



America

Certification Exhibit

FCC ID: P2SBELTCLIPT3

FCC Rule Part: 47 CFR Part 2.1093

Project Number: 72129069

Manufacturer: Neptune Technology Group Inc.
Model: BCT3

RF Exposure

General Information:

Applicant: Neptune Technology Group Inc.
Environment: General Population/Uncontrolled Exposure
Exposure Conditions: Portable

The EUT contains a 900 MHz radio and Bluetooth radio; both of which can operate simultaneously.

900 MHz *Radio* -

Minimum Test Separation Distance: 5 mm
Highest Operating Frequency: 911.0815 MHz
Antenna Type: Partially Folded Dipole
Antenna Gain: -2 dBi
Maximum Transmitter Conducted Power: 18.31 dBm, 67.76 mW
Maximum Transmitter EIRP: 16.31 dBm, 42.76 mW
Duty Factor: 2.73% (See Duty Factor Determination below)
Source-based Time-averaged Maximum Conducted Power: **2.67 dBm, 1.85 mW**

Bluetooth *Radio* -

Minimum Test Separation Distance: See Figure A1 below. 0.972 inches = 24.69 mm
Highest Operating Frequency: 2480 MHz
Antenna Type: Chip Antenna
Antenna Gain: -0.5 dBi
Maximum Transmitter Conducted Power: 8.14 dBm, 6.52 mW
Maximum Transmitter EIRP: 7.64 dBm, 5.81 mW

Justification for SAR Test Exclusion:**Standalone SAR Test Exclusion:**

Per KDB 447498 D01 General RF Exposure Guidance v06, 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:

$$\left[\frac{(\text{max. power of channel, including tune-up tolerance, mW})}{(\text{min. test separation distance, mm})} \right] \cdot [\sqrt{f(\text{GHz})}] \leq 3.0 \text{ for 1-g SAR and } \leq 7.5 \text{ for 10-g extremity SAR}$$

900 MHz *Radio* -

$$= (1.85 / 5) \cdot (\sqrt{0.9110815})$$
$$= 0.37 \cdot 0.955$$
$$= 0.353$$
0.353 < 3.0

Bluetooth *Radio* -

$$= (6.52 / 25) \cdot (\sqrt{2.480})$$
$$= 0.261 \cdot 1.575$$
$$= 0.257$$
0.411 < 3.0

Based on the results above, the unit meets SAR test exclusion requirements.

Duty Factor Determination

For purposes of determining specific absorption rate (SAR) of RF to the human user, the BCT3's R900 Transmitter produces an intermittent transmission. The R900 Transmitter is activated by the user pushing a button on the user's computer or tablet or phone, which is tethered to the BCT3 via Bluetooth, either Bluetooth Classic or Bluetooth Low Energy, but never both simultaneously. The R900 Transmitter cannot self-activate, and cannot be activated by any buttons on the BCT device itself.

For human specific absorption rate (SAR) and maximum permissible RF exposure (MPE) purposes, the transmitter is active for 0.546114 seconds (on both channels) out of a possible 20-second software-enforced time period, yielding a duty cycle of 0.0273057, or 2.73%.

Simultaneous Transmission SAR Test Exclusion:

When the sum of 1-g or 10-g SAR of all simultaneously transmitting antennas in an operating mode and exposure condition combination is within the SAR limit, SAR test exclusion applies to that simultaneous transmission configuration.

When the standalone SAR test exclusion is applied to an antenna that transmits simultaneously with other antennas, the standalone SAR must be estimated according to the following to determine simultaneous transmission SAR test exclusion:

*(max. power of channel, including tune-up tolerance, mW)/(min. test separation distance, mm)]·[$\sqrt{f(\text{GHz})/x}$] W/kg for test separation distances ≤ 50 mm;
where $x = 7.5$ for 1-g SAR, and $x = 18.75$ for 10-g SAR.*

900MHz *Radio* -

$$= (1.85 \text{ mW} / 5 \text{ mm}) * [(\sqrt{0.9110815 \text{ GHz}}) / 7.5] = 0.047 \text{ W/kg}$$

Bluetooth *Radio* -

$$= (6.52 \text{ mW} / 25 \text{ mm}) * [(\sqrt{2.480 \text{ GHz}}) / 7.5] = 0.055 \text{ W/kg}$$

Sum of 1-g Estimated SAR = 0.102 W/kg < 1.6 W/kg

Simultaneous transmission SAR test exclusion is applied.

