Calculation and sample for Confirmation

The maximum measured power output is：

GSM 850MHz: (ERP) is 33.17 dBm,

GSM 1900MHz: (EIRP) is 31.61 dBm,

the maximum antenna gain is 2 dBi.

The maximum permissible exposure is defined in 47 CFR 1.1310 with 1 mW/cm^2 for GSM1900MHz and f/1500 mW/cm^2 for GSM850MHz.

The transmitter is using indoor antennas that operate at 25 cm or more from nearby persons.

The maximum permitted level is calculated using the general equation:

$$S = P*G/4\pi R^2$$

For 850MHz:

P*G=EIRP =33.17+2.15=35.32dBm=3404 mW

For 1900MHz:

P*G=EIRP =31.61dBm=1448 mW

R = 25 cm

π = 3.1416

Solving for S, the power density at 25 cm is 0.433 mW/cm^2 for GSM850MHz and 0.184 mW/cm^2 for GSM1900MHz

So The power density limit for GSM850Hz and 1900MHz is kept.