

Standalone SAR test exclusion considerations

July 15, 2016

- Device category = ☐ Portable device ☒ Mobile device
- Transmitting mode = ☒ Single Transmitting ☐ Simultaneous Transmitting
- Max. transmitting frequency = 2462 MHz
- Min. test separation distance = 200 mm
- Max. Antenna Gain = 1.35 dBi
- Max. power with turn-up tolerance = 18.00 dBm = 63.1 mW (Typical Power = Max. 18.00 dBm)

Note. Ant1: 1.04 dBi, Ant2: 1.35 dBi
802.11b/g/n

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

= [0.5 + (200mm - 50mm X 10)] = 1500.5

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

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

$$= 0.017130 \text{ mW/cm}^2$$

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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- Device category = ☐ Portable device ☒ Mobile device
- Transmitting mode = ☐ Single Transmitting ☒ Simultaneous Transmitting
- Max. transmitting frequency = 2462 MHz
- Min. test separation distance = 200 mm
- Max. Antenna Gain = 1.198 dBi
- Max. power with turn-up tolerance = 19.00 dBm = 79.5 mW (Typical Power = Max. 19.00 dBm)
- 1st Transceiver = 16.00 dBm , 2nd Transceiver = 16.00 dBm

Note. Directional gain: 1.198 dBi

802.11b/g/n

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

= [0.62 + (200mm - 50mm X 10)] = 1500.6

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

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

$$= 0.020840 \text{ mW/cm}^2$$

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

Standalone SAR test exclusion considerations

July 15, 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 = 0.67 dBi
- Max. power with turn-up tolerance = 7.00 dBm = 5.1 mW (Typical Power = Max. 7.00 dBm)

Note.

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 + (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

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

$$= 0.001184 \text{ mW/cm}^2$$

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