



High Voltage Module, HVPS2

Introduction

The High Voltage Module, HVPS2 is an integrated high voltage power supply featuring a high voltage isolated output capable of producing up to 20kV no load. When loaded, these units will typically produce a maximum output voltage of approximately 13kV at up to 10 Watts. They accept input voltages in the range of 0-6VDC making them perfect for battery powered applications. These units are unregulated.

Typical Applications:

- Capacitor charging
- Marx generators
- Jacob's ladders
- General high voltage applications

Electrical Specifications

The following table summarizes the electrical specifications of the power supply:

| Specifications | |
|----------------------|---|
| Input Voltage Range | 0.0V to 6.0VDC Do not exceed 6.0VDC! |
| Input Current | <5A typically |
| Output Voltage Range | >20kV (unloaded) 13kV (loaded) |
| Max. Output Power | >10W (short durations) |

Thermal Considerations

These units have no external thermal provisions, therefore, runtimes should be kept to a minimum to prevent units from overheating. These units are considered light duty and we recommend a 50% duty cycle during operation – generally 1 minute operating, 1 minute cool down.

Short Circuit Operation

We do not recommend operating these units into a short circuit. We recommend using current limiting resistors to limit the charge current to less than 1mA.

Mechanical Outline / Physical Dimensions

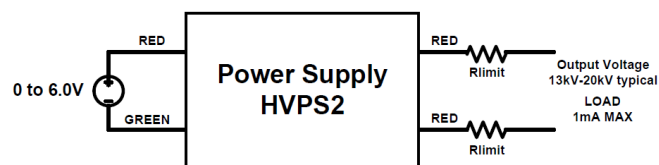
Physical dimensions of the plastic potted enclosure may vary from unit to unit.

Output Voltages

The following table summarizes the approximate output voltage vs. input voltage. These were measured using a high voltage divider which represented a 70 meg load on the HVPS2 unit. Please note as these are unregulated units, output voltage may vary per unit.

| Output Voltage vs. Input Voltage (approx.) | |
|--|--------|
| 1.0VDC input | 2.0kV |
| 2.0VDC input | 6.2kV |
| 3.0VDC input | 9.2kV |
| 4.0VDC input | 11.2kV |
| 5.0VDC input | 12.6kV |
| 6.0VDC input | 13.0kV |

Typical Application



Typical Hook-up Diagram

SAFETY WARNING

High voltage power supplies present a serious risk of personal injury if not used in accordance with design and / or use specifications, if used in applications on products which they are not intended or designed, or if they are used by untrained or unqualified personnel. These high voltage power supplies should only be operated by trained and experience professionals and never by anyone under the age of 18. We reserve the right to refuse sale of these high voltage modules to anyone.

ENERGY STORAGE WARNING

These devices have internal energy storage capacitors at the output. Be sure to properly discharge the output of these devices by shorting them together prior to handling as they will continue to hold a charge after power is removed from the input.

NON-COMMERCIAL USE STATEMENT

These units are sold "as is" for **EXPERIMENTAL or AMATEUR USE only and are not intended for commercial use.** There are no warranties or technical support for failed units or technical issues that may result from the use of these HVPS2 modules. The buyer agrees to these terms when purchasing and using these units.