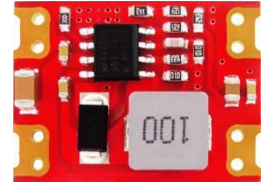


Product characteristics

- ◇ Step Down
- ◇ Package outline: SOC
- ◇ Temperature range: -40°C至+85°C
- ◇ Efficiency: max88%
- ◇ Input range: 4.5 - 36VDC
- ◇ application area: industry、Instrumentation、RF communication、track、traffic、Smart Street Lamp、Smart Home、Intelligent switch、Smart Home.



Selection Guide

Product model	Input Voltage (VDC)	Output			Temperature range (°C)	Max capacitive load (μF)
	Nominal value (Range value)	Power (W)	Voltage (VDC)	current (mA) Max./Min		
DM02-28033024DS	12 (4.5 - 28)	8	3.3	2400	-20°C to +85°C	1000
DM02-28050016DS	12 (7.5 - 28)	8	5.0	1600	-20°C to +85°C	820
DM02-28090008DS	12 (11.5 - 28)	8	9.0	888	-20°C to +85°C	680
DM02-28120006DS	24 (14.5 - 28)	8	12	666	-20°C to +85°C	470
DM02-36033024DS	12 (4.5 - 36)	8	3.3	2400	-40°C to +85°C	1000
DM02-36050016DS	12 (7.5 - 36)	8	5.0	1600	-40°C to +85°C	820
DM02-36090008DS	12 (11.5 - 36)	8	9.0	888	-40°C to +85°C	680
DM02-36120006DS	24 (14.5 - 36)	8	12	666	-40°C to +85°C	470

Input Specifications

Item	Operating Conditions			Min.	Typ.	Max.	Unit
Input current	model	Input	Output	--	--	--	mA

		Voltage	Voltage				
	DM02-28033024DS	12V	3.3V	2	785	--	
	DM02-28050016DS	12V	5V	2	745	--	
	DM02-28090008DS	12V	9V	2	676	--	
	DM02-28120006DS	24V	12V	2	350	--	
	DM02-36033024DS	12V	3.3V	1	785	--	
	DM02-36050016DS	12V	5V	1	745	--	
	DM02-36090008DS	12V	9V	1	676	--	
	DM02-36120006DS	24V	12V	1	350	--	
Ripple & Noise	DM02			40	--	150	mV
starting voltage	DM02-28033024DS			4.5	--	5	VDC
	DM02-28050016DS			7.5	--	8	
	DM02-28090008DS			11.5	--	12	
	DM02-28120006DS			14.5	--	15	
	DM02-36033024DS			4	--	4.5	
	DM02-36050016DS			6.5	--	7	
	DM02-36090008DS			10.5	--	11	
	DM02-36120006DS			13.5	--	14	
Input low voltage protection				Not.			
Input filter Typ				C			
Recommended External Input Fuse				2A/60V, slow-blow, required			

Output Specifications

Item	Operating Conditions	Min.	Typ.	Max.	Unit
Output Voltage Accuracy	0%-100% load	--	±1	±3	%
Line Regulation	Full load	--	±0.3	±0.5	
Load Regulation	5%~100% Load(balanced load)	--	±1	±2	
Ripple & Noise	20MHz bandwidth (peak-to-peak value)	40	--	150	mVp-p
Temperature Coefficient		--	±0.1	--	%/°C
Over voltage protection	DM02	Not.			
Over current protection		Not.			
Short circuit protection		Not.			

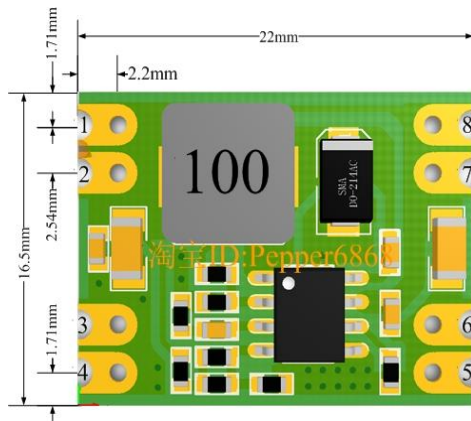
General Specifications

Item	Operating Conditions		Min.	Typ.	Max.
Switching Frequency	DM02	--	500	--	KHz
operating Temperature	DM02-28XXX	-20	25	+40	°C
	DM02-36XXX	-40	25	+40	
storage Temperature	DM02-28XXX	-20	25	+85	°C
	DM02-36XXX	-40	25	+85	
storage Humidity		--	--	95	%RH

Mechanical Specifications

Size	16.5×22 x 4.5mm
Weight	2g
Cooling method	Free air convection

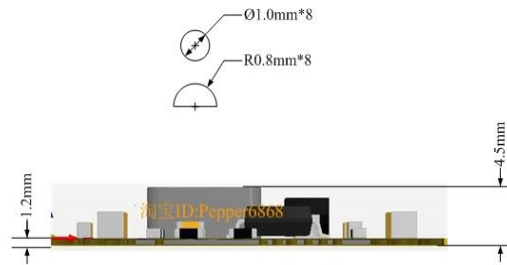
Dimensions and Recommended Layout



Note:

Pin diameter tolerances:±0.1mm

General tolerances:±0.5mm



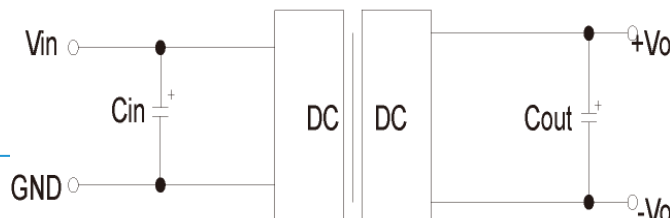
Order name	Name	Orientation	Use
1、2	Vo +	output	Output power supply positive.
3、4	Vo -	output	Earth wire, output port power reference ground.
5、6	Vin -	input	Earth wire, link to power reference ground.
7、8	Vin+	input	The maximum input of power supply is 28V, over 28V will damage module permanently.

电路设计

1.典型应用电路

所有该系列的 DC/DC 转换器在出厂前，都是按照（图 2）推荐的测试电路进行测试。

若要求进一步减少输入输出纹波，可将输入输出外接电容 C_{in} 、 C_{out} 加大或选用串联等效阻抗值小的电容，但容值不能大于该产品的最大容性负载。



注:

1. 若产品工作于最小要求负载以下, 则不能保证产品性能均符合本手册中所有性能指标;
2. 最大容性负载均在输入电压范围、满负载条件下测试;
3. 除特殊说明外, 本手册所有指标都在 Ta=25°C, 温度<75%RH, 标称输入电压和输出额定负载时测得;
4. 本手册所有指标测试方法均依据本公司企业标准;
5. 我司可提供产品定制, 具体需求可直接联系我司技术人员;

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