

ULTRA MINIATURE, REGULATED HIGH VOLTAGE POWER SUPPLIES

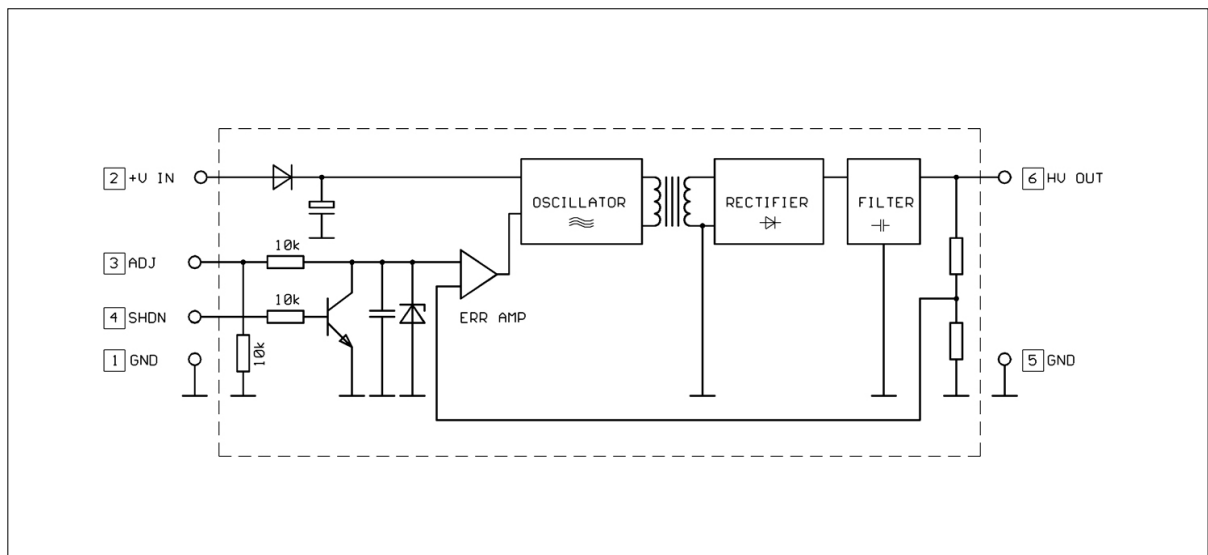
- Ultra miniature package 40 x 40 x 20 mm
- High voltage output, up to 4.500V
- Wide power supply range from 10...30V
- Programmable output voltage
- Shutdown input
- Short current proof
- High efficiency



DESCRIPTION

The HVM-01 Series are miniature, regulated high voltage power supplies. The output voltage of this types can be programmed from 0 to 4500V by a proportional input voltage at the adjust pin. Through his unique technology, the high-frequency, amplitude-modulated sine-wave-oscillator, very low ripple achieved. Built in filter techniques and the shutdown option are ideal for a wide application range.

BLOCK DIAGRAMM

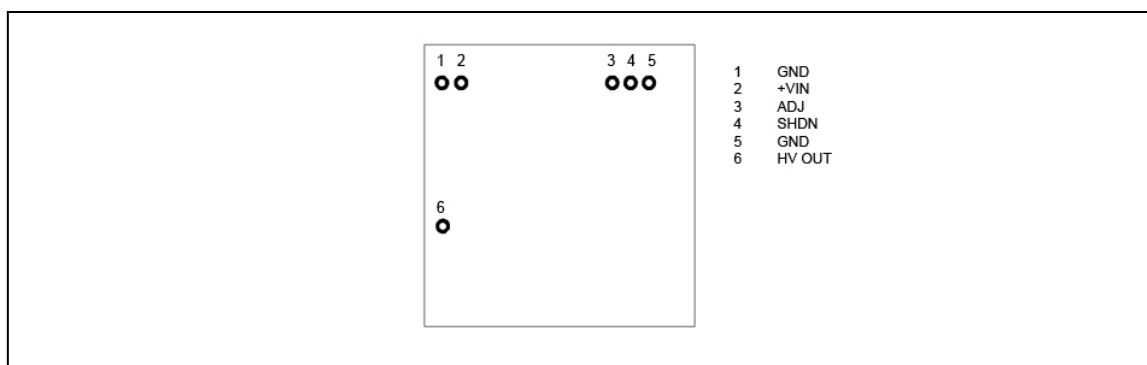


HVM-01

ABSOLUTE MAXIMUM RATINGS

Symbol	Parameter	Value	Unit
V_{IN}	Power supply	-0.5 to + 36.0	V
V_{ADJ}	Adjust Voltage Pin 3	-0.5 to +36.0	V
V_{SHDN}	Shutdown Voltage Pin 4	-0.5 to +36.0	V
t_{SHORT}	Short time HV out to GND	infinity	
T_J	Operating Junction Temperature Range	-10 to 50	°C

