

## A7511

**1 Ch 1100 V/1000  
 $\mu$ A High Efficiency  
HV Power Supply  
Module**



## Features

- High efficiency
- 1100 V/1 mA output ranges
- Available with positive or negative polarity
- Compact package: 29x54x16 mm<sup>3</sup> (WxLxH)

## Description

The **A7511** is a high efficiency, low noise single channel High Voltage DC/DC converters in a PCB mount form factor. It provides a programmable and monitorable output voltage ranging from **0** to **1100 V**, when supplied with a **+12 V** input. It is available with either positive or negative output voltage. The output voltage is regulated by providing a **0** to **+2.5 V** external voltage (Vset). The maximum output current is **1 mA**, regulated by providing **0** to **+2 V** external voltage (Iset). The board is provided with an over-current protection: if a current larger than the lout maximum value is drawn, the module is not being damaged.

Thanks to its excellent stability and special design, **A7511** power supply is engineered to work in **harsh environment and under severe temperature variations**.

The module is engineered on a **FR4 PCB**, coated and housed in **DC01 steel box**. CAD Altium library components and 3D step models are available on request.

### Safety Features Include:

- Overcurrent detection if the channel attempts to draw a current larger than Iset, the output voltage is varied to keep the current below Iset limit. The channel behaves like a current generator.

## Technical Specifications

### Packaging

Material: DC01; dimension: W=29 mm ; L=54 mm ; H=16 mm

### Number of Channels

1

### Maximum Output Current (I<sub>out</sub>)

1100V

### Output Voltage (V<sub>out</sub>)

0 ÷ ±1100 V

### Contact pins

Male strip header; 2.54mm step; phosphor bronze; UL94V0 insulator

### Protection

Over current, short circuit, sparks and humidity

### Operating temperature

-55° C ÷ +80° C

### Storage temperature

-55° C ÷ +85° C

### Output Ripple (Full Load)

Typical 5mVpp; Maximum 10mVpp

### Efficiency

>60% @ 1000 V / 1mA (R<sub>load</sub> ≈ 1 MΩ; 0° C ÷ +40° C)

### V<sub>out</sub> / Temperature coefficient

<±0.2% (-20° C ÷ +70° C)

### DeltaV<sub>out</sub>/V<sub>out</sub> (for ±5% V<sub>in</sub> variations)

<1.5 X 10<sup>-3</sup> @ full scale

### V<sub>out</sub> vs. V<sub>set</sub> Integral Non Linearity

<±0.2% (-20° C ÷ +70° C)

### V<sub>mon</sub> vs. V<sub>out</sub> Integral Non Linearity

<±0.2% (-20° C ÷ +70° C)

### Voltage Supply (V<sub>in</sub>)

+12 V ± 10%

### Enable

Enable > 2.8 V Channel active  
Enable < 1 V Channel disabled

### Vset Input (positive analog command)

0 ÷ +2.5 V Important!: Vset must not exceed 2 V (Vout is not limited)

### Vmon Output (positive analog command)

0 ÷ +2.5 V

### Iset input (positive analog command)

0 ÷ +2 V

### Imon Output (positive analog command)

0 ÷ +2 V

### Status OVC bit

0÷5 V (High = OVC)

### Electromagnetic compatibility

Weak emission of electromagnetic impulse and RF; one-piece metal shielding with several ground connections

### Power requirement

< 1700 mW

### Thermal stability (DeltaVout/Vout)

<50ppm/°C (@Vout>300V)

## Ordering Options

Code	Description	
WA7511NBXAAA	A7511NB - -1.1kV 1mA High Efficiency HV Power Supply Module BOXED	RoHS
WA7511NXAAAA	A7511N - -1.1kV 1mA High Efficiency HV Power Supply Module (12V in)	RoHS
WA7511PXAAAA	A7511P - +1.1kV 1mA High Efficiency HV Power Supply Module (12V in)	RoHS

## Accessories

### DT75XX

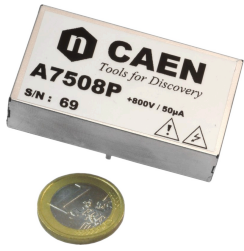


HV Carrier Board for A750x PCB Modules

---

## Related Products

### A7508



1 Ch 800 V/50  $\mu$ A High Efficiency HV Power Supply Module (5V in)

### A7505



1 Ch 1600 V/500  $\mu$ A High Efficiency HV Power Supply Module

### A7502



1 Ch 2100 V/100  $\mu$ A High Efficiency HV Power Supply Module (5V in)

### A7526



1 Ch 2600 V/500  $\mu$ A High Efficiency HV Power Supply Module - PCB Mount

### A7501



1 Ch 2100 V/100  $\mu$ A High Efficiency HV Power Supply Module

## A7504C



1 Ch 4 kV/100  $\mu$ A High Efficiency HV Power Supply Module

---

**This document, or parts thereof, may not be reproduced in any form or by any means without written permission from Caen S.p.A. Although every effort has been made to ensure the accuracy of information presented in this catalog, Caen S.p.A reserves the right to modify its products specifications without giving any notice; for up to date information please visit [www.caen.it](http://www.caen.it) © Caen S.p.A - 2024**

**CAEN S.p.A.**

Via Vetraia 11  
55049 - Viareggio  
Italy

**Phone +39.0584.388.398**

**Fax +39.0584.388.959**

**info@caen.it**

**www.caen.it**

**CAEN GmbH**

Brunnenweg 9  
64331 Weiterstadt, Germany

**Phone +49 (0)212.254.4077**

**Mobile +49 (0)151.16.548.484**

**info@caen-de.com**

**www.caen-de.com**

**CAEN Technologies, Inc.**

1 Edgewater Street - Suite 101  
Staten Island, NY 10305  
USA

**Phone +1.718.981.0401**

**Fax +1.718.556.9185**

**info@caentechnologies.com**

**www.caentechnologies.com**

**CAENspa India Private Limited**

B205, BLDG42, B Wing,  
Azad Nagar Sangam CHS,  
Mhada Layout, Azad Nagar, Andheri West  
Mumbai, Maharashtra 400053, India

**info@caen-india.in**

**www.caen-india.in**

