恒率 HDY

值得您托付的企业

DC-DC 模块电源

S(D)XXHDXX-XW（定电压输入“高隔离”非稳压双输出型 功率：2W Max）

说明：单排直插（SIP）封装或双排直插 DIP（封装），任意值电压输入转换出任意值电压输出，精度为±2%或±3%.

简说：DC/DC 定电压隔离双输出（两路正压或两路负压及或一正一负）转换器，输出共同一地线，瞬变响应快，极低纹波噪声输出，无需任何外围元件即可工作，脚位采用 7PIN 单列，14PIN 双列直插，小型封装。

应用： 便携仪表，医学仪表，自控装置，防盗报警器，手持仪表等数字电路。

输出特性：

负载效应：≤±3% 20%-100%负载

严禁长时间空载运行！

具有短时间(1s)短路，过载，过热保护电路，自恢复。

纹波/噪声：5VDC 50mV Max， 9VDC 60mV Max

12VDC,15VDC,24VDC 100mV Max

开关频率：50KHz-800KHz

空载电压：5VDC,9VDC(+0.8VDC Max)

12VDC,15VDC,24VDC (+1.5VDC Max)

一般特性：

源效应： 输入电压从低至高

平均无故障时间(MTBF):200000h

温漂系数：≤±0.03%摄氏度

隔离电压：3000VDC 0.5mA 1Minute

工作温度：-40~+85℃，**存储温度**：-65~+150℃

引脚焊接：≤10S 300℃ Max

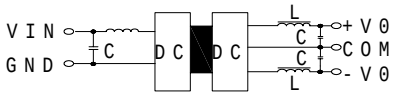
外壳：高阻燃塑胶外壳（UL94-V0）

最大工作壳温：85℃，相对温度：10%~90%

散热方式：自然冷却，无需加散热器

使用注意事项:

滤波：在一些对噪声和纹波敏感的电路中，可在 DC/DC 输出端和输入外滤波电容，以减少纹波值.但输出滤波电容器的容值要适当，若电容太大，很可能会造成启动问题.对于每一路输出，在确保安全可靠工作的条件下，其滤波电容的最大容值详见外接电容表.为了获得非常低日纹波值时，可在 DC/DC 转换器输入输出端联接一个“LC”滤波网络，这样滤波的效果更明显。同时应注意到电感值的大小及“LC”滤波网络其自身的频率应于 DC/DC 频率错开，避免相互干扰(如下图)



