

Test report No:
NIE: 71139RAN.002

Assessment report

RF EXPOSURE REPORT ACCORDING TO

FCC 47 CFR Part 2.1093
FCC 47 CFR Part 1.1307

(*) Identification of item under evaluation	Bluetooth enabled blood glucose meter.
(*) Trademark	OneTouch
(*) Model and /or type reference	Verio Reflect
(*) Other identification of the product	HW version: rev E SW version: 4.1.2 FCC ID: 2ACT5-K01 IC: 12202A-K01
(*) Features	Bluetooth LE
(*) Manufacturer	Lifescan Europe GmbH Gubelstrasse 34, 6300 Zug, Switzerland
Test method requested, standard	FCC 47 CFR Part 2.1093. Radiofrequency radiation exposure evaluation: portable devices. FCC 47 CFR Part 1.1307: Actions that may have a significant environmental effect, for which Environmental Assessments (EAs) must be prepared.
Summary	IN COMPLIANCE
Approved by (name / position & signature)	Miguel Lacave Antennas Lab. Manager
Date of issue	2022-12-23
Report template No	FAN24_02 (*) "Data provided by the client"

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Data provided by the client

The following data has been provided by the client:

1. Information relating to the description of the sample ("Identification of the item under evaluation", "Trademark", "Model and/or type reference", "General description of the device", "Other identification of the product").
2. Maximum antenna gain and use distance information.
3. The device under evaluation consists of a Bluetooth enabled blood glucose meter for measuring the levels of Glucose in a patient's blood. Bluetooth is used to transfer the patients result(s) to their smart device.

DEKRA Testing and Certification S.A.U. declines any responsibility with respect to the information provided by the client and that may affect the validity of results.

Identification of the client

Lifescan Scotland Ltd
Beechwood Park North, Inverness, IV2 3ED, UK

Document history

Report number	Date	Description
71139RAN.002	2022-08-09	First release
71139RAN.002A1	2022-12-23	Second release. Added FCC ID and IC.

Appendix A: FCC RF Exposure assessment result

General description of the device under evaluation

The device under evaluation consists of a Bluetooth enabled blood glucose meter.

According to the manufacturer, during its normal use, the separation distance between the radiating structures of the device and nearby users will be greater than 0 cm. In order to perform the assessment a conservative evaluation distance of 0 cm (5mm applied for the evaluation) has been used.

The equipment specifications for each supported technology are shown in Table 1. Values corresponding to antenna gain have been declared by the manufacturer. Values corresponding to output power have been measured and stated into DEKRA Testing and Certification, S.A.U. test report num. 71139RRF.002.

Technology / Mode	Band	Frequency (MHz)	Maximum Conducted Output Power (dBm)	Antenna peak gain (dBi)	Maximum E.R.P. (dBm)	Maximum E.R.P. (mW)
Bluetooth	2.4 GHz	2400 - 2483.5	-7.00	2.14	-7.01	0.20

Table 1: Equipment specifications

Evaluation Results

The evaluation according to the minimum intended use distance of 0 mm (5mm applied for the evaluation) will be as follow:

Technology / Mode	Band	Frequency (MHz)	Distance (cm)	Maximum Conducted Power (mW)	§1.1307(b)(3).i.(A) Exposure Limit (mW)	Verdict
Bluetooth	2.4 GHz	2400 - 2483.5	0.50	0.20	1.00	Pass

Table 2: FCC Evaluation Result

The computed value(s) are below the limit(s), so according to KDB 447498 D01 – General RF Exposure Guidance, these modes meet the RF Exposure test exemption for single source.

Appendix B: FCC RF Exposure information

RF Exposure determination of exemption

According to FCC 47 CFR §1.1307 (b)(3) Determination of exemption:

(i) For single RF sources (i.e., any single fixed RF source, mobile device, or portable device, as defined in paragraph (b)(2), a single RF source is exempt if:

(A) The available maximum time-averaged power is no more than 1 mW, regardless of separation distance. This exemption may not be used in conjunction with other exemption criteria other than those in paragraph (b)(3)(ii)(A) of this section. Medical implant devices may only use this exemption and that in paragraph (b)(3)(ii)(A);

(B) Or the available maximum time-averaged power or effective radiated power (ERP), whichever is greater, is less than or equal to the threshold P_{th} (mW) described in the following formula. This method shall only be used at separation distances (cm) from 0.5 centimeters to 40 centimeters and at frequencies from 0.3 GHz to 6 GHz (inclusive). P_{th} is given by:

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

Where

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

and

$$ERP_{20 \text{ cm}} \text{ (mW)} = \begin{cases} 2040f & 0.3 \text{ GHz} \leq f < 1.5 \text{ GHz} \\ 3060 & 1.5 \text{ GHz} \leq f \leq 6 \text{ GHz} \end{cases}$$

d = the separation distance (cm);

(C) Or using Table 1 and the minimum separation distance (R in meters) from the body of a nearby person for the frequency (f in MHz) at which the source operates, the ERP (watts) is no more than the calculated value prescribed for that frequency. For the exemption in Table 1 to apply, R must be at least $\lambda/2\pi$, where λ is the free-space operating wavelength in meters. If the ERP of a single RF source is not easily obtained, then the available maximum time-averaged power may be used in lieu of ERP 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 (1.64 linear value).

TABLE 1 TO §1.1307(b)(3)(i)(C)—SINGLE RF SOURCES SUBJECT TO ROUTINE ENVIRONMENTAL EVALUATION

RF Source frequency (MHz)	Threshold ERP (watts)
0.3-1.34	$1,920 R^2$.
1.34-30	$3,450 R^2/f^2$.
30-300	$3.83 R^2$.
300-1,500	$0.0128 R^2 f$.
1,500-100,000	$19.2 R^2$.