

**VDH Series VDHXXXXH-1W/2W 3KVAC Isolation Wide voltage input 8KV anti-static short circuit protection regulator double isolation dual output**
**Description:**

The VDH series is designed according to the national safety regulations of the medical and electrical instrumentation industry. The product meets the 4KVAC pulse group between input and output.

**Input voltage:**

3.3V/5V/9V/12V/15V/24V DC

**Output voltage**

(+/- /+/-)3.3V/5V/9V/12V/15VDC

For other specifications, please contact Sunyuan Technology Co., Ltd.

**Electrical characteristics**

The following data are measured at TA=25° C, nominal input voltage, and rated output current unless otherwise specified.

**Input feature**

volt range +/- 10  
Filter Ceramic capacitors

**Isolation feature**

Rated volt input/output: 3000 VAC, input 1 /output 2: 2000VAC  
Leakage current 1 m A  
resistance 10<sup>9</sup> Ohm  
capacitance 60 p TYP.

**Output feature**

Output anti-static protection > 8KV (Antistatic voltage detection)  
Voltage accuracy The output voltage fluctuation range is +/- 2 % (load variation range 0-100%).  
( 20 MHz BW) Ripple and noise 50 mV p-p,TYP  
Sustainable short circule time The output has antistatic 8KV and self-recovery overload short circuit protection.  
Linear voltage calibration +/- 0,5 % max.,(3.3 VDC output +/- 1 % max )  
Load vottage calibration +/- 0,5 % typ., +/- 1 % max.(No load to full load)  
temperature Coefficient +/- 0.02 % / °C

**General characteristics**

effectiveness 60% to 80 %  
On-off level 60~ 125KHz  
working temperature - 40° C to + 85° C  
Storage temperature - 55 °C to + 125 °C  
Lower the fixed volue See temperature characteristic curve  
Temperature ≤ 90 %, Uncompressed

cooling method Natural air cooling

**Volume feature**

SIP packaging size 32.0 x 7.70 x 13.80 mm  
1.26 x 0.30 x 0.54 size

**Weight**

6 g~10 g

**Shell Material**

Non-conductive flame retardant black plastic

**Product test data and model examples**

(The following data is the reference value of the product after 8 hours of continuous full load aging)

Model No.	Input Volt Vin(VDC)	Input Curr no load(mA)	Input Cur full laod(mA)	Output Volt Vout(VDC)	Output curr (max.mA)	(%TYPE)
VD050303H-1W	5	21	317	3.3/3.3	100/100	63
VD050505H-1W	5	24	303	5/5	100/100	66
VD051212H-1W	5	22	289	12/12	42/42	66

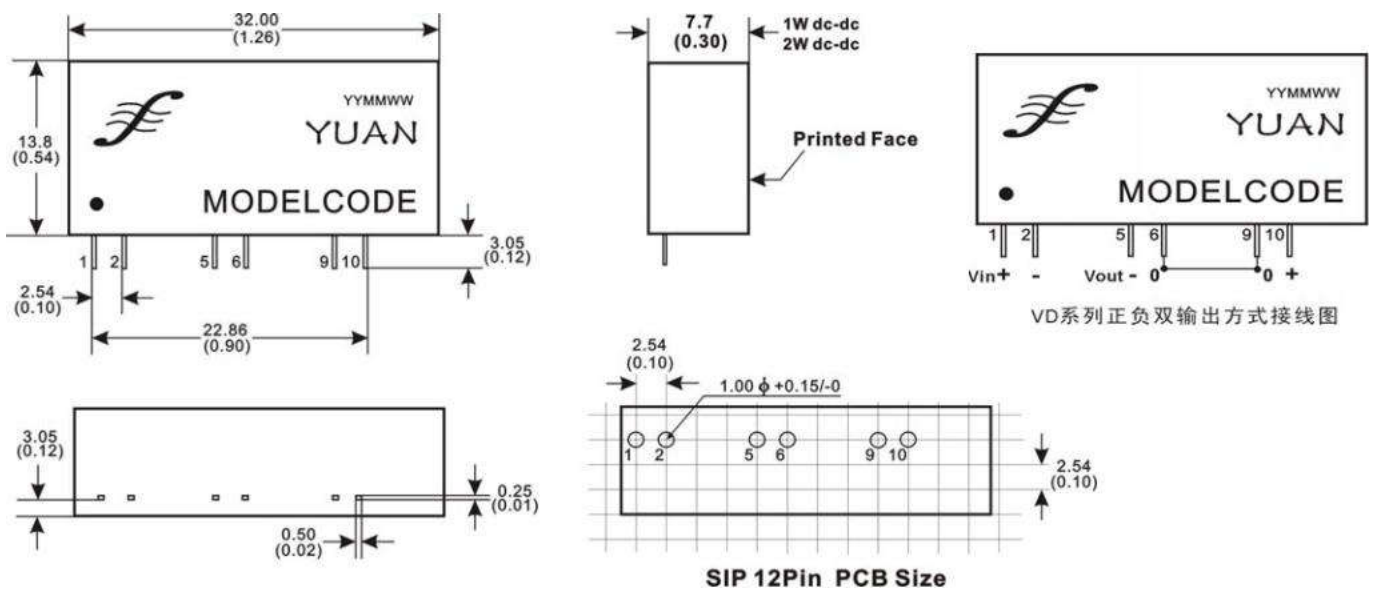
## VDH Series VDHXXXXH-1W/2W 3KVAC Isolation Wide Voltage Input 8KV Antistatic Short Circuit Protection Regulated Double Isolated Dual Output

