



RF - TEST REPORT

- Human Exposure -

Type / Model Name : WRTZ-1550 RDR

Product Description : UHF RFID reader

Applicant : Checkpoint Systems Inc.

Address : 101 Wolf Dr. Thorofare

New Jersey 08086, United States

Manufacturer : Checkpoint Systems Inc.

Address : 101 Wolf Dr. Thorofare

New Jersey 08086, United States

Test Result according to the standards listed in clause 1 test standards:	POSITIVE
---	----------

Test Report No. : 80294489-01 Rev_0	16. June 2026 Date of issue
-------------------------------------	--------------------------------



Deutsche
Akkreditierungsstelle
D-PL-12030-01-00



Deutsche
Akkreditierungsstelle
D-PL-12030-01-00

Contents

1	<u>TEST STANDARDS</u>	<u>3</u>
2	<u>EQUIPMENT UNDER TEST</u>	<u>4</u>
2.1	Information provided by the Client	4
2.2	Sampling	4
2.3	Photo documentation of the EUT – see Attachment A	4
2.4	Equipment type, category	4
2.5	Short description of the equipment under test (EUT)	4
2.6	Variants of the EUT	4
2.7	Operation frequency	5
2.8	Antennas	5
2.9	Power supply system utilised	5
3	<u>TEST RESULT SUMMARY</u>	<u>6</u>
3.1	Revision history of test report	6
3.2	Final assessment	6
4	<u>TEST ENVIRONMENT</u>	<u>7</u>
4.1	Address of the test laboratory	7
4.2	Environmental conditions	7
4.3	Statement of the measurement uncertainty	7
4.4	Conformity Decision Rule	7
5	<u>HUMAN EXPOSURE</u>	<u>8</u>
5.1	Maximum permissible exposure (MPE) according to FCC	8
5.2	Field reference level exposure exemption limits (FRL) according to RSS-102	10

ATTACHMENT A as separate supplement

1 TEST STANDARDS

The tests were performed according to following standards:

FCC Rules and Regulations:

Part 1, Subpart I, Section 1.1310	Radiofrequency radiation exposure limits
Part 2, Subpart J, Section 2.1091	Radiofrequency radiation exposure evaluation: fixed devices.
KDB 447498 D01 V06	General RF Exposure Guidance

ISED Canada Rules and Regulations:

RSS-102, Issue 6	Radio Frequency (RF) Exposure Compliance of Radiocommunication Apparatus (All Frequency Bands)
------------------	---

2 EQUIPMENT UNDER TEST

2.1 Information provided by the Client

Please note, we do not take any responsibility for information provided by the client or his representative which may have an influence on the validity of the test results.

2.2 Sampling

The customer is responsible for the choice of sample. Sample configuration, start-up and operation is carried out by the customer or according to his/her instructions.

2.3 Photo documentation of the EUT – see Attachment A

2.4 Equipment type, category

RFID UHF, fixed equipment

2.5 Short description of the equipment under test (EUT)

UHF-RFID Reader WRTZ-1550 RDR is the electronics system of an Ultra High Frequency (UHF) radio frequency identification (RFID) system (typically called an interrogator or reader) which communicates with targets that are applied to or incorporated into an item. The targets (typically referred to as tags or labels) serve to identify the item to which it is attached based on a unique ID stored on the target.

Number of tested samples : 1
Serial number : 1003961203F0356508
Firmware number : 7.01_t0108.26-01-e48
HVIN : Rev. 5

FCC ID : DO4WRTZ1550
IC ID : 3356B-WRTZ1550

2.6 Variants of the EUT

There are no variants.

2.7 Operation frequency

The operating frequency is 902 MHz to 928 MHz.

Channel plan:

Channel No.	Frequency (MHZ)	Channel No.	Frequency (MHZ)	Channel No.	Frequency (MHZ)
1	902.75	21	912.75	41	922.75
2	903.25	22	913.25	42	923.25
3	903.75	23	913.75	43	923.75
4	904.25	24	914.25	44	924.25
5	904.75	25	914.75	45	924.75
6	905.25	26	915.25	46	925.25
7	905.75	27	915.75	47	925.75
8	906.25	28	916.25	48	926.25
9	906.75	29	916.75	49	926.75
10	907.25	30	917.25	50	927.25
11	907.75	31	917.75		
12	908.25	32	918.25		
13	908.75	33	918.75		
14	909.25	34	919.25		
15	909.75	35	919.75		
16	910.25	36	920.25		
17	910.75	37	920.75		
18	911.25	38	921.25		
19	911.75	39	921.75		
20	912.25	40	922.25		

Note: the marked frequencies are determined for final testing.

