

# Standalone SAR test exclusion considerations

September 12, 2017

- Device category =  Portable device  Mobile device
- Transmitting mode =  Single Transmitting  Simultaneous Transmitting
- Max. transmitting frequency = 2441 MHz
- Min. test separation distance = 30 mm
- Max. Antenna Gain = 0 dBi
- Max. power with turn-up tolerance = 17.50 dBm = 56.3 mW ( Typical Power = Max. 17.50 dBm )

Note. Bluetooth

## KDB 447498 D01 clause 4.3.1 Step 1) SAR test exclusion thresholds for 100MHz to 6GHz at test separation distances $\leq$ 50 mm

[ ( max. power of channel, including tune-up tolerance, mW ) / ( min. test separation distance, mm ) ]  $\cdot$  [  $\sqrt{f(\text{GHz})}$  ]  $\leq$  3.0 for 1g SAR and  $\leq$  7.5 for 10g extremity SAR  
= [ ( 56.3mW / 30mm ) ]  $\times$  [  $\sqrt{2.441\text{GHz}}$  ] = 2.9

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.***

# Standalone SAR test exclusion considerations

September 12, 2017

- Device category =  Portable device  Mobile device
- Transmitting mode =  Single Transmitting  Simultaneous Transmitting
- Max. transmitting frequency = 2440 MHz
- Min. test separation distance = 30 mm
- Max. Antenna Gain = 0 dBi
- Max. power with turn-up tolerance = 4.00 dBm = 2.6 mW ( Typical Power = Max. 4.00 dBm )

Note. Bluetooth LE

## KDB 447498 D01 clause 4.3.1 Step 1) SAR test exclusion thresholds for 100MHz to 6GHz at test separation distances $\leq$ 50 mm

[ ( max. power of channel, including tune-up tolerance, mW ) / ( min. test separation distance, mm ) ]  $\cdot$  [  $\sqrt{f(\text{GHz})}$  ]  $\leq$  3.0 for 1g SAR and  $\leq$  7.5 for 10g extremity SAR  
 $= [ ( 2.6\text{mW} / 30\text{mm} ) ] \times [ \sqrt{2.44\text{GHz}} ] = 0.1$

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.***

# Standalone SAR test exclusion considerations

September 12, 2017

- Device category =  Portable device  Mobile device
- Transmitting mode =  Single Transmitting  Simultaneous Transmitting
- Max. transmitting frequency = 2410 MHz
- Min. test separation distance = 30 mm
- Max. Antenna Gain = 0 dBi
- Max. power with turn-up tolerance = 17.50 dBm = 56.3 mW ( Typical Power = Max. 17.50 dBm )

Note. 2.4GHz ISM Band(Mesh)

## KDB 447498 D01 clause 4.3.1 Step 1) SAR test exclusion thresholds for 100MHz to 6GHz at test separation distances $\leq$ 50 mm

[ ( max. power of channel, including tune-up tolerance, mW ) / ( min. test separation distance, mm ) ]  $\cdot$  [  $\sqrt{f(\text{GHz})}$  ]  $\leq$  3.0 for 1g SAR and  $\leq$  7.5 for 10g extremity SAR  
= [ ( 56.3mW / 30mm ) ]  $\times$  [  $\sqrt{2.41\text{GHz}}$  ] = 2.9

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.***