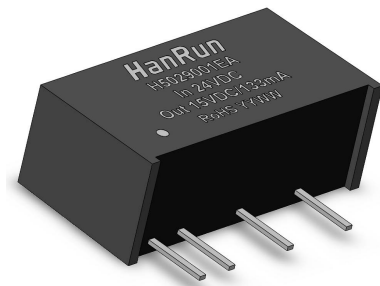


2W isolated DC-DC converter
Fixed input voltage, unregulated dual output



H5029001EA

- Features :
- I/O isolation test voltage: 1500VDC
 - Continuous short-circuit protection
 - High efficiency up to 90%
 - Capacitive Load: 560μF Max.
 - Industry standard pin-out
 - Operating ambient temperature range: -40℃ to +105℃
 - Designed to Comply with EN 62368-1, IEC 62368-1



This model is specially designed for applications where an isolated voltage is required in a distributed power supply system. It is suitable for: pure digital circuits, low frequency analog circuits, relay-driven circuits and data switching circuits.

Input Specifications					
Item	Operating Conditions	Min.	Typ.	Max.	Unit
Input Voltage Range	DC Input	21.6	24	26.4	V
Input Current	Vin=24VDC, Io=0mA	—	7	10	mA
Input Current	Vin=24VDC, Io=133mA	—	95	104	mA
Reflected Ripple Current		—	15	—	mA
Surge Voltage (1sec. max.)		-0.3	—	30	V
Input Filter		Capacitance filter			
Hot Plug		Unavailable			

Output Specifications					
Item	Operating Conditions	Min.	Typ.	Max.	Unit
DC Output Current	Nominal Input Voltage	13	—	133	mA
DC Output Voltage	Vin=24VDC, Io=133mA	—	15	—	VDC
Ouput Voltage Accuracy	See output regulation curves (Fig. 1)				
Line Regulation	Input voltage change: ±1%	—	—	±1.2	%/%
Load Regulation	24VDC input, 10%–100% load	—	7	10	%
Temperature Coefficient	Full load	—	±0.03	—	%/°C
Ripple & Noise	20MHz bandwidth (parallel cable method)	—	75	180	mVp-p
Short circuit Protection	Continuous, self-recovery				
Note:* The “parallel cable” method is used for Ripple and Noise test.					

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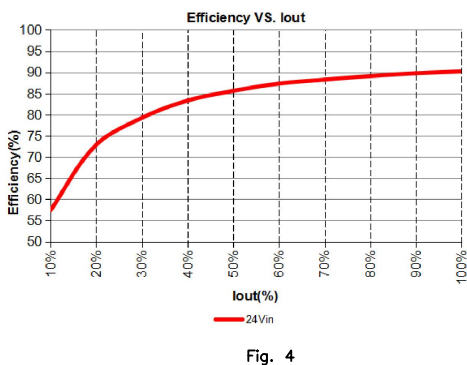
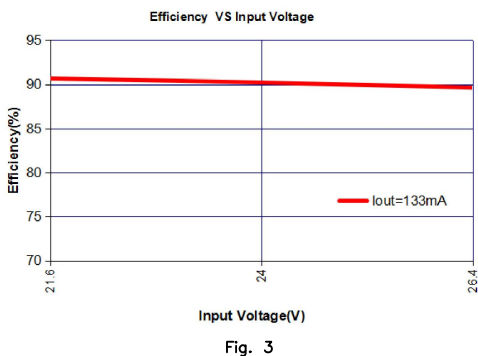
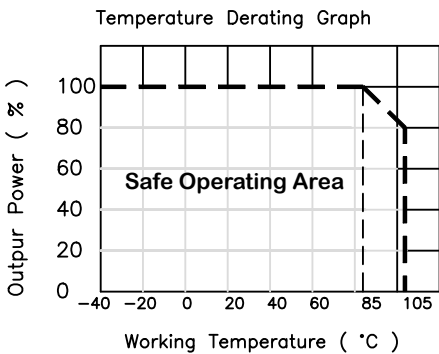
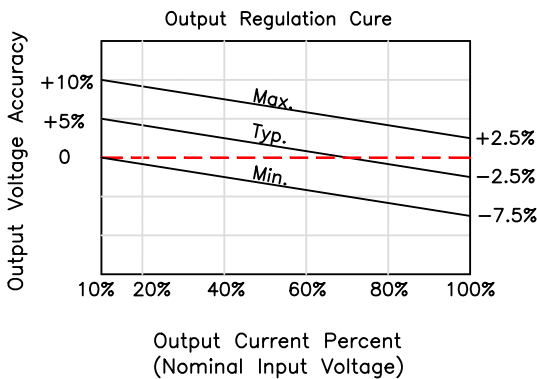


