# Standalone SAR test exclusion considerations

**May 18, 2020**

- Device category =  ☐  Portable device    ☑  Mobile device
- Transmitting mode =    ☑  Single Transmitting    ☐  Simultaneous Transmitting
- Max. transmitting frequency =    **919**    MHz
- Min. test separation distance =    **200**    mm
- Max. Antenna Gain =    **-0.4**    dBi
- Max. power with turn-up tolerance =    **16.50**  dBm  =  **44.7**  mW  (  Typical Power =    **Max.  16.50**  dBm  )

Note.

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**KDB 447498 D01 clasue 4.3.1 Step 2-1)  SAR test exclusion thresholds for 100MHz to 1500MHz at test separationn distances > 50 mm**

[ Threshold at 50 mm + ( test separation distance - 50 mm ) X ( f(MHz ) / 150 ) ] mW

**= [ 0.21 + ( 200mm - 50mm ) X ( 919MHz  / 150 ) ] = 919.2**

Note. The calculation result was rounded to one decimal place for comparison.

→ *SAR evaluation for general population exposure conditions by measurement or numerical simulation is not required.*

# Maximum Permissible Exposure(MPE) evaluation for mobile device

$$S = P\,G\,/\,(\,4\,R^{2}\,\pi\,)\ ,\ \mathrm{mW/cm}^{2}$$

S =  Maximum power density
P =  Maximum power with turn-up tolerance

G =  Numeric power gain of the antenna
R =  Distance from transmitting antenna

$$=\ \ 0.008110\ \ \ \mathrm{mW/cm}^{2}$$

**Conclusion: The exposure condition of this device is compliant with FCC rules.**

The limit for maximum permissible exposure =  0.612666   mW/cm$^{2}$   ( f/1500 )

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