RF Exposure evaluation

According to 447498 D01 General RF Exposure Guidance v06:

The 1-g and 10-g SAR test exclusion thresholds for 100 MHz to 6 GHz at test separation distances ≤ 50 mm are determined by:

[(max. power of channel, including tune-up tolerance, mW)/(min. test separation distance, mm)] • [√f(GHz)] ≤ 3.0 for 1-g SAR and ≤ 7.5 for 10-g extremity SAR, where

   f(GHz) is the RF channel transmit frequency in GHz.

   Power and distance are rounded to the nearest mW and mm before calculation.

   The result is rounded to one decimal place for comparison.

$eirp = p_t \times g_t = (E \times d)^2/30$

where:

p_t = transmitter output power in watts,

g_t = numeric gain of the transmitting antenna (unitless),

E = electric field strength in V/m, --- $10^{((dBuV/m)/20)}/10^6$,

d = measurement distance in meters (m)--- 3m.

So $p_t = (E \times d)^2/(30 \times g_t)$

Worse case is as below:

Field strength = _71.42_ dBuV/m @3m

Ant gain_0_dBi; so Ant numeric gain=1

So p_t={[$10^{(71.42/20)}$/10^6x3]^2/(30x1)}x1000mW =0.004mW

So _(0.004mW/5mm)x √0.315GHz = 0.0005_<3.0 for 1-g SAR

Then SAR evaluation is not required.