

Radio frequency radiation exposure evaluation: portable devices

RESULT :

Pass

Test Specification

Test item	: Guitar controller
Identification / Type No.	: CK25GX
FCC ID	: 2BAXLCK25GX
IC	: 30307-CK25GX
Test standard	: CFR47 FCC Part 2: Section 2.1093 FCC KDB Publication 447498 D04 RSS-102 Issue 6

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:

For 2.4G SRD EIRP= 93.44 - 95.2 = -1.76dBm

ERP= EIRP – 2.15 = -3.91dBm

Test Mode	Conducted Power (dBm)	ERP (dBm)	ERP (mW)	Minimum Separation Distances (mm)	Limit (mW)
BLE	-2.85	-2.37	0.579	5	2.72
EDR	-0.13	0.35	1.084	5	2.72
2.4G SRD	----	-3.91	0.406	5	2.72

ISED Measurement Record:

For 2.4G SRD EIRP= 93.19 - 95.2 = -2.01dBm

Test Mode	E.I.R.P (dBm)	E.I.R.P (mW)	Minimum Separation Distances (mm)	Limit (mW)
BLE	-0.22	0.951	5	3
EDR	2.50	1.778	5	3
2.4G SRD	-1.76	0.667	5	3

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 6.