Maximum Public Exposure to RF (MPE) CFR 15.247 (i), CFR 1.1310 (e)

The maximum exposure level to the public from the RF power of the EUT shall not exceed a power density, **S** as per the respective limits in Table 1 below, at a distance, d, of 20 cm (Mobile condition) from the EUT.

TABLE 1—LIMITS FOR MAXIMUM PERMISSIBLE EXPOSURE (MPE)

Frequency range (MHz)	Electric field strength (V/m)	Magnetic field strength (A/m)	Power density (mW/cm^2)	Averaging time (minutes)
Limits for General Population/Uncontrolled Exposure				
0.3-1.34	614	1.63	*100	30
1.34-30	824/f	2.19/f	$*180/f^2$	30
30-300	27.5	0.073	0.2	30
300-1,500			f/1500	30
1,500-100,000			1.0	30

f = frequency in MHz * = Plane-wave equivalent power density

Therefore, for:

MPE for 902-928 MHz Radio Device

Limit: 0.61 mW/cm^2 @ 915 MHz
Peak Power (dBm) = 2.92 dBm
Peak Power (Watts) = 0.002 W
Gain of Transmit Antenna = 0 dB_i =1, numeric (Highest Gain Antenna)
d = Distance = 20 cm = 0.2 m

$S = (PG/ 4\pi d^2)$ = EIRP/4A = $0.002(1.0)/4*\pi*0.2*0.2$
= $0.002/0.5030 = 0.0040$ W/m^2
= $(0.0040\ W/m^2)\ (1m^2/W)\ (0.1\ mW/cm^2)$
= 0.00040 mW/cm^2

which is << less than S = 0.61 mW/cm^2

RF Exposure Evaluation – IC

According to RSS-102, 2.5.2 Exemption Limits for Routine Evaluation

At or above 300 MHz and below 6 GHz and the source based time averaged maximum EIRP of the device is equal to or less than $1.31 \times 10^{-2} \times f^{0.6834}$ in Watts (adjusted for tune up tolerance where applicable), where f= frequency in MHz

For 902-928 MHz Band:

Limit= $1.31 \times 10^{-2} \times 915^{0.6834} = 1.4$ Watts

Max EIRP = 2.92 dBm + 0 dBi = 2.92 dBm = 2 mW << 1400 mW