US Tech Test Report:	FCC Part 15 Certification/ RSS 247
FCC ID:	2AGBW9290019684X
IC:	20812-9684X
Test Report Number:	7088818001170-00
Issue Date:	October 26, 2018
Model:	9290019684

Maximum Public Exposure to RF (MPE) CFR 15.247 (i), CFR 1.1310 (e) & RSS-102, 2.5.2

The maximum exposure level to the public from the RF power of the EUT shall not exceed a power density, **S**, of 1 mW/cm^2 at a distance, d, of 20 cm from the EUT.

Therefore, for:

Maximum Peak Power (dBm) = 9.26 dBm at Zigbee 2405MHz
Peak Power (Watts) = 0.0084 W
Maximum Gain of Transmit Antenna = 1.77 dBi =1.5, numeric
d = Distance = 20 cm = 0.2 m

$$S = (PG/ 4 \pi d^2) = EIRP/4A = 0.0084*(1.5)/4*\pi*0.2*0.2$$
$$= 0.0127/0.5030 = 0.02520 \ W/m^2$$
$$= (0.02520 \ W/m^2) \ (1m^2/W) \ / \ (0.1 \ mW/cm^2)$$
$$= 0.252 \ mW/cm^2$$

which is << less than 1.0 mW/cm^2

RSS-102, 2.5.2 Compliance for 2405 MHz ~ 2480 MHz band:

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

$1.31 * 10^{-2} * 2405^{0.6834} = 2.68 \ W$

EUT max EIRP = 9.26 dBm + 1.77 dBi = 11.03 dBm EIRP = 0.0127 W
Which is << than 2.68 W

The MPE limits are below the threshold as stated in KDB447498 D01 V06 in Section 4.3. The calculations above are presented to show that the EUT meets the exclusion requirements.