§ 18.303 Prohibited frequency bands.

Operation of ISM equipment within the following safety, search and rescue frequency bands is prohibited: 490–510 kHz, 2170–2194 kHz, 8354–8374 kHz, 121.4–121.6 MHz, 156.7–156.9 MHz, and 242.8–243.2 MHz.

§ 18.305 Field strength limits.

(a) ISM equipment operating on a frequency specified in §18.301 is permitted unlimited radiated energy in the band specified for that frequency.

(b) The field strength levels of emissions which lie outside the bands specified in §18.301, unless otherwise indicated, shall not exceed the following:

Equipment	Operating frequency	RF Power generated by equipment (watts)	Field strength limit (uV/m)	Distance (meters)
Any type unless otherwise specified (miscellaneous).	Any ISM frequency	Below 500	25	300
		500 or more	25×SQRT(power/500)	[1]300
	Any non-ISM frequency	Below 500	15	300
		500 or more	15×SQRT(power/500)	[1]300
Industrial heaters and RF stabilized arc welders.	On or below 5,725 MHz	Any	10	1,600
	Above 5,725 MHz	Any	([2])	([2])
Medical diathermy	Any ISM frequency	Any	25	300
	Any non-ISM frequency	Any	15	300
Ultrasonic	Below 490 kHz	Below 500	2,400/F(kHz)	300
		500 or more	2,400/F(kHz)× SQRT(power/500).	[3]300
	490 to 1,600 kHz	Any	24,000/F(kHz)	30
	Above 1,600 kHz	Any	15	30
Induction cooking ranges	Below 90 kHz	Any	1,500	[4]30
	On or above 90 kHz	Any	300	[4]30

[1] Field strength may not exceed 10 μV/m at 1600 meters. Consumer equipment operating below 1000 MHz is not permitted the increase in field strength otherwise permitted here for power over 500 watts.
[2] Reduced to the greatest extent possible.
[3] Field strength may not exceed 10 μV/m at 1600 meters. Consumer equipment is not permitted the increase in field strength otherwise permitted here for over 500 watts.
[4] Induction cooking ranges manufactured prior to February 1, 1980, shall be subject to the field strength limits for miscellaneous ISM equipment.

According to 18.305(a) 6.78MHz +/-15kHz is an ISM band in which unlimited energy may be radiated.

For a wireless charger operating at this frequency and bandwidth, there should not be a violation. If the center frequency of the wireless charger drifts slightly outside 6.78MHz +/- 15kHz, then the maximum emission allowed is specified by 18.301(b): 25uV/m at 300m.

Assuming that the wireless charger can be modeled as a loop antenna, then:

$$B = \frac{\mu_0}{4\pi}\frac{2\pi R^2 IN}{(z^2+R^2)^{3/2}}$$

At 300 meters, the field strength can not exceed 25uV/m or 28dBuV/m. For the wireless charger, N=24, I=0.4A, R=0.005m, z=300m.

$$B = 5.59 \times 10^{-18}\ \mathrm{T}$$

$$(5.59 \times 10^{-18}) \times \frac{10^6}{1.25} = 4.47 \times 10^{-12}\ \mathrm{A/m}$$

$$20 \times log_{10}(4.47 \times 10^{-12}\ \mathrm{A/m}) + 120 = -107\ \mathrm{dB\mu A/m}$$

$$107\ \mathrm{dB\mu A/m} + 51.5 = -55.5\ \mathrm{dB\mu V/m}$$

Even outside of the ISM band, there is still a 70dB margin in field strength.