Standalone SAR test exclusion considerations

January 20, 2020

- Device category = ☐ Portable device   ☑ Mobile device
- Transmitting mode =   ☑ Single Transmitting   ☐ Simultaneous Transmitting
- Max. transmitting frequency =   **2475**   MHz
- Min. test separation distance =   **200**   mm
- Max. Antenna Gain =   **-1**   dBi
- Max. power with turn-up tolerance =   **7.00**   dBm =   **5.1**   mW (Typical Power =   **Max.   7.00**   dBm)

Note.   RF4CE

KDB 447498 D01 clasue 4.3.1 Step 2-2) SAR test exclusion thresholds for 1500MHz to 6GHz at test separationn distances > 50 mm

[Threshold at 50 mm + (test separation distance - 50 mm) X 10] mW

= [0.04 + (200mm - 50mm X 10)] = 1500

 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

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

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

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

$$=   0.000806   mW/cm^2$$

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

The limit for maximum permissible exposure = 1.000000 mW/cm^2

Standalone SAR test exclusion considerations

January 20, 2020

- Device category = ☐ Portable device   ☑ Mobile device
- Transmitting mode =   ☑ Single Transmitting   ☐ Simultaneous Transmitting
- Max. transmitting frequency =   **2480**   MHz
- Min. test separation distance =   **200**   mm
- Max. Antenna Gain =   **-1**   dBi
- Max. power with turn-up tolerance =   **7.00**   dBm =   **5.1**   mW   (Typical Power =   **Max.   7.00**   dBm   )

Note.   BLE

KDB 447498 D01 clasue 4.3.1 Step 2-2) SAR test exclusion thresholds for 1500MHz to 6GHz at test separationn distances > 50 mm
[Threshold at 50 mm + (test separation distance - 50 mm) X 10] mW
= [0.04 + (200mm - 50mm X 10)] = 1500
  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

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

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

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

  =   **0.000806** mW/cm^2

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

The limit for maximum permissible exposure = 1.000000 mW/cm^2