

Standalone SAR test exclusion considerations

April 17, 2017

- 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 = **-0.1** dBi
- Max. power with turn-up tolerance = **3.00** dBm = **2.0** mW (Typical Power = **Max. 3.00** dBm)

Note. BT(BDR)

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

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

$$= [0.02 + (200\text{mm} - 50\text{mm} \times 10)] = 1500$$

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

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

$$= 0.000389 \text{ mW/cm}^2$$

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

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

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

The limit for maximum permissible exposure = **1.000000** mW/cm²

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- Max. transmitting frequency = **2480** MHz
- Min. test separation distance = **200** mm
- Max. Antenna Gain = **-0.1** dBi
- Max. power with turn-up tolerance = **2.00** dBm = **1.6** mW (Typical Power = **Max. 2.00** dBm)

Note. BT(EDR)

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

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

$$= [0.01 + (200\text{mm} - 50\text{mm} \times 10)] = 1500$$

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

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

$$= 0.000311 \text{ mW/cm}^2$$

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

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

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

The limit for maximum permissible exposure = **1.000000** mW/cm²