

Document No.:	CERT2686	
Document Title:	Maximum Permissible Exposure (MPE) Report	Rev 2.0

# RF Exposure


## Maximum Permissible Exposure (MPE)


Model Name .....:2AGPT-PLNX3

Applicant .....:SolarEdge Technologies Ltd.  
1 HaMada Street, Herzeliya 4673335, Israel  
Tel: +972-9-9576620.

Standards .....: FCC CFR 47 Part C 15.247(i)  
RSS-102 ,Issue 6 ,December 15, 2023

Issued Date .....:19 June 2025

Prepared By .....:   
Test Engineer- Ageneu Yizhak

Approved By .....:   
EMC Lab Manager- Rami Nataf

Prepared by .....: EMC & Radio Laboratory-Solaredge  
10 Tzela HaHar st.,POB 56 Modi'in 7171001  
Israel Tel:+972-52-4006994

Verdict Summary .....:Pass



Document No.:	CERT2686	
Document Title:	Maximum Permissible Exposure (MPE) Report	Rev 2.0

### Table of Contents

1.	Test Summary.....	3
2.	Revision History:.....	4
3.	Test Facility .....	4
4.	General Information .....	5
5.	RF Exposure - Maximum Permissible Exposure (MPE).....	6
6.	Lab Accreditation .....	10

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 The test results refer to item tested only, not for any other manufacturing samples  
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Document No.:	CERT2686	
Document Title:	Maximum Permissible Exposure (MPE) Report	Rev 2.0

## 1. Test Summary

Test procedures per the technical standards:

Emission Tests			
Standard	Test Item	Verdict <sup>(2)</sup>	Remark
CFR 47 Part 15 Subpart C §15.247 (i) RSS-102 ,Issue 6	RF Exposure - Maximum Permissible Exposure (MPE)	Pass	

Note

- (1) :N/A-not applicable
- (2) Based on the test result only, not taking into account the measurement uncertainty ULab(dB) which is described on para. 2.4

Document No.:	CERT2686	
Document Title:	Maximum Permissible Exposure (MPE) Report	Rev 2.0

## 2. Revision History:

Version	Date	Performed By	Note
1.0	19/06/2025	Ageneu Yizhak	-
2.0	03/09/2025	Rami Nataf	Revised according to the certification body comments

## 3. Test Facility

### 3.1. Address of the Laboratory:

10 Tzela HaHar st.,POB 56 Modi'in 7171001, Israel, Tel-972-52-4006994

### 3.2. Laboratory Accreditation/recognition/certification

- A2la -The Certificate Registration Number -6185.01
- FCC Registration- Firm Registration Number: 898943
- IC-Registration: The Certificate Registration Number:IL1008

### 3.3. Software used

Software Name	Software Version	Test Name
Radimation	RadiMation 2024.1.8	CE, RE

### 3.4. Measurement Uncertainty

The calculated uncertainty of measurement  $y \pm U$ , where expended uncertainty  $U$  is based on a standard uncertainty multiplied by a coverage factor of  $k=2$ , providing a level of confidence of approximately 95 %.

Parameter	Measurement Uncertainty (+/-)	Units
Occupied Channel Bandwidth	0.26	%
RF Output Power, conducted	1.20	dB
Power Spectral Density, Conducted	1.05	dB
Spurious emissions, conducted	1.05	dB
All emissions, radiated	4.86	dB
Temperature	1.6	°C
Humidity	1	%
DC and low-frequency voltages	0.09	%

Document No.:	CERT2686	
Document Title:	Maximum Permissible Exposure (MPE) Report	Rev 2.0

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## 4. General Information

### 4.1. EUT Description

Short Description:	Portia Linux - Linux Communication Board.
Model Name:	2AGPT-PLNX3

### 4.2. Testing intended:

To calculate the RF Exposure - Maximum Permissible Exposure (MPE) for Portia Linux - Linux Communication Board  
Model: 2AGPT-PLNX3.

Document No.:	CERT2686	
Document Title:	Maximum Permissible Exposure (MPE) Report	Rev 2.0

## 5. RF Exposure - Maximum Permissible Exposure (MPE)

Test Date:	19/06/2025	Verdict	Pass
Tested By:	Ageneu Yizhak	Test Standard & Test Procedure	CFR 47 Part 15.247(i) Subpart C
Requirement:	Radio frequency devices operating under the provisions of this part are subject to the radio frequency radiation exposure requirements specified in §§ 1.1307(b), 1.1310, 2.1091, and 2.1093 of this chapter, as appropriate. Applications for equipment authorization of mobile or portable devices operating under this section must contain a statement confirming compliance with these requirements. Technical information showing the basis for this statement must be submitted to the Commission upon request.		