过载保护：在通常工作条件下，该产品输出电路对于过流及短路情况无保护功能。最简单的方法是在输入端串接一个自恢复保险丝，或在电路中外加一个断路器。

产品型号	输入电压	输出电压	负载电流	满载效率	封装
S(D)05HD3.3-1W	5VDC±5%	±3.3VDC±3%	±15mA-±150mA	72% Min	SIP/DIP
S(D)05HD3.3-2W		±3.3VDC±3%	±30mA-±300mA	75% Min	SIP/DIP
S(D)05HD05-1W		±5VDC±3%	±10mA-±100mA	72% Min	SIP/DIP
S(D)05HD05-2W		±5VDC±3%	±20mA-±200mA	75% Min	SIP/DIP
S(D)05HD09-1W		±9VDC±3%	±55mA-±55mA	72% Min	SIP/DIP
S(D)05HD09-2W		±9VDC±3%	±11mA-±110mA	75% Min	SIP/DIP
S(D)05HD12-1W		±12VDC±2%	±4.1mA-±41.5mA	75% Min	SIP/DIP
S(D)05HD12-2W		±12VDC±2%	±83.5mA-±83.5mA	78% Min	SIP/DIP
S(D)05HD15-1W		±15VDC±2%	±3.3mA-±33.5mA	75% Min	SIP/DIP
S(D)05HD15-2W		±15VDC±2%	±2.6mA-±26.6mA	78% Min	SIP/DIP
S(D)05HD24-1W		±24VDC±2%	±2.1mA-±21mA	78% Min	SIP/DIP
S(D)05HD24-2W		±24VDC±2%	±4.1mA-±41.5mA	80% Min	SIP/DIP
S(D)09HD3.3-1W	9VDC±5%	±3.3VDC±3%	±15mA-±150mA	72% Min	SIP/DIP
S(D)09HD3.3-2W		±3.3VDC±3%	±30mA-±300mA	75% Min	SIP/DIP
S(D)09HD05-1W		±5VDC±3%	±10mA-±100mA	72% Min	SIP/DIP
S(D)09HD05-2W		±5VDC±3%	±20mA-±200mA	75% Min	SIP/DIP
S(D)09HD09-1W		±9VDC±3%	±55mA-±55mA	72% Min	SIP/DIP
S(D)09HD09-2W		±9VDC±3%	±11mA-±110mA	75% Min	SIP/DIP
S(D)09HD12-1W		±12VDC±2%	±4.1mA-±41.5mA	75% Min	SIP/DIP
S(D)09HD12-2W		±12VDC±2%	±83.5mA-±83.5mA	78% Min	SIP/DIP
S(D)09HD15-1W		±15VDC±2%	±3.3mA-±33.5mA	75% Min	SIP/DIP
S(D)09HD15-2W		±15VDC±2%	±2.6mA-±26.6mA	78% Min	SIP/DIP
S(D)09HD24-1W		±24VDC±2%	±2.1mA-±21mA	78% Min	SIP/DIP
S(D)09HD24-2W		±24VDC±2%	±4.1mA-±41.5mA	81% Min	SIP/DIP
S(D)12HD3.3-1W	12VDC±5%	±3.3VDC±3%	±15mA-±150mA	72% Min	SIP/DIP
S(D)12HD3.3-2W		±3.3VDC±3%	±30mA-±300mA	75% Min	SIP/DIP
S(D)12HD05-1W		±5VDC±3%	±10mA-±100mA	75% Min	SIP/DIP
S(D)12HD05-2W		±5VDC±3%	±20mA-±200mA	78% Min	SIP/DIP
S(D)12HD09-1W		±9VDC±3%	±55mA-±55mA	75% Min	SIP/DIP
S(D)12HD09-2W		±9VDC±3%	±11mA-±110mA	78% Min	SIP/DIP
S(D)12HD12-1W		±12VDC±2%	±4.1mA-±41.5mA	75% Min	SIP/DIP

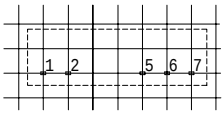
DC-DC模块电源

输出负载要求：为了确保该模块能够高效可靠的工作，该类型 DC/DC 转换器，除了规定最大负载（即满负载），同时也规定了一个最小负载。在使用时，要确保在规定输入电压范围内，其输出最小负载不能小于满负载的 20%，且该产品***严禁空载使用！***若您的电路中负载实际所输功率实较小，请在输出端并联一个适当阻值的电阻以增加负载，或选用敝公司的额定输出功率较小的产品最小可做到 0.1W（一般此模块正常使用时负载率在 20%-70%为最佳状态）。

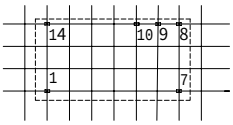
输入电压	外接电容	输出电压	外接电容
5VDC	4.7μF	5VDC	4.7μF
12VDC	2.2μF	9VDC	2.2μF
24VDC	1μF	12VDC	1μF
——	——	15VDC	0.47μF

