RF Exposure Evaluation

REQUIREMENT

KDB 447498 D04 Interim General RF Exposure Guidance v01

Appendix B Exemptions for Single RF Sources

B.3 MPE-based Exemption and B.4 SAR-based Exemption:

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

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

where

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

f is in GHz, d is the separation distance (cm), and ERP20cm is per Formula (B.1).

TEST RESULT

Radio Type	Frequency (MHz)	Conducted Power(dBm)	Conducted Maximum Tune-up(dBm)	Ant Gain(dBi)	Maximum ERP/EIRP (dBm)	Maximum ERP/EIRP (mW)	Minimum Separation Distance(mm)	Pth* (mW)
Bluetooth	2402	1.85	1.90	2.5	4.4	2.75	0	2.788

Note:

- 1) The safety distance for body exposure assessment is 0mm
- 2) *: when 10-g extremity SAR applies, SAR test exemption may be considered by applying a factor of 2.5 to the SAR-based exemption thresholds.