SAR Exclusion Evaluation

FCC SAR Test Exclusion Thresholds (FCC KDB Publication 447498 D01 v06)**:**

For   100 MHz ≤ f ≤ 6 GHz   and d_{min} ≤ 50 mm:

$$\frac{P_{max}}{d_{min}} \cdot [\sqrt{f_{(GHz)}}] \quad \leq 3.0 \quad \text{for 1-g SAR, and}$$

$$\leq 7.5 \quad \text{for 10-g extremity SAR}$$

where P_{max} = max. power of channel in mW
   d_{min} = minimum test separation distance in mm
   f   = RF channel transmit frequency

Calculation:

BLE and IEC 802.15.4 transmitters do not transmit simultaneously.

Type of TX	Frequency, f (GHz)	Minimum Separation Distance, d_{min} (mm)	Power*, P_{max} (dBm eirp)	Peak Antenna Gain (dBi)	Power, P_{max} (dBm cond.)	Power, P_{max} (mW cond.)	(P_{max}/ d_{min})* SQRT(f)	SAR Test Exclusion Threadhold (Extremity)	Result
BLE	2.442	5	14.17	2	12.17	16.48	5.15	7.5	Compliant
801.15.4	2.440	5	10.98	2	8.98	7.91	2.47	7.5	Compliant

*: data was taken from Intertek 104363035BOX-003 test report

Evaluation Results, FCC: **Complies**