外形尺寸、建议印刷板图、引脚方式：

单列直插



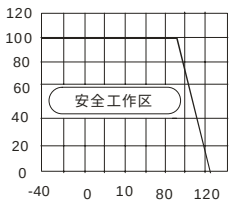
双列直插



俯视图,栅格间距 2.54mm(0.1inch),开孔直径 1.00mm

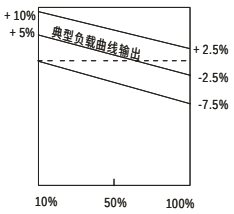
温度曲线图：

输入功率（%）：



环 境 温 度 （℃）

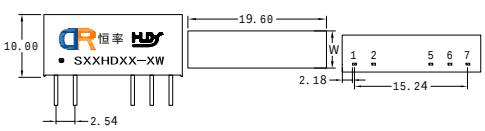
输出电压（%）：



输 出 电 流（%）

型号	输入电压	输出电压	输出电流	效率	封装
S(D)12HD12-2W	12VDC±5%	±12VDC±2%	±83.5mA-±83.5mA	78% Min	SIP/DIP
S(D)12HD15-1W		±15VDC±2%	±3.3mA-±33.5mA	75% Min	SIP/DIP
S(D)12HD15-2W		±15VDC±2%	±2.6mA-±26.6mA	78% Min	SIP/DIP
S(D)12HD24-1W		±24VDC±2%	±2.1mA-±21mA	78% Min	SIP/DIP
S(D)12HD24-2W		±24VDC±2%	±4.1mA-±41.5mA	81% Min	SIP/DIP
S(D)15HD3.3-1W	15VDC±5%	±3.3VDC±3%	±15mA-±150mA	72% Min	SIP/DIP
S(D)15HD3.3-2W		±3.3VDC±3%	±30mA-±300mA	75% Min	SIP/DIP
S(D)15HD05-1W		±5VDC±3%	±10mA-±100mA	75% Min	SIP/DIP
S(D)15HD05-2W		±5VDC±3%	±20mA-±200mA	78% Min	SIP/DIP
S(D)15HD09-1W		±9VDC±3%	±5.5mA-±55mA	75% Min	SIP/DIP
S(D)15HD09-2W		±9VDC±3%	±11mA-±110mA	78% Min	SIP/DIP
S(D)15HD12-1W		±12VDC±2%	±4.1mA-±41.5mA	75% Min	SIP/DIP
S(D)15HD12-2W		±12VDC±2%	±8.3mA-±83.5mA	75% Min	SIP/DIP
S(D)15HD15-1W		±15VDC±2%	±3.3mA-±33.5mA	75% Min	SIP/DIP
S(D)15HD15-2W		±15VDC±2%	±2.6mA-±26.6mA	75% Min	SIP/DIP
S(D)15HD24-1W		±24VDC±2%	±2.1mA-±21mA	78% Min	SIP/DIP
S(D)15HD24-2W		±24VDC±2%	±4.1mA-±41.5mA	82% Min	SIP/DIP
S(D)24HD3.3-1W	24VDC±5%	±3.3VDC±3%	±15mA-±150mA	72% Min	SIP/DIP
S(D)24HD3.3-2W		±3.3VDC±3%	±30mA-±300mA	75% Min	SIP/DIP
S(D)24HD05-1W		±5VDC±3%	±10mA-±100mA	75% Min	SIP/DIP
S(D)24HD05-2W		±5VDC±3%	±20mA-±200mA	78% Min	SIP/DIP
S(D)24HD09-1W		±9VDC±3%	±55mA-±55mA	75% Min	SIP/DIP
S(D)24HD09-2W		±9VDC±3%	±11mA-±110mA	78% Min	SIP/DIP
S(D)24HD12-1W		±12VDC±2%	±4.1mA-±41.5mA	75% Min	SIP/DIP
S(D)24HD12-2W		±12VDC±2%	±83.5mA-±83.5mA	78% Min	SIP/DIP
S(D)24HD15-1W		±15VDC±2%	±3.3mA-±33.5mA	78% Min	SIP/DIP
S(D)24HD15-2W		±15VDC±2%	±2.6mA-±26.6mA	80% Min	SIP/DIP
S(D)24HD24-1W		±24VDC±2%	±2.1mA-±21mA	78% Min	SIP/DIP
S(D)24HD24-2W		±24VDC±2%	±4.1mA-±41.5mA	83% Min	SIP/DIP

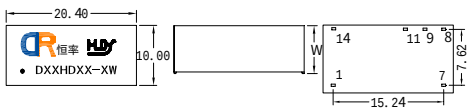
单列直插-外观尺寸图



功率≤1W(W=6.0)　功率≤2W(W=7.0)

引脚	功能
1	Vin
2	GND
5	Vo1
6	Com
7	Vo2

双列直插-外观尺寸图



功率≤1W(H=6.5)　功率≤2W(W=7.5)

引脚	功能
1	GND
7	NC
8	VO2
9	COM
10	Vo2
14	Vin

单位：mm　端子截面尺寸:0.50*0.30mm(0.020*0.012inch)　端子公差 0.10mm（0.004inch）　未标注之公差:0.25mm(0.010inch)