H5029001EA

General Specifications					
Item	Operating Conditions	Min.	Typ.	Max.	Unit
Isolation Voltage	Input to output, test for 60 second with 1 mA Max	1500	—	—	VDC
Insulation Resistance	Input to output,at 500VDC	1000	—	—	Mohm
Isolation capacitor	Input to output,100KHz 0.1V	—	20	—	pF
Operating Temperature	Derating when operating temperature≥85℃,(see Fig. 2)	−40	—	+105	℃
Storage Temperature		−55	—	+125	℃
Storage Humidity	Non—condensing	5	—	95	%
Case Temperature Rise	Ta=25℃, nominal input voltage, full load	—	15	—	℃
Switching Frequency	full load,nominal input voltage	—	250	—	KHz
Efficiency	24VDC Input, Full load	82	86	—	%
Pin Soldering Resistance Temperature	Soldering spot is 1.5mm away from case for 10s seconds	—	—	300	℃
Capacitive Load	24VDC Input, Full load	—	—	560	μF
Safety Standard	Safety Standard	EN 62368-1,IEC 62368-1			
MTBF	MIL-HDBK-217F@25℃	3500	—	—	Khours
Vibration	10-150Hz, 5G, 0.75mm. along X, Y and Z				
Physical Specifications					
Casing Material	Black plastic; flame-retardant and heat-resistant (UL94 V-0)				
Epoxy	Black ,UL94 V-0				
Dimensions	19.65 x 7.05 x 10.10 mm				
Weight	2.4g (typ.)				
Cooling Method	Free air convection				
Electromagnetic Compatibility (EMC)					
Emissions	CE	CISPR32/EN55032 CLASS B (see Fig.6 for recommended circuit)			
	RE	CISPR32/EN55032 CLASS B (see Fig.6 for recommended circuit)			
Immunity	ESD	IEC/EN61000-4-2 Air ±6kV, Contact ±8kV perf. Criteria B			

H5029001EA

Typical Characteristic Curve:



2W isolated DC-DC converter

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H5029001EA

Design Reference:

1. Typical application

Input and/or output ripple can be further reduced, by connecting a filter capacitor from the input and/or output terminals to ground as shown in Fig.5.

Choosing suitable filter capacitor values is very important for a smooth operation of the modules, particularly to avoid start-up problems caused by capacitor values that are too high .