Model No.	Input Volt Vin(VDC)	Input Curr no load(mA)	Input Curr full load(mA)	Output Volt Vout(VDC)	Output Curr (max.mA)	(%TYPE)
VD120505H-1W	12	18	123	5/5	100/100	68
VD120909H-1W	12	16	12	9/9	55/55	68
VD121212H-1W	12	16	118	12/12	42/42	69
VD240505S-1W	24	14	55	5/5	100/100	75
VD240909S-1W	24	15	58	9/9	55/55	72
VD241212S-1W	24	14	55	12/12	42/42	76
VD050303H-2W	5	40	667	3.3/3.3	200/200	60
VD050505H-2W	5	38	645	5/5	200/200	62
VD050512H-2W	5	42	571	5/12	250/150	70
VD051212H-2W	5	32	556	12/12	83/83	72
VD090512H-2W	9	38	317	9/12	250/150	70
VD120203H-2W	12	20	252	2.5/3.3	300/300	66
VD120505H-2W	12	25	245	5/5	200/200	68
VD120909H-2W	12	20	245	9/9	111/111	68
VD121212H-2W	12	20	256	12/12	83/83	65
VD240505H-2W	24	10	119	5/5	200/200	70
VD240909H-2W	24	8	116	9/9	111/111	72
VD241212H-2W	24	8	113	12/12	83/83	72

### Shape and PCB layout size reference

The pin form of VDH series product package and PCB layout is selected according to customer's specific requirements.

Packaging way—



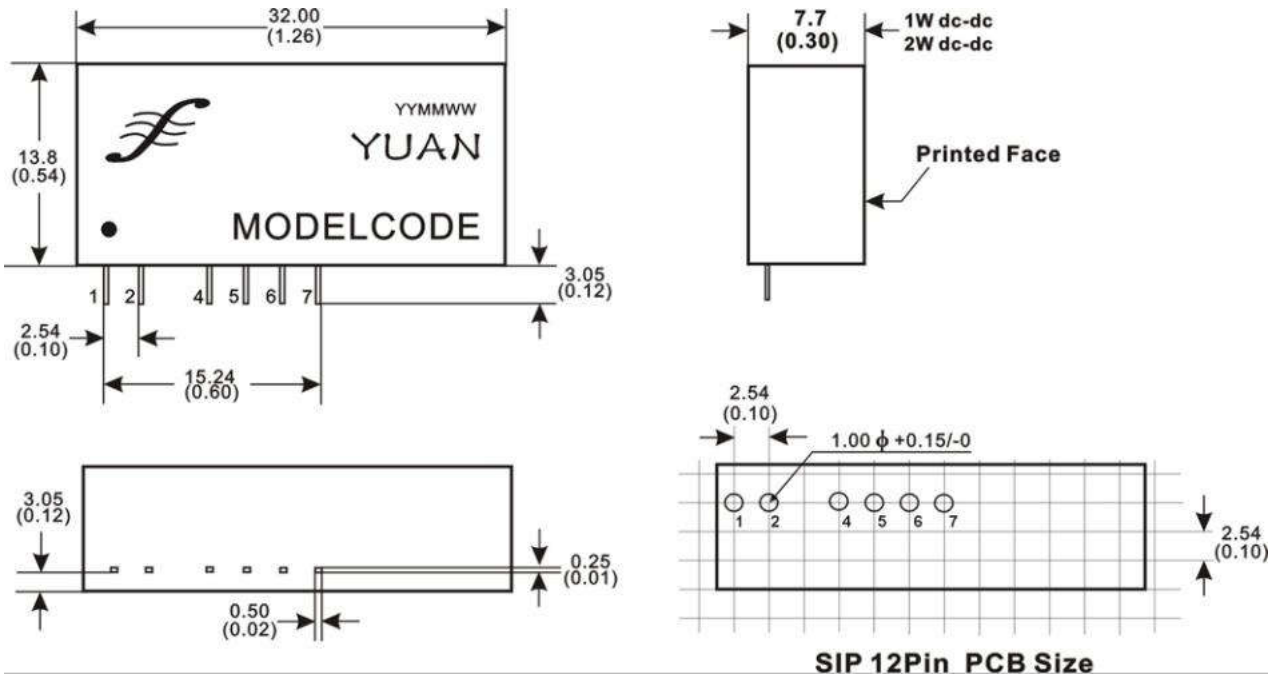
\* The VD series products can connect the "+" of one set of outputs to the "-" of the other set of outputs to realize the positive and negative dual output functions of the same voltage.

