Choose Scandinavian trust

RADIO TEST REPORT

Type of assessment:

MPE Calculation report

Manufacturer:

Ericsson AB

Product Marketing Name (PMN):

Radio 4472HP B5

Hardware Version Identification Number (HVIN):

AS1614405

FCC ID:

TA8AKRC1614405

ISED certification number:

IC: 287AB-AS1614405

Specification:

- FCC 47 CFR Part 1 Subpart I, §§1.1307, 1.1310
- FCC 47 CFR Part 2 Subpart J, §2.1091
- FCC KDB 447498 D01 General RF Exposure Guidance v06
- ISED Canada RSS-102 Issue 6 December 15, 2023

RSS-102 - Declaration of RF Exposure Compliance

ATTESTATION: I attest that, Annex A and the Technical Brief information was prepared by me and is correct; that the device evaluation was performed or supervised by me; that applicable measurement and evaluation methodologies have been followed; and that the device meets the SAR, APD and/or IPD limits of RSS-102.

Date of issue: June 3, 2025

Andrey Adelberg, Senior EMC/RF Specialist

Prepared by

Signature

Lab locations

Company name	Nemko Canada Inc.			
Facilities	*Ottawa site:* 303 River Road Ottawa, Ontario Canada K1V 1H2 Tel: +1 613 737 9680 Fax: +1 613 737 9691	*Montréal site:* 292 Labrosse Avenue Pointe-Claire, Québec Canada H9R 5L8 Tel: +1 514 694 2684 Fax: +1 514 694 3528	*Cambridge site:* 1-130 Saltsman Drive Cambridge, Ontario Canada N3E 0B2 Tel: +1 519 650 4811	*Almonte site:* 1500 Peter Robinson Road West Carleton, Ontario Canada K0A 1L0 Tel: +1 613 256-9117
Test site identifier	**Organization**	**Ottawa/Almonte**	**Montreal**	**Cambridge**
	FCC:	CA2040	CA2041	CA0101
	ISED:	2040A-4	2040G-5	24676
Website	www.nemko.com			

Limits of responsibility

Note that the results contained in this report relate only to the items tested and were obtained in the period between the date of initial receipt of samples and the date of issue of the report.
This test report has been completed in accordance with the requirements of ISO/IEC 17025. All results contained in this report are within Nemko Canada's ISO/IEC 17025 accreditation.

Copyright notification

Section 1 Evaluation summary

1.1 MPE calculation for standalone transmission

1.1.1 References, definitions and limits

FCC §2.1091(d)

(2) (2) For operations within the frequency range of 300 kHz and 6 GHz (inclusive), the limits for maximum permissible exposure (MPE), derived from whole-body SAR limits and listed in Table 1 in paragraph (e)(1) of this section, may be used instead of whole-body SAR limits as set forth in paragraphs (a) through (c) of this section to evaluate the environmental impact of human exposure to RF radiation as specified in §1.1307(b) of this part, except for portable devices as defined in §2.1093 of this chapter as these evaluations shall be performed according to the SAR provisions in §2.1093.

Table 1.1-1: *Table 1 to §1.1310(e)(1)—Power Density Limits for Maximum Permissible Exposure (MPE)*

Frequency range (MHz)	Power density (mW/cm^2)	Averaging time (minutes)
(i) Limits for Occupational/Controlled Exposure		
0.3–3.0	*(100)	≤6
3.0–30	*(900 / f^2)	<6
30–300	1.0	<6
300–1500	f / 300	<6
1500–100000	5	<6
(ii) Limits for General Population/Uncontrolled Exposure		
0.3–1.34	*(100)	<30
1.34–30	*(180 / f^2)	<30
30–300	0.2	<30
300–1500	f / 1500	<30
1500–100000	1.0	<30

Notes: f = frequency in MHz. * = Plane-wave equivalent power density.

References, definitions and limits, continued

RSS-102, Section 5.3.2

The electric and magnetic field strength reference levels, power density reference levels, and associated reference period for devices employed by the general public (uncontrolled environment) and controlled-use devices (controlled environment) are specified in table below. Note that the power density limits specified in these tables apply to whole body exposure conditions.

