUT Frequency Band:	WLAN: 2412-2462MHz 24GHz Radar: 24075-24175MHz
Limits for General Population/Uncontrolled Exposure in the band of:	1500 - 100,000 MHz
Power Density Limit:	1 mW / cm ²

Equation: $S = PG / 4\pi R^2$ or $R = \sqrt{PG / 4\pi S}$
Where, S = Power Density
P = Power Input to Antenna
G = Antenna Gain
R = distance to the center of radiated antenna

Prediction distance 20 cm

EUT: Elara Radar

Radio	Frequency (MHz)	Conducted Output Power (dBm)	Antenna Gain (dBi)	Separation distance (cm)	Power Density (mW/ cm ²)	MPE Limit (mW/ cm ²)
24GHz Radar	24075-24175	14	11	20	0.063	1
WLAN	2412-2462	17.79	-6	20	0.030	1

The above results show that the device complies with the MPE requirement.

The 24GHz Radar is able to transmit simultaneously with WLAN.

The ratio = $0.063/1 + 0.03/1 = 0.093 < 1.0$

The above results show that the device complies with the simultaneous transmission MPE requirement.

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