\* Product design and specifications are subject to change without notice

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Packaging way

二:



SIP 12Pin PCB Size

## Pin description

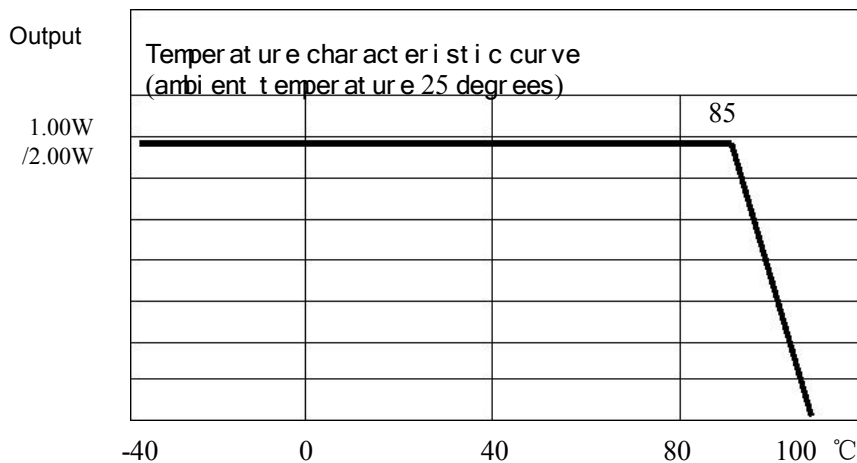
Packaging way 一

Pin	Pin function des		
<b>1</b>	+	<b>Vin</b>	输入正
<b>2</b>	-	<b>Vin</b>	输入负
<b>3~4</b>			空脚
<b>5</b>	-	<b>Vout1</b>	输出负
<b>6</b>	+	<b>Vout1</b>	输出正
<b>7~8</b>			空脚
<b>9</b>	-	<b>Vout2</b>	输出负
<b>10</b>	+	<b>Vout2</b>	输出正
<b>11~12</b>			空脚

Packaging way 二

Pin	Pin function des		
<b>1</b>	+	<b>Vin</b>	输入正
<b>2</b>	-	<b>Vin</b>	输入负
<b>3</b>			空脚
<b>4</b>	-	<b>Vout1</b>	输出负
<b>5</b>	+	<b>Vout1</b>	输出正
<b>6</b>	-	<b>Vout2</b>	输出负
<b>7</b>	+	<b>Vout2</b>	输出正
<b>8~10</b>			空脚
<b>10~12</b>			空脚

