

Standalone SAR test exclusion considerations

November 23, 2016

- 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 = **5.37** dBi
- Max. power with turn-up tolerance = **13.00** dBm = **20.0** mW (Typical Power = **Max. 13.00** 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

$$= [0.16 + (200\text{mm} - 50\text{mm} \times 10)] = 1500.2$$

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

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

$$= 0.013701 \text{ mW/cm}^2$$

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 = **5.37** dBi
- Max. power with turn-up tolerance = **7.00** dBm = **5.1** mW (Typical Power = **Max. 7.00** 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

$$= [0.04 + (200\text{mm} - 50\text{mm} \times 10)] = 1500$$

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

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

$$= 0.003494 \text{ mW/cm}^2$$

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