2.8 Antennas

The following antennas shall be used with the EUT:

Number	Characteristic	Name	Connector	Frequency band (MHz)	Gain (dBic)	Gain (dBi)
1	HPBW	Kathrein 520 10073	TNC	902 - 928	8.2	5.2
2	HPBW	Laird S9028PCL/S9028PCR	TNC	902 - 928	9.0	6.0
3	HPBW	Checkpoint A1212	SMA	902 - 928	6.5	3.5
4	HPBW	Checkpoint A1230 FCC	SMA	902 - 928	8.0	5.0
5	HPBW	Checkpoint A1266 FCC	SMA	902 - 928	8.5	5.5
6	HPBW	Checkpoint A1268 FCC	SMA	902 - 928	7.0	5.0
7	HPBW	Checkpoint A1270 FCC	SMA	902 - 928	6.5	3.5
8	HPBW	Checkpoint A1278 FCC	SMA	902 - 928	5.5	2.5
9	HPBW	Checkpoint OH2 10042405	SMA	902 - 928	9.0	6.0
10	HPBW	Jiakang 10048079	SMA	902 - 928	7.0	5.0

Note: Laird antenna was used for radiated measurements.

2.9 Power supply system utilised

Power supply voltage EUT : 12 V_{DC}

3 TEST RESULT SUMMARY

Operating in the 902 MHz – 928 MHz band:

FCC Rule Part	RSS Rule Part	Description	Result
KDB 447498, 7.1	RSS-102, 6.6	MPE / FRL	passed
KDB 447498, 4.3.1	RSS-102, 6.3	SAR exclusion consideration	not applicable ¹
KDB 447498, 7.2	RSS-102, 7.1.5	Co-location, Co-transmission	not applicable ²

Note: ¹ Not applicable, distance of user to antenna structures > 20 cm.

² Not applicable, EUT has only one transmitter.

3.1 Revision history of test report

Test report No	Rev.	Issue Date	Changes
80294489-01	0	16 June 2026	Initial test report

The test report with the highest revision number replaces the previous test reports.

3.2 Final assessment

The equipment under test fulfils the requirements cited in clause 1 test standards.

Date of receipt of test sample : acc. to storage records

Assessment commenced on : 19 May 2026

Assessment concluded on : 19 May 2026

Checked by:

 Klaus
Gegenfurtner
2026.06.16
12:59:32 +02'00'

Klaus Gegenfurtner
Teamleader Radio

Tested by:

 Christopher
Thaller
2026.06.16
08:56:12 +02'00'

Christopher Thaller
Radio Team

4 TEST ENVIRONMENT

4.1 Address of the test laboratory

**CSA Group Bayern GmbH
Straubinger Strasse 100
94447 PLATTILING
GERMANY**

4.2 Environmental conditions

During the measurement the environmental conditions were within the listed ranges:

Temperature: 15 - 35 °C

Humidity: 30 - 60 %

Atmospheric pressure: 86 - 106 kPa

4.3 Statement of the measurement uncertainty

The data and results referenced in this document are true and accurate. It is noted that the expanded measurement uncertainty corresponds to the measurement results from the standard measurement uncertainty multiplied by the coverage factor $k = 2$. The true value is located in the corresponding interval with a probability of 95 %. The measurement uncertainty was calculated for all measurements listed in this test report acc. to CISPR 16-4-2: 2011 + A1: 2014 „Uncertainties, statistics and limit modelling – Uncertainty in EMC measurements“ and is documented in the quality system acc. to DIN EN ISO/IEC 17025. For all measurements shown in this report, the measurement uncertainty of the test laboratory, CSA Group Bayern GmbH, is below the measurement uncertainty as defined by CISPR. Therefore, no special measures must be taken into consideration with regard to the limits according to CISPR. Furthermore, component and process variability of devices similar to that tested may result in additional deviation. The manufacturer has the sole responsibility of continued compliance of the device.

4.4 Conformity Decision Rule

The applied conformity decision rule is based on ILAC G8:09/2019 clause 4.2.1 Binary Statement for Simple Acceptance Rule ($w = 0$).

