# RF EXPOSURE EVALUATION METHOD

## FCC ID：XHWEGQ307

**SAR Test Exclusion Thresholds for 100 MHz － 6 GHz and ≤ 50 mm**

The 1-g and 10-g SAR test exclusion thresholds for 100 MHz to 6 GHz at test separation distances ≤ 50 mm are determined by:

[(max. power of channel, including tune-up tolerance, mW)/(min. test separation distance, mm)] · [√f(GHz)] ≤ 3.0 for 1-g SAR and ≤ 7.5 for 10-g extremity SAR,where

f(GHz) is the RF channel transmit frequency in GHz

Power and distance are rounded to the nearest mW and mm before calculation

The result is rounded to one decimal place for comparison

The test exclusions are applicable only when the minimum test separation distance is ≤ 50 mm and for transmission frequencies between 100 MHz and 6 GHz. When the minimum test separation distance is < 5 mm, a distance of 5 mm is applied to determine SAR test exclusion.

Maximum measured transmitter power.

| Test Channe | Frequency | Maximum Conducted Output Power(PK) | Maximum Conducted Output Power(AV) | Maximum Conducted Output Power(AV) |
|---|---|---|---|---|
| | (MHz) | (dBm) | (dBm) | mW |
| TX 802.11b Mode | | | | |
| CH01 | 2412 | 14.56 | 9.16 | 8.24 |
| CH06 | 2437 | 14.67 | 9.21 | 8.34 |
| CH11 | 2462 | 14.54 | 9.15 | 8.22 |
| TX 802.11g Mode | | | | |
| CH01 | 2412 | 12.49 | 8.36 | 6.85 |
| CH06 | 2437 | 12.57 | 8.41 | 6.93 |
| CH11 | 2462 | 12.58 | 8.43 | 6.97 |
| TX 802.11n Mode | | | | |
| CH01 | 2412 | 11.37 | 8.28 | 6.73 |
| CH06 | 2437 | 11.42 | 8.31 | 6.78 |
| CH11 | 2462 | 11.46 | 8.37 | 6.87 |

Remark: The best case gain of the antenna is 1.0dBi.

1.0dBi logarithmic terms convert to numeric result is nearly 1.26

**IEEE 802.11b: CH01**

[(max. power of channel, including tune-up tolerance, mW)/(min. test separation distance,mm)] · [√f(GHz)]= 8.24/5*√2.412=2.56≤3.0

**IEEE 802.11b: CH06**

[(max. power of channel, including tune-up tolerance, mW)/(min. test separation distance,mm)] · [√f(GHz)]= 8.34/5*√2.437=2.60≤3.0

**IEEE 802.11b: CH11**

[(max. power of channel, including tune-up tolerance, mW)/(min. test separation distance,mm)] · [$\sqrt{f(GHz)}$]= 8.22/5* $\sqrt{2.462}$=2.58≤3.0

**IEEE 802.11g: CH01**

[(max. power of channel, including tune-up tolerance, mW)/(min. test separation distance,mm)] · [$\sqrt{f(GHz)}$]= 6.85/5* $\sqrt{2.412}$=2.13≤3.0

**IEEE 802.11g: CH06**

[(max. power of channel, including tune-up tolerance, mW)/(min. test separation distance,mm)] · [$\sqrt{f(GHz)}$]= 6.93/5* $\sqrt{2.437}$=2.16≤3.0

**IEEE 802.11g: CH11**

[(max. power of channel, including tune-up tolerance, mW)/(min. test separation distance,mm)] · [$\sqrt{f(GHz)}$]= 6.97/5* $\sqrt{2.462}$=2.19≤3.0

**IEEE 802.11n-HT20: CH01**

[(max. power of channel, including tune-up tolerance, mW)/(min. test separation distance,mm)] · [$\sqrt{f(GHz)}$]= 6.73/5* $\sqrt{2.412}$=2.09≤3.0

**IEEE 802.11 n-HT20: CH06**

[(max. power of channel, including tune-up tolerance, mW)/(min. test separation distance,mm)] · [$\sqrt{f(GHz)}$]= 6.78/5* $\sqrt{2.437}$=2.12≤3.0

**IEEE 802.11 n-HT20: CH11**

[(max. power of channel, including tune-up tolerance, mW)/(min. test separation distance,mm)] · [$\sqrt{f(GHz)}$]= 6.87/5* $\sqrt{2.462}$=2.16≤3.0


Threshold at which no SAR required is ≤ 3.0 for 1-g SAR, Separation distance is 5mm.


**Conclusion:** No SAR is required.