

RF Exposure Report

Test Report Number HID-26022631-LC-FCC-IC-MPE-Rev1.0

FCC ID JQ6-TRC3
IC 2236B-TRC3

Applicant HID Global Corporation

Applicant Address 611 Center Ridge Drive, Austin, TX, 78753, USA

Product Name Tag Reader Controller 3 (TRC3); Tag Reader 3 (TR3)

Model Number BVBFTRC3, BVBFTR3

Date of Receipt 03/24/2026

Date of Test 04/06/2026- 05/01/2026

Report Issue Date 07/01/2026

Test Standards 47 CFR §1.1307(b), 47 CFR §1.1310

RSS-102 Issue 6 Dec 2023

Test Result **PASS**



Issued by:

Vista Compliance Laboratories

1261 Puerta Del Sol, San Clemente, CA 92673 USA

www.vista-compliance.com



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REVISION HISTORY

Report Number	Version	Description	Issued Date
HID-26022631-LC-FCC-IC-MPE	01	Initial report	05/10/2026
HID-26022631-LC-FCC-IC-MPE- Rev 1.0	Rev1.0	Update Model number to "BVBFTRC3, BVBFTR3"	07/01/2026

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1 General Information

1.1 Applicant

Applicant	HID Global Corporation
Applicant Address	611 Center Ridge Drive, Austin, TX, 78753, USA
Manufacturer	HID Global Corporation
Manufacturer Address	611 Center Ridge Drive, Austin, TX, 78753, USA

1.2 Product information

Product Name	Tag Reader Controller 3 (TRC3); Tag Reader 3 (TR3)
Product Description	RTLS data gateway
Model Number	BVBFTR3
Family Models	BVBFTRC3
Serial Number	N/A
Frequency Band	BLE: 2402-2480MHz; 433.92 MHz
Type of modulation	BLE: GFSK; 433.92 MHz: FSK
Equipment Class	DTS, DSC
Antenna Information	BLE: Internal PCB Trace antenna 1.60 dBi (max) gain External Dipole antenna with RP-SMA connector: 1.5 dBi (max) gain 433.92MHz: Internal Chip antenna: -12.96 dBi gain (max) External Dipole antenna with RP-SMA connector: 3.3 dBi gain (max) gain
Clock Frequencies	N/A
Input Power	12VDC, 200 mA (Ethernet) PoE: IEEE 802.3af
Power Adapter Manufacturer/Model	V-Infinity EPSA120200U
Power Adapter SN	N/A
Hardware version	N/A
Software version	N/A
Additional Info	- The TR3 is a gateway device designed for use within HID RTLS Solutions. - The unit can be powered either through a 12V DC supply or via Power over Ethernet (PoE). - External antenna connectors are available as an option to provide greater sensitivity for BLE and 433 MHz receivers.

1.3 Test standard and method

Test standard	47 CFR §1.1307(b), 47 CFR §1.1310 RSS-102 Issue 6 Dec 2023
Test method	47 CFR §1.1307(b), 47 CFR §1.1310 RSS-102 Issue 6 Dec 2023

2 Test Site Information

Lab performing tests	Vista Laboratories, Inc.
Lab Address	1261 Puerta Del Sol, San Clemente, CA 92673 USA
Phone Number	+1 (949) 393-1123
Website	www.vista-compliance.com

3 FCC RF Exposure Evaluation

3.1 Limits for Maximum Permissible Exposure (MPE)

Frequency Range (MHz)	Electric Field Strength (V/m)	Magnetic Field Strength (A/m)	Power Density (mW/cm ²)	Average Time (minutes)
Limits For General Population / Uncontrolled Exposure				
0.3-1.34	614	1.63	(100)*	30
1.34-30	824/f	2.19/f	(180/f ²)*	30
30-300	27.5	0.073	0.2	30
300-1500	...	...	f/1500	30
1500-100,000	...	...	1.0	30

f = Frequency in MHz; *Plane-wave equivalent power density

3.2 MPE Calculation Formula

Equation: $S = PG / 4\pi R^2$ or $R = \sqrt{PG / 4\pi S}$

Where, S = Power Density

P = Power Input to Antenna

G = Antenna Gain

R = distance to the center of radiated antenna in cm

3.3 Classification

The antenna of this product, under normal use condition, is at least 20cm away from the body of the user. So, this device is classified as Mobile Device.

3.4 Antenna Gain

Please see section 1.2 product information for antenna gain details.

3.5 FCC RF Exposure Evaluation Results

Embedded antenna

Band (MHz)	Max Output Power (dBm)	Antenna Gain (dBi)	Separation distance (cm)	Power Density (mW/cm ²)	MPE Limit (mW/cm ²)
BLE	11.313	1.60	20	0.00389	1

Band (MHz)	Maximum E-Field (dBuV/m@3m)	EIRP (dBm)	Antenna Gain (dBi)	Separation distance (cm)	Power Density (mW/cm ²)	MPE Limit (mW/cm ²)
433.92	88.4	-6.83	-12.96	20	0.00004	0.28928

Simultaneous Transmission Ratio:

$$\text{BLE} + 433.92\text{MHz} = (0.00389/1) + (0.00004/0.28928) = 0.0040 < 1$$

The above results show that the device complies with the FCC MPE requirement.