PIN CONNECTIONS (TOP VIEW)



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Pin Number	Pin Name	Input/Output	Description
1	GND	I	Supply Ground
2	+VIN	I	Supply
3	ADJ	I	Adjust High Voltage Output
4	SHDN	I	Shutdown enable (active high)
5	GND	I	High Voltage Ground
6	HV OUT	O	High Voltage Output

GENERAL ELECTRIC CHARACTERISTICS

Symbol	Parameter	Test Condition	Min	Typ	Max	Unit
V_{IN}	Power Supply Voltage		10	18	36	V
V_{ADJ}	Adjust Input Voltage		-0.5	5	36	V
V_{SHDN}	Shutdown Voltage		-0.5	>0.6	36	V
V_{OUT}	High Voltage Output ¹	R_{LOAD} infinity	0	4.5	5.0	kV
I_{SUP}	Supply Current	Power supply @ 18V; R_{LOAD} infinity; V_{OUT} 4.5kV	0.1	0.15	0.2	A
I_{SUP}	Supply Current, stdby	Power supply @ 18V; R_{LOAD} infinity; V_{OUT} 0V		2.8	5.0	mA
I_{OUT}	Output Current	Power supply @ 18V; V_{OUT} 4.5kV	0.03	0.05	0.07	mA
P_{IN}	Power Consumption	R_{LOAD} infinity; V_{OUT} 4.5kV	1.2	1.3	1.4	W
f_{OSC}	Oscillator Frequency		250	300	350	kHz
R_{OUT}	Output Resistance ¹		15	30	66	MΩ

¹Contact innox.com, to get more information about custom solutions and other versions

FIGURE 1. TEST CIRCUIT

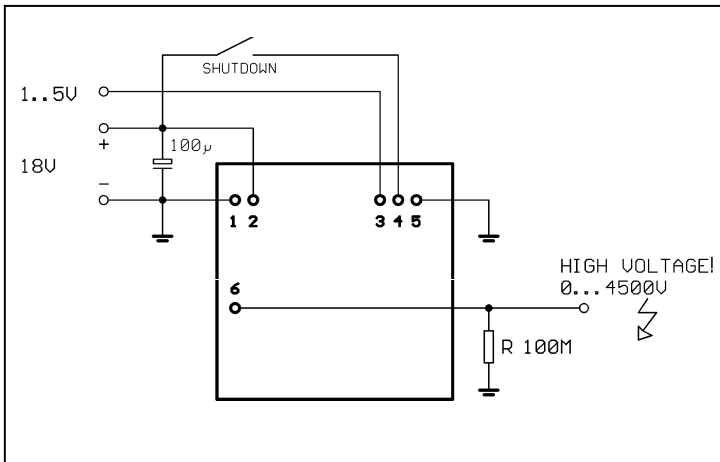


FIGURE 2. DEPENDENCE OF OUTPUT VOLTAGE

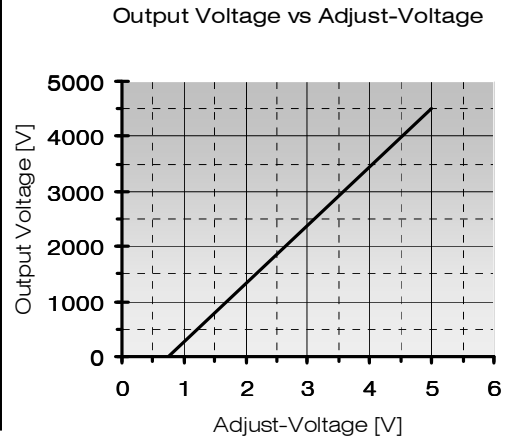


FIGURE 3. PACKAGE DIMENSIONS (in mm)

