



Chipsmall Limited consists of a professional team with an average of over 10 year of expertise in the distribution of electronic components. Based in Hongkong, we have already established firm and mutual-benefit business relationships with customers from,Europe,America and south Asia,supplying obsolete and hard-to-find components to meet their specific needs.

With the principle of “Quality Parts,Customers Priority,Honest Operation,and Considerate Service”,our business mainly focus on the distribution of electronic components. Line cards we deal with include Microchip,ALPS,ROHM,Xilinx,Pulse,ON,Everlight and Freescale. Main products comprise IC,Modules,Potentiometer,IC Socket,Relay,Connector.Our parts cover such applications as commercial,industrial, and automotives areas.

We are looking forward to setting up business relationship with you and hope to provide you with the best service and solution. Let us make a better world for our industry!



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# KHV Series

## 5 Watt

### DC/DC CONVERTER

#### 5 WATT HIGH VOLTAGE DC/DC CONVERTER



#### FEATURES

- Max. Output Capacity 5W
- Adjustable Output Voltage from 0 to 100%
- Control Voltage 0 to +6V
- Over Current Protection
- On/Off Control (Optional)
- Adjustable Voltage by Variable Resistor
- RoHS Compliant

#### DISCRIPTION

The KHV series is an ultra-compact, medium-high voltage DC/DC converters with 5sided metal shield case. Output voltage can be adjusted by external voltage or external variable resistor, with built in short circuit and over current protection providing this unit with high reliability and long life.

#### ELECTRICAL SPECIFICATIONS

All specifications are typical at nominal input, full load, and 25° C unless otherwise noted.

#### INPUT SPECIFICATIONS

Input Voltage Range	10.8 - 16.5VDC
Input Current	580mA

#### OUTPUT SPECIFICATIONS

Output Current (see table)	See Chart
Voltage Accuracy	± 5% or less
Ripple and Noise	See Chart
Line Regulation, Full Load	0.01% typ
Load Regulation (0% to 100% of FL)	0.01%
Output Voltage Control	Either with 0V to +6V external voltage or a 5KΩ external variable resistor.
Over Current Protection	Drooping characteristic, built-in automatic return circuit, activated at 105% or more
On/Off Control	Between 2pin and 5pin, ON when open, and OFF when short circuited.

#### GENERAL SPECIFICATIONS

Isolation (Input – Output)	None Isolated (2 pin and 6 pin internally connected)
Ripple Noise(typ)	100mVp-p
MTBF(Calculated)	380K hours

#### ENVIRONMENTAL SPECIFICATIONS

Operating Temperature	-10° C ~ +50° C
Storage Temperature Range	-25° C to +85° C
Relative Humidity	20% to 95% RH

#### PHYSICAL SPECIFICATIONS

Metallic Shielding	5 Sided
Dimensions	60 x 40 x 20 mm



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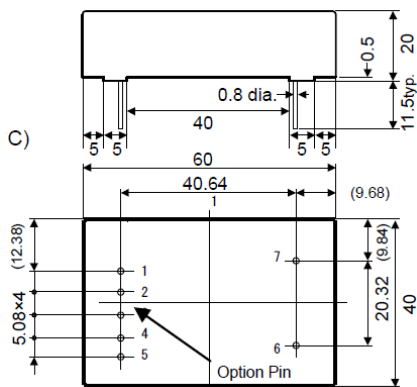
## 5 Watt

MODEL	INPUT VOLTAGE	OUTPUT VOLTAGE	ADJUSTABLE OUTPUT VOLTAGE RANGE	OUTPUT CURRENT	INPUT CURRENT	RIPPLE NOISE
KHV12-0.5K10000P	10.8 ~ 16.5VDC	+500VDC	0 ~ +500 VDC	0 ~ 10mA	580mA	100mVp-p
KHV12-0.5K10000N	10.8 ~ 16.5VDC	-500VDC	0 ~ -500 VDC	0 ~ 10mA	580mA	100mVp-p
KHV12-1.0K5000P	10.8 ~ 16.5VDC	+1000VDC	0 ~ +1000 VDC	0 ~ 5mA	580mA	100mVp-p
KHV12-1.0K5000N	10.8 ~ 16.5VDC	-1000VDC	0 ~ -1000 VDC	0 ~ 5mA	580mA	100mVp-p
KHV12-2.0K2500P	10.8 ~ 16.5VDC	+2000VDC	0 ~ +2000 VDC	0 ~ 2.5mA	580mA	100mVp-p
KHV12-2.0K2500N	10.8 ~ 16.5VDC	-2000VDC	0 ~ -2000 VDC	0 ~ 2.5mA	580mA	100mVp-p

### Note

- The output voltage will be controlled by applying the Vcont voltage. Using an adjustable resistor or an external voltage, voltage should be applied on the Vcont in in order to control the output voltage. When Vcont voltage=0V, the output voltage (output residual voltage) should be less than 2.0% of the max output voltage.
- The ON/OFF control is optional. When ordering, add a suffix "R" to the end of the product name. (example: KHV12-0.5K10000PR; R=Remote Control)

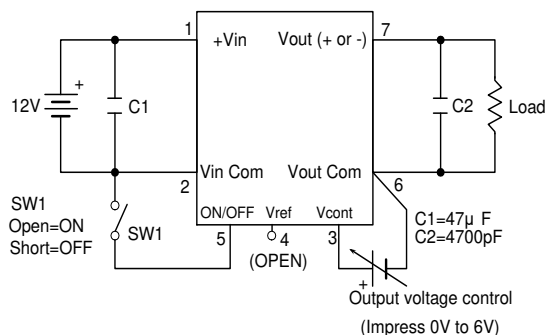
### DIMENSIONS:



### PIN OUTPUT:

PIN CONNECTION	
PIN	DEFINE
1	+VIN
2	-VIN
3	Vcont
4	Vref
5	ON/OFF
6	Vout(Com)
7	HVout

### TEST CIRCUIT:



### BLOCK DIAGRAM:

