

*** RF Exposure**

1. Regulation

According to §15.247(i), systems operating under the provisions of this section shall be operated in a manner that ensures that the public is not exposed to radio frequency energy levels in excess of the Commission's guidelines. See § 1.1307(b)(1) of this Chapter.

KDB447498 was used as the guidance.

According to §1.1310 and §2.1093 RF exposure is calculated.

1.1 Result

Mode	Test frequency (GHz)	Conducted output power (dBm)	Conducted output power (mW)	Min. test separation distance (mm)	SAR test exclusion thresholds ≤ 7.5 for 10g SAR
Bluetooth Low Energy	2 480	0.00	1.00	5.00	0.31
Bluetooth	2 480	-2.00	0.63	5.00	0.20

- SAR test exclusion thresholds

$$= [(max. power of channel, including tune-up tolerance, mW)/(min. test separation distance, mm)] \cdot [\sqrt{f(GHz)}]$$
 Bluetooth Low Energy = $[(1.00)/(5)] \cdot [\sqrt{2.480}] = 0.31$
 Bluetooth = $[(0.63)/(5)] \cdot [\sqrt{2.480}] = 0.20$

- Bluetooth

Mode	Target power [dBm]	Tolerance [dB]	Max tuneup power [dBm]	Average Power [dBm]
Bluetooth_GFSK Lowest	-4.00	±2.00	-2.00	-2.07
Bluetooth_GFSK Middle	-4.00	±2.00	-2.00	-3.97
Bluetooth_GFSK Highest	-4.00	±2.00	-2.00	-3.52
Bluetooth_π/4DQPSK Lowest	-6.00	±2.00	-4.00	-4.30
Bluetooth_π/4DQPSK Middle	-6.00	±2.00	-4.00	-5.92
Bluetooth_π/4DQPSK Highest	-6.00	±2.00	-4.00	-5.51
Bluetooth_8DPSK Lowest	-6.00	±2.00	-4.00	-4.30
Bluetooth_8DPSK Middle	-6.00	±2.00	-4.00	-5.92
Bluetooth_8DPSK Highest	-6.00	±2.00	-4.00	-5.45

- Bluetooth Low Energy

Mode	Target power [dBm]	Tolerance [dB]	Max tuneup power [dBm]	Average Power [dBm]
Bluetooth Low Energy_Lowest	-2.00	±2.00	0.00	-0.53
Bluetooth Low Energy_Middle	-2.00	±2.00	0.00	-2.73
Bluetooth Low Energy_Highest	-2.00	±2.00	0.00	-1.50

1.2 RF Exposure Compliance Issue

Therefore, EUT is not required the SAR Evaluation.