Table 1.1-2: *RSS-102— Power density limits*

Frequency range (MHz)	Power density (W/m^2)	Power density (mW/cm^2)	Reference Period (minutes)
Limits for controlled-use devices (controlled environment)			
10–20	10	1	6
20–48	$44.72 / f^{0.5}$	$4.472 / f^{0.5}$	6
48–100	6.455	0.6455	6
100–6000	$0.6455 f^{0.5}$	$0.06455 f^{0.5}$	6
6000–15000	50	5	$616000 / f^{1.2}$
15000–30000	$3.33\times10^{-4} f$	$0.333\times10^{-4} f$	$616000 / f^{1.2}$
Limits for devices used by the general public (uncontrolled environment)			
10–20	2	0.2	6
20–48	$8.944 / f^{0.5}$	$0.8944 / f^{0.5}$	6
48–300	1.291	0.1291	6
300–6000	$0.02619 f^{0.6834}$	$0.002619 f^{0.6834}$	6
6000–15000	10	1	$616000 / f^{1.2}$
15000–30000	$6.67\times10^{-5} / f$	$0.667\times10^{-5} / f$	$616000 / f^{1.2}$

Notes: f = frequency in MHz.

The above table refers to Health Canada's Safety Code 6 for relevant notes and additional information.

Equation from page 18 of OET Bulletin 65, Edition 97-01

$$S = \frac{PG}{4\pi R^2}$$

where: S = power density (mW/cm^2 or W/m^2)
P = power input to the antenna (mW or W)
G = power gain of the antenna in the direction of interest relative to an isotropic radiator
R = distance to the center of radiation of the antenna (cm or m)

1.1.2 EUT technical information

Prediction frequency	881.5 MHz
Antenna gain	16.5 dBi
Path loss	5 dB (FCC), 8 dB (ISED)
Number of antennas	4
Maximum transmitter power	60.954 W (conducted per port)

1.1.3 MPE calculation

Fundamental transmit (prediction) frequency:	881.5	MHz		
Maximum measured conducted peak output power:	47.85	dBm		
Cable and/or jumper loss:	5	dB	8	dB
Maximum peak power at antenna input terminal:	42.85	dBm	39.85	dBm
Duty cycle:	100	%		
Maximum calculated average power at antenna input terminal:	19275.35	mW	9660.56	mW
Single Antenna gain (typical):	16.5	dBi		
Number of antennae:	4			
Total system gain:	22.52	dBi		

	FCC calculations		ISED calculations	
Uncontrolled environment				
Declared distance:	683	cm	714	cm
Average power density at declared distance:	**0.587504**	**mW/cm²**	**0.269436**	**mW/cm²**
	5.875041	W/m²	2.694362	W/m²
MPE limit at prediction frequency:	**0.587667**	**mW/cm²**	**0.269712**	**mW/cm²**
	5.876667	W/m²	2.697121	W/m²
Minimum calculated prediction **distance** for compliance:	683	cm	714	cm
Margin of Compliance:	**0.00**	**dB**	**0.00**	**dB**
with Maximum premitted antenna gain:	22.52	dBi	22.53	dBi
Controlled environment				
Declared distance:	305	cm	268	cm
Average power density at declared distance:	**2.938333**	**mW/cm²**	**1.916494**	**mW/cm²**
	29.383333	W/m²	19.164937	W/m²
MPE limit at prediction frequency:	**2.938333**	**mW/cm²**	**1.916494**	**mW/cm²**
	29.383333	W/m²	19.164937	W/m²
Minimum calculated prediction **distance** for compliance:	305	cm	268	cm
Margin of Compliance:	**0.00**	**dB**	**0.00**	**dB**
with Maximum permitted antenna gain:	22.52	dBi	19.53	dBi

1.1.4 Verdict

The calculation is below the limit; therefore, the product is passing the RF Exposure requirements for the declared distance.

End of the test report