

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 $\pm$ **1.00** dB
 Measured Average Power: **-1.11** dBm

Step 1) SAR test exclusion thresholds for 100MHz to 6GHz at test separationn distances $\leq$ 50 mm = **Used**

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

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

= **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 separationn 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 separationn 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 separationn distances ≤ 50 mm = **Used**

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

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

= **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 separationn 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 separationn 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 separationn 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 separationn 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 separationn distances > 50 mm = **N/A**

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