

Radio frequency radiation exposure evaluation: portable devices

RESULT :

Pass

Test Specification

Test item	: SureSmile VPro
Identification / Type No.	: V18100
FCC ID	: TF3-91077
IC	: 4681B-91077
Test standard	: CFR47 FCC Part 2: Section 2.1093 FCC KDB Publication 447498 D04 RSS-102 Issue 5

Calculation Method according to KDB 447498 D04

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

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 ERP20cm is per Formula (B.1). The example values shown in Table B.2 are for illustration only.

FCC Measurement Record:

D=5mm, f=2.44GHz, Pth= 2.7528mW (this is a limit only applicable for ERP.).
 Conducted power= -0.17dBm
 ERP=eirp-2.15=-0.17dBm+2dBi-2.15= -0.32dBm= 0.9290dBm.
 0.9290<2.7528, compliance.

Test Mode	Conducted Power (dBm)	E.I.R.P (dBm)	E.I.R.P (mW)	Minimum Separation Distances (mm)	Limit (mW)
BLE	-0.17	1.83	1.52	5	4

For ISED, output power level shall be the higher of the maximum conducted or effective isotropic radiated power (e.i.r.p.) source-based, time-averaged output power.

Hence the EUT is excluded from SAR evaluation if the distance between the antenna and the human body is equal or above one of the minimum distances depicted in the tables above, depending on the wireless protocol in use, in accordance with FCC KDB Publication 447498 D04 and RSS-102 Issue 5.