

January 31, 2018

```
- Device category = Portable device Mobile device

- Transmitting mode = Single Transmitting Simultaneous Transmitting

- Max. transmitting frequency = 846.6 MHz

- Min. test separation distance = 300 mm

- Max. Antenna Gain = 2.72 dBi

- Max. power with turn-up tolerance = 24.00 dBm = 251.2 mW ( Typical Power = Max. 24.00 dBm )

Note. WCDMA B5
```

KDB 447498 D01 clasue 4.3.1 Step 2-1) SAR test exclusion thresholds for 100MHz to 1500MHz at test separationn distances > 50 mm

[ Threshold at 50 mm + ( test separation distance - 50 mm ) X ( f(MHz) / 150 ) ] mW

```
= [ 0.77 + ( 300mm - 50mm ) X ( 846.6MHz / 150 ) ] = 1411.8
```

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<sup>2</sup>
= 0.041550 \text{ mW/cm}^2
S = Maximum power density P = Maximum power with turn-up tolerance}
S = Maximum power with turn-up tolerance R = Distance from transmitting antenna
```

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

The limit for maximum permissible exposure = 0.564400 mW/cm<sup>2</sup> (f/1500)



January 31, 2018

```
- Device category = □ Portable device □ Mobile device
- Transmitting mode =

☑ Single Transmitting

                                                Simultaneous Transmitting
- Max. transmitting frequency =
                               1907.6
                                      MHz
- Min. test separation distance =
                                  300
                                      mm
- Max. Antenna Gain =
                         3.86
                              dBi
- Max. power with turn-up tolerance = 24.00 dBm = 251.2 mW ( Typical Power =
                                                                                       Max. 24.00 dBm )
Note. WCDMA B2
```

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 = [ 1.16 + ( 300mm - 50mm X 10 ) ] = 2501.2
```

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), mW/cm<sup>2</sup>
= 0.054022 \text{ mW/cm}^2
S = Maximum power density P = Maximum power with turn-up tolerance 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/cm<sup>2</sup>



January 31, 2018

```
- Device category = Portable device Mobile device

- Transmitting mode = Single Transmitting Simultaneous Transmitting

- Max. transmitting frequency = 848.8 MHz

- Min. test separation distance = 300 mm

- Max. Antenna Gain = 2.72 dBi

- Max. power with turn-up tolerance = 34.00 dBm = 2511.9 mW ( Typical Power = Max. 34.00 dBm )

Note. GSM850
```

KDB 447498 D01 clasue 4.3.1 Step 2-1) SAR test exclusion thresholds for 100MHz to 1500MHz at test separationn distances > 50 mm

[ Threshold at 50 mm + ( test separation distance - 50 mm ) X ( f(MHz) / 150 ) ] mW

= [7.71 + (300mm - 50mm) X (848.8MHz / 150)] = 1422.4

Note. The calculation result was rounded to one decimal place for comparison.

The SAR evaluation is required.

# Maximum Permissible Exposure(MPE) evaluation for mobile device

```
S = P G / (4 R^2 \pi), mW/cm<sup>2</sup>
= 0.415480 \text{ mW/cm}^2
S = Maximum power density P = Maximum power with turn-up tolerance}
S = Maximum power with turn-up tolerance R = Distance from transmitting antenna
```

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

The limit for maximum permissible exposure = 0.565866 mW/cm<sup>2</sup> (f/1500)



January 31, 2018

```
- Device category = □ Portable device □ Mobile device
- Transmitting mode =

☑ Single Transmitting

                                                Simultaneous Transmitting
- Max. transmitting frequency =
                               1909.8
                                       MHz
- Min. test separation distance =
                                  300
                                       mm
- Max. Antenna Gain =
                         3.86
                              dBi
- Max. power with turn-up tolerance = 31.00 dBm = 1259.0 mW ( Typical Power =
                                                                                       Max. 31.00 dBm )
Note. GSM1900
```

KDB 447498 D01 clasue 4.3.1 Step b-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 = [ 5.8 + ( 300mm - 50mm X 10 ) ] = 2505.8
```

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<sup>2</sup> S = Maximum power densityP = Maximum power with turn-up toleranceG = 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/cm<sup>2</sup>



January 31, 2018

```
- Device category = □ Portable device □ Mobile device
                        ■ Single Transmitting
- Transmitting mode =
                                                 Simultaneous Transmitting
- Max. transmitting frequency =
                                2462
                                         MHz
- Min. test separation distance =
                                   300
                                       mm
- Max. Antenna Gain =
                          8.0
                                dBi
                                     3.50 dBm =
                                                      2.3 mW ( Typical Power =
- Max. power with turn-up tolerance =
                                                                                        Max. 3.50 dBm )
```

Note. 802.11 B/G/N

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 = [0.01 + (300 \text{mm} - 50 \text{mm} \times 10)] = 2500
```

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<sup>2</sup>
= 0.000244 mW/cm<sup>2</sup>
S = Maximum power density P = Maximum power with turn-up tolerance
<math display="block">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/cm<sup>2</sup>