RF Exposure evaluation

According to 447498 D01 General RF Exposure Guidance v05
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 = pt x gt = $(EXd)^2$/30
where:
 pt = transmitter output power in watts,
 gt = 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 pt = $(EXd)^2$/30 x gt

Field strength =90.53 dBuV/m @3m
Ant gain 0 dBi; so Ant numeric gain=1

So pt={[$10^{(90.53/20)}$/10^6 x3]^2/30x1 }x1000 mW =0.339 mW
So (0.339 mW/5mm)x √2.453 GHz = 0.106 <3

Then SAR evaluation is not required