Details can be found in the procedure CSA_B_V50_29.

5 HUMAN EXPOSURE

5.1 Maximum permissible exposure (MPE) according to FCC

5.1.1 Applicable standard

According to FCC Part 15, Section 15.255(g):

Systems operating under the provisions of this section shall be operated in a manner that the public is not exposed to radio frequency energy levels in excess of the Commission's guidelines.

5.1.2 Description of Determination

The maximum rated output power conducted included the tune up tolerance is used to calculate the EIRP. Through the Friis transmission formula, the known maximum gain of the antenna and the maximum power, can be calculated the MPE in a defined distance away from the product.

Friis transmission formula:

$$P_d = \frac{P_{out} * G}{4 * \pi * r^2}$$

Where:

P_d = power density (mW/cm²)

P_{out} = output power to antenna (mW)

G = gain of antenna (linear scale)

r = distance between antenna and observation point (cm)

5.1.3 Determination of MPE

The EUT is not a portable device, it is designed to be used that radiating structures are 20 cm outside of the body of the user. ($r = 20$ cm)

Rated AV output power:	11.0 dBm
Tune-up tolerance:	2.00 dB
Maximum AV output power:	13.0 dBm
Antenna gain max:	6.0 dBi
Minimum distance r:	20.0 cm

Channel	EIRP _{AV}	EIRP _{AV}	S	Limit S _{eq}	Margin	Exposure ratio
No.	(dBm)	(mW)	(mW/cm ²)	(mW/cm ²)	(mW/cm ²)	(%)
1	12.9	19.50	0.0039	0.60	-0.5976	0.64
26	12.8	19.05	0.0038	0.61	-0.6064	0.62
50	13.0	19.95	0.0040	0.62	-0.6142	0.64

Limits for maximum permissible exposure (MPE):

(B) Limits for General Population / Uncontrolled Exposure				
Frequency range (MHz)	Electric field strength (V/m)	Magnetic field strength (A/m)	Power density (mW/cm ²)	Averaging time (minutes)
0.3 – 1.34	614	1.63	100	30
1.34 – 30	824/ <i>f</i>	2.19/ <i>f</i>	180/ <i>f</i> ²	30
30 - 300	27.5	0.073	0.2	30
300-1500	---	---	<i>f</i>/1500	30
1500-100000	---	---	1.0	30

f = Frequency in MHz

The requirements are **FULFILLED**.

Remarks: For determination of EIRP please refer to test report 80294489-00 issued by CSA Group
Bayern GmbH.

5.2 Field reference level exposure exemption limits (FRL) according to RSS-102

5.2.1 Applicable standard

According to RSS-102, section 6.6:

Field reference level (FRL) 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 (i.e. mobile devices), except when the device operates as follows:

- below 20 MHz and the source-based, time-averaged maximum EIRP 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 EIRP of the device is equal to or less than $4.49/f^{0.5}W$ (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 EIRP 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 EIRP 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 EIRP 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 EIRP was derived.

5.2.2 Determination of MPE according ISED:

The EUT is not a portable device. The EUT is designed to be used that the separation distance between the user and/or bystander and the device's radiating element is greater than 20 cm ($r = 20$ cm).

Rated AV output power:	11.0 dBm
Tune-up tolerance:	2.00 dB
Maximum AV output power:	13.0 dBm
Antenna gain max:	6.0 dBi
Minimum distance r:	20.0 cm

Frequency	EIRP	Factor	$f^{0.6834}$	Limit	Margin
MHz	(mW)		(W)	(W)	(W/m ²)
902.75	19.5	0.0131	104.6730	1.3712	-1.3517
915.25	19.1	0.0131	105.6614	1.3842	-1.3651
927.25	20.0	0.0131	106.6062	1.3965	-1.3766

Exemption limits for routine Evaluation – RF exposure evaluation according to RSS-102, section 6.6:

- at or above 300 MHz and below 6 GHz and the source-based, time-averaged maximum EIRP of the device is equal to or less than $1.31 \times 10^{-2} f^{0.6834} \text{W}$
(adjusted for tune-up tolerance), where f is in MHz

The requirements are **FULFILLED**.

Remarks: For determination of EIRP please refer to test report 80294489-00 issued by CSA Group
Bayern GmbH.

- End of test report -

The test report merely corresponds to the test sample. It is not permitted to copy extracts of these test results without the written permission of the test laboratory.