Analysis Report

The 6.0 is a Electronic Price Tag. The Equipment Under Test (EUT) operates at frequency range of 2402MHz to 2480MHz. The EUT is powered by 3VDC (3.0-3.3V standard CR2032 battery).

Antenna Type: Internal, Integral, Inverted-L PCB Antenna
Peak Antenna Gain: -2.21 dBi
Average EIRP Radiated Power Range: -5dBm to -1dBm (90.2dBµV/m@3m to 94.2dBµV/m@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 94.2dBµV/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_{20cm} in Formula (B.1) [repeated from § 2.1091(c)(1) and § 1.1307(b)(1)(i)(B)].

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

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 λ/4 or if the antenna gain is less than that of a half-wave dipole.

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

where

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

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

Table B.2—Example Power Thresholds (mW)

Frequency (MHz)	Distance (mm)										
	5	10	15	20	25	30	35	40	45	50
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

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 with antenna gain -2.21dBi is 97.4dBuV/m @3m (average)

Since maximum average field strength plus production tolerance < = 97.4dBuV/m @3m, 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.