Appendix A

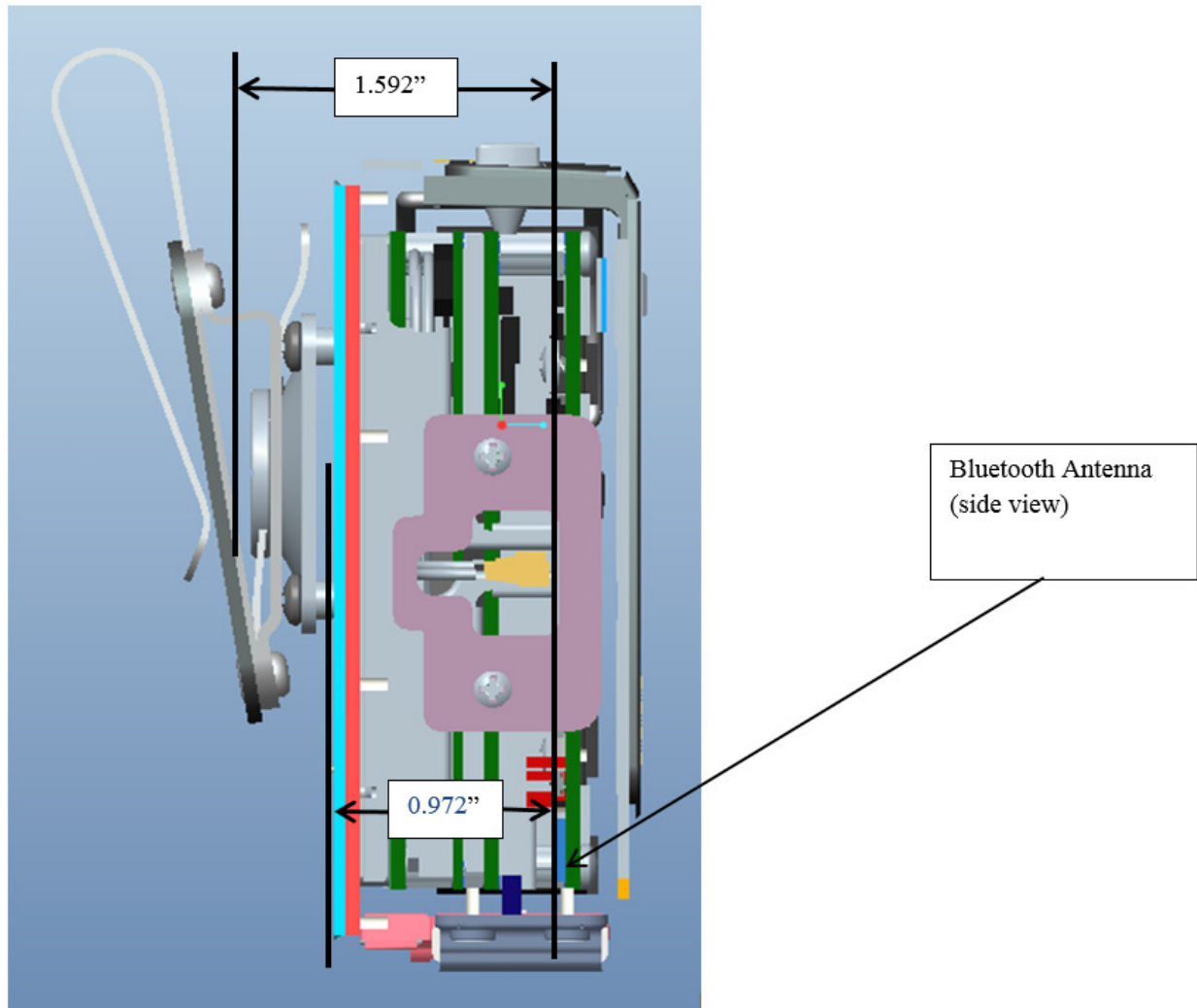


Figure A1: Location of Bluetooth antenna with respect to user