

## 7.10 SAR Test Exclusion

### 7.10.1 Maximum Output Power (Average)

Mode	Ch#	Frequency (MHz)	Average Power (dBm)	
			Measured	Spec. Max.
Bluetooth	0	2402	6.61	8.0
	39	2441	7.64	
	78	2480	7.89	

Power measurement is required for the transmission mode configuration with the highest maximum output power specified for production units. (Bluetooth configurations are considered separately.)

- When the same highest maximum output power specification applies to multiple transmission modes, the largest channel bandwidth configuration with the lowest order modulation and lowest data rate is measured.
- When the same highest maximum output power is specified for multiple largest channel bandwidth configurations with the same lowest order modulation or lowest order modulation and lowest data rate, power measurement is required for all equivalent Bluetooth configurations with the same maximum output power.

### 7.10.2 Standalone SAR Test Exclusion Considerations (KDB 447498 D01)

The 1 g SAR test exclusion thresholds for 100 MHz to 6 GHz at *test separation distances*  $\leq 50$  mm are determined by;

$$[(\text{max. power of channel, including tune-up tolerance, mW}) / (\text{min. test separation distance, mm})] \cdot [\sqrt{f_{\text{(GHz)}}}] \leq 3.0, \text{ where}$$

- $f_{\text{(GHz)}}$  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.
- When the minimum test separation distance is  $< 5$  mm, a distance of 5 mm is applied.

#### ***SAR exclusion calculations for antenna $\leq 50$ mm from the user***

Band	Freq. (MHz)	Max. Power		Distance (mm)	Threshold	Test Exclusion
		(dBm)	(mW)			
Bluetooth	2480	8.0	6	$< 5$	1.9	YES

The minimum user separation distance was assumed to be 0 mm for the purpose of the SAR exclusion calculations.

#### **Conclusion:**

The device qualifies for the Standalone SAR test exclusion because the computed value is  $< 3$ .