## Temperature characteristic curve

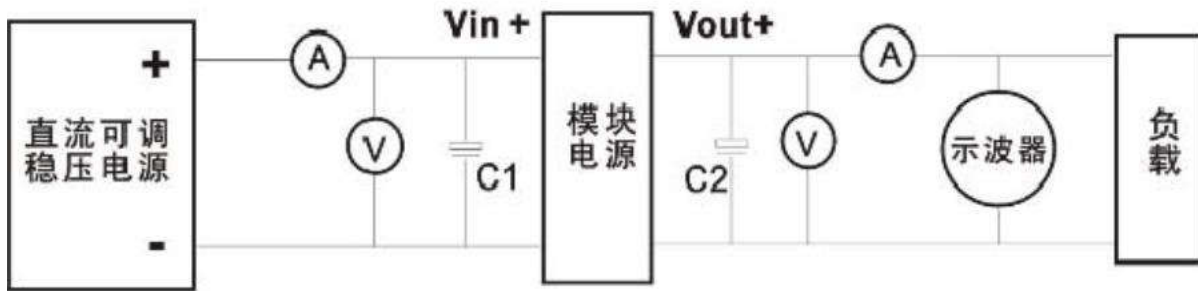


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## SUNYUAN DC-DC模块电源产品检测方法

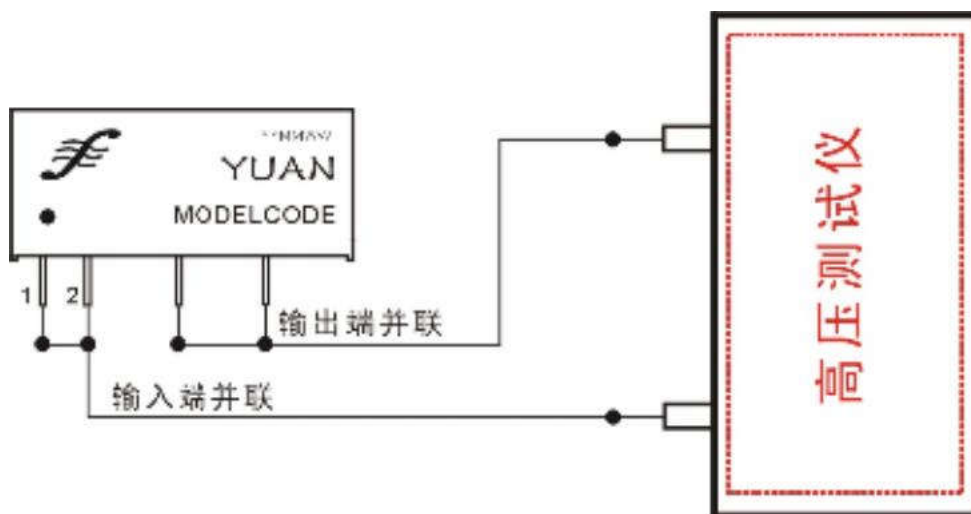
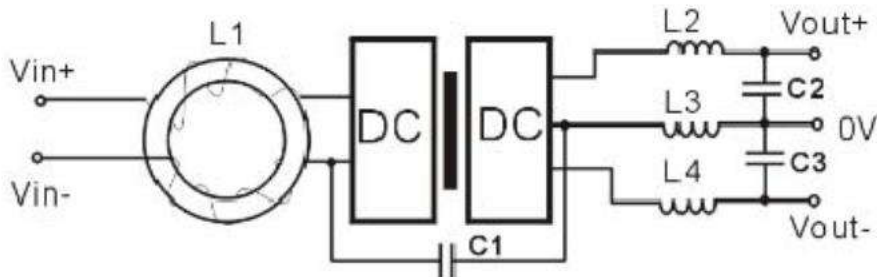
测试采用标准的开尔文四端输入和额定负载（如图）。  
测试条件：室温 $T_A=25^{\circ}\text{C}$ ，湿度： $<75\%$ 。标称输入和额定负载。



DC-DC 模块电源产品检测参考图

## DC-DC 减小噪声共模干扰的参考方法

模块电源在开关频率工作下会产生共模和差模噪声。减少噪声和噪声的方法是在输入、输出端加上无源LC或RC（损耗较大）滤波网络。L的自身谐振频率要远高于模块的开关频率，允许通过的电流值也最好选在模块最大输入电流的两倍以上，内阻要较小以降低直流损耗。对于固定频率的模块，可以计算其滤波网络参数，一般的差模噪声很小只需在输入外接L1（共模扼流圈），即可满足要求。



输入与输出间隔离测试参考图