### 5.1. Limits FCC

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

(ii) For multiple RF sources: Multiple RF sources are exempt if:

$$\sum_{i=1}^a \frac{P_i}{P_{th,i}} + \sum_{j=1}^b \frac{ERP_j}{ERP_{th,j}} + \sum_{k=1}^c \frac{Evaluated_k}{Exposure Limit_k} \leq 1$$

### 5.2. Test Result: FCC

Frequency (MHz)	Tune up conducted power [dBm]	Antenna Gain		ERP		Evaluation distance (m)	ERP Limit (mW)	Pass/fail
		dBi	dBd	(dBm)	(mW)			
906-924	15.03	1.8	-0.35	14.68	29.4	0.2	464	Pass
2412-2462	22.35	3.0	0.85	23.2	208.9	0.2	768	Pass

For multiple RF sources: Multiple RF sources are exempt if:

Document No.:	CERT2686	
Document Title:	Maximum Permissible Exposure (MPE) Report	Rev 2.0

$$\sum_{j=1}^b \frac{ERP_j}{ERP_{th,j}} \leq 1$$

Total MPE = 29.4/464 + 208.9/768 = 0.063311 + 0.272044 = 0.335355 < 1

$ERP_j$  = the ERP of fixed, mobile, or portable RF source  $j$ .

$ERP_{th,j}$  = exemption threshold ERP for fixed, mobile, or portable RF source  $j$ , at a distance of at least  $\lambda/2\pi$  according to the applicable formula of [paragraph \(b\)\(3\)\(i\)\(C\)](#) of this section.

#### Conclusion:

The device is compatible with the FCC RF Exposure Limit.

Document No.:	CERT2686	
Document Title:	Maximum Permissible Exposure (MPE) Report	Rev 2.0

### 5.3. RSS-102 Issue 6 § 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.

#### 5.3.1. Limits RSS-102

RF field strength and power density limits for devices used by the general public (uncontrolled environment)

Frequency range (MHz)	Electric field (V <sub>RMS</sub> /m)	Magnetic field (A <sub>RMS</sub> /m)	Power density (W/m <sup>2</sup> )	Reference period (minutes)
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	$0.158 f^{0.5}$	$4.21 \times 10^{-4} f^{0.5}$	$6.67 \times 10^{-5} f$	$616000 / f^{1.2}$

Note:  $f$  is frequency in MHz.

For the above table refer to Health Canada's Safety Code 6 for relevant notes and additional information.



Document No.:	CERT2686	
Document Title:	Maximum Permissible Exposure (MPE) Report	Rev 2.0

#### 5.4. Test Result: RSS-102

Frequency (MHz)	Tune up conducted power [dBm]	Antenna Gain [dBi]	EIRP [mW]	Evaluation distance (m)	Calculate Power density (W/m <sup>2</sup> )	Limit Power density (W/m <sup>2</sup> )	Pass/fail
906-924	15.03	1.8	48.195	0.2	0.096	2.748	Pass
2412-2462	22.35	3.0	342.768	0.2	0.682	5.366	Pass

$$Power\ Density\left(\frac{mW}{cm^2}\right)=\frac{EIRP(mW)}{4\pi\cdot(20cm)^2}$$

$$1\text{ mW/cm}^2=10\text{ W/m}^2$$

Total MPE=  $\sum (P_i/P_{thi}) \leq 1$

- $P_i$ = Power of RF source i.
- $(P_{th})$ =the exemption threshold power ( $P_{th}$ )
- $MPE=(0.096/2.748)+(0.682/5.366)=0.162 < 1$

#### Conclusion:

The device is compatible with the RSS-102 RF Exposure Limit.

Document No.:	CERT2686	
Document Title:	Maximum Permissible Exposure (MPE) Report	Rev 2.0

## 6. Lab Accreditation



**Accredited Laboratory**

A2LA has accredited

**SOLAREGE TECHNOLOGIES LTD.**

Herzeliya, Israel

for technical competence in the field of

**Electrical Testing**

This laboratory is accredited in accordance with the recognized International Standard ISO/IEC 17025:2017 General requirements for the competence of testing and calibration laboratories. This accreditation demonstrates technical competence for a defined scope and the operation of a laboratory quality management system (refer to joint ISO-ILAC-IAF Communiqué dated April 2017).



Presented this 30<sup>th</sup> day of May 2024



Mr. Trace McInturff, Vice President, Accreditation Services  
For the Accreditation Council  
Certificate Number 6185.01  
Valid to February 28, 2026

For the tests to which this accreditation applies, please refer to the laboratory's Electrical Scope of Accreditation.

Document No.:	CERT2686	
Document Title:	Maximum Permissible Exposure (MPE) Report	Rev 2.0

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