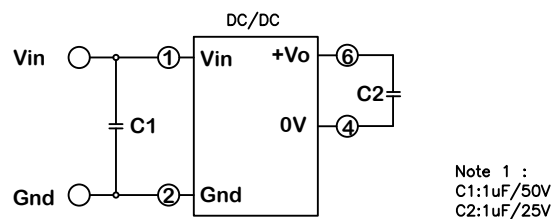


Fig. 5

2. EMC typical recommended circuit

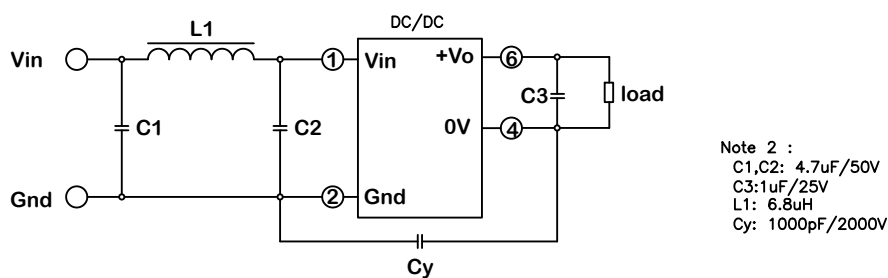


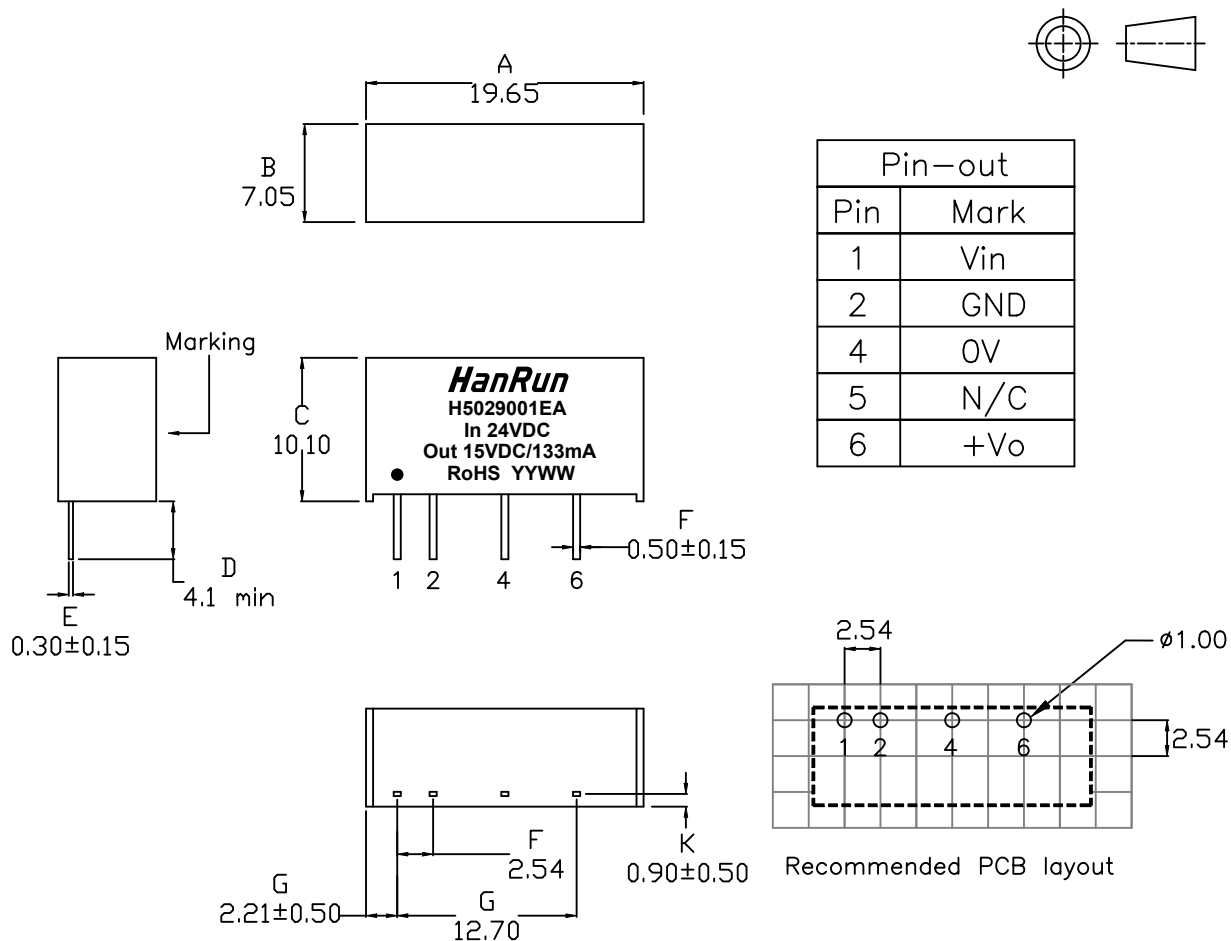
Fig.6

Note 3 :

- 1.If the product is not operated within the required load range, the product performance cannot be guaranteed to comply with all parameters in the datasheet;
- 2.The maximum capacitive load offered were tested at input voltage range and full load;
- 3.Unless otherwise specified, parameters in this datasheet were measured under the conditions of Ta=25℃, humidity<75%RH with nominal input voltage and rated output load;
- 4.All index testing methods in this datasheet are based on our company corporate standards;
- 5.Products are related to laws and regulations: see "Features" and "EMC";

H5029001EA

Dimensions and Recommended Layout:



Unit : mm
Unless otherwise specified,
Tolerance: .xx ± 0.25