

## Standalone SAR test exclusion considerations(2402~2427MHz)

August 19, 2015

- Transmitting frequency = 2480 MHz
- Min. test separation distance = 5 mm
- Max. power with turn-up tolerance = -1.00 dBm = 0.79 mW
- Typical Power: -2.00 dBm ± 1.00 dB
- Measured Average Power: -1.11 dBm

**Step 1) SAR test exclusion thresholds for 100MHz to 6GHz at test separation distances ≤ 50 mm = **Used****

$[(\text{max. power of channel, including tune-up tolerance, mW}) / (\text{min. test separation distance, mm})] \cdot [\sqrt{f(\text{GHz})}]$

=  $[ 0.79 / 5 ] * [ \sqrt{ 2.48 } ]$

= **0.25** ≤ 3, for 1g SAR

Thus SAR for this device is not required.

**Step 2-1) SAR test exclusion thresholds for 100MHz to 1500MHz at test separation distances > 50 mm = **N/A****

$[\text{Threshold at 50 mm in step 1}) + (\text{test separation distance} - 50 \text{ mm}) \cdot (f(\text{MHz}) / 150)] \text{ mW}$

**Step 2-2) SAR test exclusion thresholds for 1500MHz to 6GHz at test separation distances > 50 mm = **N/A****

$[\text{Threshold at 50 mm in step 1}) + (\text{test separation distance} - 50 \text{ mm}) \cdot 10] \text{ mW}$

## Standalone SAR test exclusion considerations(2428~2454MHz)

August 19, 2015

- Transmitting frequency = 2480 MHz
- Min. test separation distance = 5 mm
- Max. power with turn-up tolerance = 0.50 dBm = 1.12 mW
- Typical Power: -0.50 dBm ± 1.00 dB
- Measured Average Power: 0.38 dBm

**Step 1) SAR test exclusion thresholds for 100MHz to 6GHz at test separation distances ≤ 50 mm = **Used****

$[(\text{max. power of channel, including tune-up tolerance, mW}) / (\text{min. test separation distance, mm})] \cdot [\sqrt{f(\text{GHz})}]$

=  $[ 1.12 / 5 ] * [ \sqrt{ 2.48 } ]$

= **0.35** ≤ 3, for 1g SAR

Thus SAR for this device is not required.

**Step 2-1) SAR test exclusion thresholds for 100MHz to 1500MHz at test separation distances > 50 mm = **N/A****

$[\text{Threshold at 50 mm in step 1}) + (\text{test separation distance} - 50 \text{ mm}) \cdot (f(\text{MHz}) / 150)] \text{ mW}$

**Step 2-2) SAR test exclusion thresholds for 1500MHz to 6GHz at test separation distances > 50 mm = **N/A****

$[\text{Threshold at 50 mm in step 1}) + (\text{test separation distance} - 50 \text{ mm}) \cdot 10] \text{ mW}$

## Standalone SAR test exclusion considerations(2455~2480MHz)

August 19, 2015

- Transmitting frequency = 2480 MHz
- Min. test separation distance = 5 mm
- Max. power with turn-up tolerance = 1.00 dBm = 1.26 mW
- Typical Power: 0.00 dBm ± 1.00 dB
- Measured Average Power: 0.89 dBm

**Step 1) SAR test exclusion thresholds for 100MHz to 6GHz at test separation distances ≤ 50 mm = **Used****

$[(\text{max. power of channel, including tune-up tolerance, mW}) / (\text{min. test separation distance, mm})] \cdot [\sqrt{f(\text{GHz})}]$

=  $[ 1.26 / 5 ] \cdot [ \sqrt{ 2.48 } ]$

= **0.40** ≤ 3, for 1g SAR

Thus SAR for this device is not required.

**Step 2-1) SAR test exclusion thresholds for 100MHz to 1500MHz at test separation distances > 50 mm = **N/A****

$[\text{Threshold at 50 mm in step 1}) + (\text{test separation distance} - 50 \text{ mm}) \cdot (f(\text{MHz}) / 150)] \text{ mW}$

**Step 2-2) SAR test exclusion thresholds for 1500MHz to 6GHz at test separation distances > 50 mm = **N/A****

$[\text{Threshold at 50 mm in step 1}) + (\text{test separation distance} - 50 \text{ mm}) \cdot 10] \text{ mW}$