External antenna

Band (MHz)	Max Output Power (dBm)	Antenna Gain (dBi)	Separation distance (cm)	Power Density (mW/cm ²)	MPE Limit (mW/cm ²)
BLE	11.313	1.5	20	0.00380	1

Band (MHz)	Maximum E-Field (dBuV/m@3m)	EIRP (dBm)	Antenna Gain (dBi)	Separation distance (cm)	Power Density (mW/cm ²)	MPE Limit (mW/cm ²)
433.92	88.2	-7.03	3.3	20	0.00004	0.28928

Simultaneous Transmission Ratio:

$$\text{BLE} + 433.92\text{MHz} = (0.00380/1) + (0.00004/0.28928) = 0.00394 < 1$$

The above results show that the device complies with the FCC MPE requirement.

4 ISED RF Exposure Evaluation

4.1 Limits for Maximum Permissible Exposure (MPE)

Per RSS-102 issue 6, section 2.5.2 as reproduced below:

2.5.2 Exemption from Routine Evaluation Limits – RF Exposure Evaluation

RF exposure evaluation is required if the separation distance between the user and/or bystander and the device's radiating element is greater than 20 cm, except when the device operates as follows:

- Below 20 MHz and the source-based, time-averaged maximum e.i.r.p. of the device is equal to or less than 1 W (adjusted for tune-up tolerance);
- At or above 20 MHz and below 48 MHz and the source-based, time-averaged maximum e.i.r.p. of the device is equal to or less than $22.48/f^{0.5}W$ (adjusted for tune-up tolerance), where f is in MHz;
- At or above 48 MHz and below 300 MHz and the source-based, time-averaged maximum e.i.r.p. of the device is equal to or less than 0.6 W (adjusted for tune-up tolerance);
- At or above 300 MHz and below 6 GHz and the source-based, time-averaged maximum e.i.r.p. of the device is equal to or less than $1.31 \times 10^{-2} f^{0.6834} W$ (adjusted for tune-up tolerance), where f is in MHz;
- At or above 6 GHz and the source-based, time-averaged maximum e.i.r.p. of the device is equal to or less than 5 W (adjusted for tune-up tolerance).

In these cases, the information contained in the RF exposure technical brief may be limited to information that demonstrates how the e.i.r.p. was derived.

Frequency Range (MHz)	Electric Field Strength (V/m rms)	Magnetic Field Strength (A/m rms)	Power Density (W/m ²)	Reference Period (minutes)
Limits For General Population / Uncontrolled Exposure				
0.003-10 ²¹	83	90	-	Instantaneous*
0.1-10	-	0.73/ f	-	6**
1.1-10	87/ $f^{0.5}$	-	-	6**
10-20	27.46	0.0728	2	6
20-48	58.07/ $f^{0.25}$	0.1540/ $f^{0.25}$	8.944/ $f^{0.5}$	6
48-300	22.06	0.05852	1.291	6
300-6000	3.142 $f^{0.3417}$	0.008335 $f^{0.3417}$	0.02619 $f^{0.6834}$	6
6000-15000	61.4	0.163	10	6
15000-150000	61.4	0.163	10	616000/ $f^{1.2}$
150000-300000	0.158 $f^{0.5}$	4.21 x 10 ⁻⁴ $f^{0.5}$	6.67 x 10 ⁻⁵ f	616000/ $f^{1.2}$
Note: f is frequency in MHz. *Based on nerve stimulation (NS). ** Based on specific absorption rate (SAR).				

4.2 MPE Calculation Formula

$$P_d = (P_{out} * G) / (4 * \pi * r^2)$$

Where

P_d = power density in mW/cm²

P_{out} = output power to antenna in mW

G = gain of antenna in linear scale

π = 3.1416

R = distance between observation point and center of the radiator in cm

Exemption limit for Routine Evaluation:

$1.31 \times 10^{-2} \text{ f0.6834 W}$

4.3 Classification

The antenna of this product, under normal use condition, is at least 20cm away from the body of the user. So, this device is classified as Mobile Device.

4.4 Antenna Gain

Please see section 1.2 product information for antenna gain details.

4.5 ISED RF Exposure Exemption Evaluation Results

Embedded antenna

Band (MHz)	Max Output Power (dBm)	Antenna Gain (dBi)	Separation distance (cm)	Power Density (W/m ²)	MPE Limit (W/m ²)
BLE	11.313	1.60	20	0.03891	5.35

Band (MHz)	Maximum E-Field (dBuV/m@3m)	EIRP (dBm)	Antenna Gain (dBi)	Separation distance (cm)	Power Density (W/m ²)	MPE Limit (W/m ²)
433.92	88.4	-6.83	-12.96	20	0.0004	1.66

Simultaneous Transmission Ratio:

$$\text{BLE} + 433.92\text{MHz} = (0.03891/5.35) + (0.0004/1.66) = 0.0075 < 1$$

External antenna

Band (MHz)	Max Output Power (dBm)	Antenna Gain (dBi)	Separation distance (cm)	Power Density (W/m ²)	MPE Limit (W/m ²)
BLE	11.313	1.5	20	0.03802	5.35

Band (MHz)	Maximum E-Field (dBuV/m@3m)	EIRP (dBm)	Antenna Gain (dBi)	Separation distance (cm)	Power Density (W/m ²)	MPE Limit (W/m ²)
433.92	88.2	-7.03	3.3	20	0.0004	1.66

Simultaneous Transmission Ratio:

$$\text{BLE} + 433.92\text{MHz} = (0.03802/5.35) + (0.0004/1.66) = 0.00735 < 1$$

The above results show that the device is exempted from ISED RF exposure requirement.

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