

Standalone SAR test exclusion considerations

May 10, 2016

- Device category = ☐ Portable device ☒ Mobile device
- Transmitting mode = ☐ Single Transmitting ☒ Simultaneous Transmitting
- Max. transmitting frequency = 5240 MHz
- Min. test separation distance = 200 mm
- Max. Antenna Gain = 4.525 dBi
- Max. power with turn-up tolerance = 16.00 dBm = 39.9 mW (Typical Power = Max. 16.00 dBm)
- 1st Transceiver = 13.00 dBm , 2nd Transceiver = 13.00 dBm

Note. Ant1: 1.0 dBi, Ant2: 2.0 dBi, Directional gain: 4.525 dBi, 5180 ~ 5240 MHz

Typical Power is the target of sum of two chains.

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

= [0.46 + (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

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

$$= 0.022501 \text{ mW/cm}^2$$

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

May 10, 2016

- Device category = ☐ Portable device ☒ Mobile device
- Transmitting mode = ☐ Single Transmitting ☒ Simultaneous Transmitting
- Max. transmitting frequency = 5320 MHz
- Min. test separation distance = 200 mm
- Max. Antenna Gain = 4.525 dBi
- Max. power with turn-up tolerance = 16.00 dBm = 39.9 mW (Typical Power = Max. 16.00 dBm)
- 1st Transceiver = 13.00 dBm , 2nd Transceiver = 13.00 dBm

Note. Ant1: 1.0 dBi, Ant2: 2.0 dBi, Directional gain: 4.525 dBi, 5260 ~ 5320 MHz

Typical Power is the target of sum of two chains.

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

= [0.46 + (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

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

$$= 0.022501 \text{ mW/cm}^2$$

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

May 10, 2016

- Device category = ☐ Portable device ☒ Mobile device
- Transmitting mode = ☐ Single Transmitting ☒ Simultaneous Transmitting
- Max. transmitting frequency = **5700** MHz
- Min. test separation distance = **200** mm
- Max. Antenna Gain = **4.585** dBi
- Max. power with turn-up tolerance = **16.00** dBm = **39.9** mW (Typical Power = **Max. 16.00** dBm)
- 1st Transceiver = **13.00** dBm , 2nd Transceiver = **13.00** dBm

Note. Ant1: 2.2 dBi, Ant2: 0.9 dBi, Directional gain: 4.585 dBi, 5500 ~ 5700 MHz

Typical Power is the target of sum of two chains.

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

= [0.48 + (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

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

$$= 0.022814 \text{ mW/cm}^2$$

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

May 10, 2016

- Device category = ☐ Portable device ☒ Mobile device
- Transmitting mode = ☐ Single Transmitting ☒ Simultaneous Transmitting
- Max. transmitting frequency = **5825** MHz
- Min. test separation distance = **200** mm
- Max. Antenna Gain = **4.402** dBi
- Max. power with turn-up tolerance = **16.00** dBm = **39.9** mW (Typical Power = **Max. 16.00** dBm)
 1st Transceiver = **13.00** dBm , 2nd Transceiver = **13.00** dBm

Note. Ant1: 2.2 dBi, Ant2: 0.5 dBi, Directional gain: 4.402 dBi, 5745 ~ 5825 MHz

Typical Power is the target of sum of two chains.

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

= [0.48 + (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

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

$$= 0.021873 \text{ mW/cm}^2$$

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