## **Analysis Report**

The Equipment Under Test (EUT) is the Bluetooth BLE transceiver of MoCap Pro Fidelty glove, which is a wearable garment that captures finger motion by reading deformation data from embedded stretchable capacitance sensors. The EUT is powered by internal rechargeable LiPo Battery (3.4VDC - 4.2VDC). This battery can be charged by USB port (5VDC).

Antenna Type: Internal integral antenna Antenna Gain: 2.8 dBi Maximum allowed field strength of production tolerance range: 77.2 dBµV/m at 3m to 99.2 dBµV/m at 3m

According to the KDB 447498 D04 Interim General RF Exposure Guidance v01

Based on the Maximum allowed average field strength of production tolerance was  $99.2dB\mu V/m$  at 3m.

Thus, it below calculated field strength according to minimum SAR exclusion threshold level as follows:

For mobile devices that are not exempt per Table B.1 [Table 1 of § 1.1307(b)(1)(i)(C)] at distances from 20 cm to 40 cm and in 0.3 GHz to 6 GHz, evaluation of compliance with the exposure limits in § 1.1310 is necessary if the ERP of the device is greater than *ERP*<sub>20cm</sub> in Formula (B.1) [repeated from § 2.1091(c)(1) and § 1.1307(b)(1)(i)(B)].

$$P_{\rm th} (\rm mW) = ERP_{20 \,\rm cm} (\rm mW) = \begin{cases} 2040f & 0.3 \,\rm GHz \le f < 1.5 \,\rm GHz \\ \\ 3060 & 1.5 \,\rm GHz \le f \le 6 \,\rm GHz \end{cases}$$
(B.1)

If the ERP is not easily obtained, then the available maximum time-averaged power may be used (i.e., without consideration of ERP only if the physical dimensions of the radiating structure(s) do not exceed the electrical length of  $\lambda/4$  or if the antenna gain is less than that of a half-wave dipole.

$$P_{\rm th} \,({\rm mW}) = \begin{cases} ERP_{20\,\,{\rm cm}} (d/20\,\,{\rm cm})^x & d \le 20\,\,{\rm cm} \\ \\ ERP_{20\,\,{\rm cm}} & 20\,\,{\rm cm} < d \le 40\,\,{\rm cm} \end{cases}$$
(B.2)

where

$$x = -\log_{10}\left(\frac{60}{ERP_{20} \operatorname{cm}\sqrt{f}}\right)$$

and f is in GHz, d is the separation distance (cm), and  $ERP_{20cm}$  is per Formula (B.1). The example values shown in Table B.2 are for illustration only.

	Distance (mm)										
		5	10	15	20	25	30	35	40	45	50
Frequency (MHz)	300	39	65	88	110	129	148	166	184	201	217
	450	22	44	67	89	112	135	158	180	203	226
	835	9	25	44	66	90	116	145	175	207	240
	1900	3	12	26	44	66	92	122	157	195	236
	2450	3	10	22	38	59	83	111	143	179	219
	3600	2	8	18	32	49	71	96	125	158	195
	5800	1	6	14	25	40	58	80	106	136	169

Table B.2-Example Power Thresholds (mW)

The worst case of SAR Exclusion Threshold Level at 2.48GHz with distance 5mm: = 2.717mW

According to the KDB 412172 D01: EIRP = [(FS\*D) ^2\*1000 / 30]

Calculated Field Strength for 2.717mW is 99.6dBuV/m @3m

Since maximum average field strength plus production tolerance < = 99.6dBuV/m @3m and antenna gain is > = 0.0dBi, it is concluded that maximum Conducted Power and Field Strength are well below the SAR Exclusion threshold level, so the EUT is considered to comply with SAR requirement without testing.