

**FEATURES :**

- 4 PIN SIP and 8 PIN DIL Package.
- High insulation 3000Vdc.
- High Efficiency up to 85%.
- Unregulated Output Types.
- Internal SMD Construction
- No External Component Required
- Operating Temperature:-40°C TO +85°C
- Industry Standard Pinout

YUAN DEAN SCIENTIFIC



DC-DC Converter

13D1 SERIES

1Watt

3KV Isolated

Single Output

SIP4 & DIL8

Specifications typical at TA=25°C, nominal input voltage and rated output current unless otherwise specified

Part Number	Output Voltage	Output Current	Efficiency	Package Style
	Vdc	mA	%TYP	"X"
13D1-XXS03NX	3.3	303	70	1/2/3/4
13D1-XXS05NX	5	200	70	1/2/3/4
13D1-XXS09NX	9	112	75	1/2/3/4
13D1-XXS12NX	12	84	78	1/2/3/4
13D1-XXS15NX	15	67	80	2/3/4
13D1-XXS24NX	24	42	82	2/3/4

**Note:**

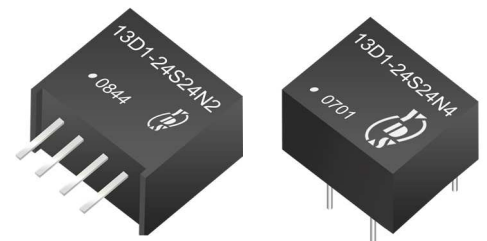
- 1."XX" Is Input Voltage:03=3.3Vdc,05=05Vdc,09=09Vdc,12=12Vdc,15=15Vdc,24=24Vdc.
2. Vin:15Vdc, Vout:15Vdc, using the 2 package.
3. Vin:24Vdc, Vout:24Vdc, using the 3 package.
4. The input voltage increases, there will be an increase in efficiency.

**Input Specifications**

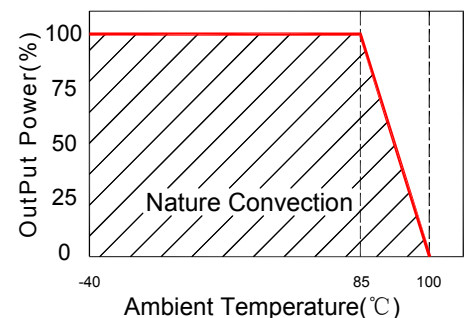
Parameters	Conditions	Min	Typ	Max	Units
Voltage Tolerance	Vo,Io Nom			±10	%
Filter	Capacitor				

**Output Specifications**

Parameters	Conditions	Min	Typ	Max	Units
Voltage Tolerance	100% full load			±5	%
Short Circuit Protection	Short Term			1	Sec
Line Regulation	For 1.0% OF Vin		1.2		%
Load Regulation	3.3V & 5V (10% To 100% F.L)			15	%
Load Regulation	9V,12V,15V&24V (10% To 100% F.L)			10	%
Ripple & Noise	BW=DC To 20MHz (Package 1)			150	mVp-p
Ripple & Noise	BW=DC To 20MHz (Package 2/3/4)			100	mVp-p
Transient response setting	50% load step change		350		us



**Temperature Derating Graph**



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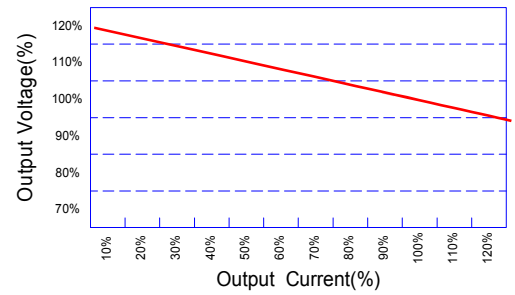
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Rev:1 2018/10/02

General Specifications

Parameters	Conditions	Min	Typ	Max	Units
Isolation Resistance	500Vdc	1000			MΩ
Switching Frequency	Full load, nominal input		100		KHz
Operating Temperature		-40		+85	°C
Humidity	Non Condensing			95	%
Cooling	Free air Convection				
Case material	DAP				
MTBF	MIL-HDBK-217F @25°C	3500000			Hours
Weight	Package 1/2/3/4		1.1/1.5/1.9/1.9		g
Dimensions	Package 1		11.50x6.00x7.5		mm
Dimensions	Package 2		11.50x6.00x10.0		mm
Dimensions	Package 3		11.50x7.50x10.0		mm
Dimensions	Package 4		12.7x10.16x7.50		mm

Tolerance Envelope Graph

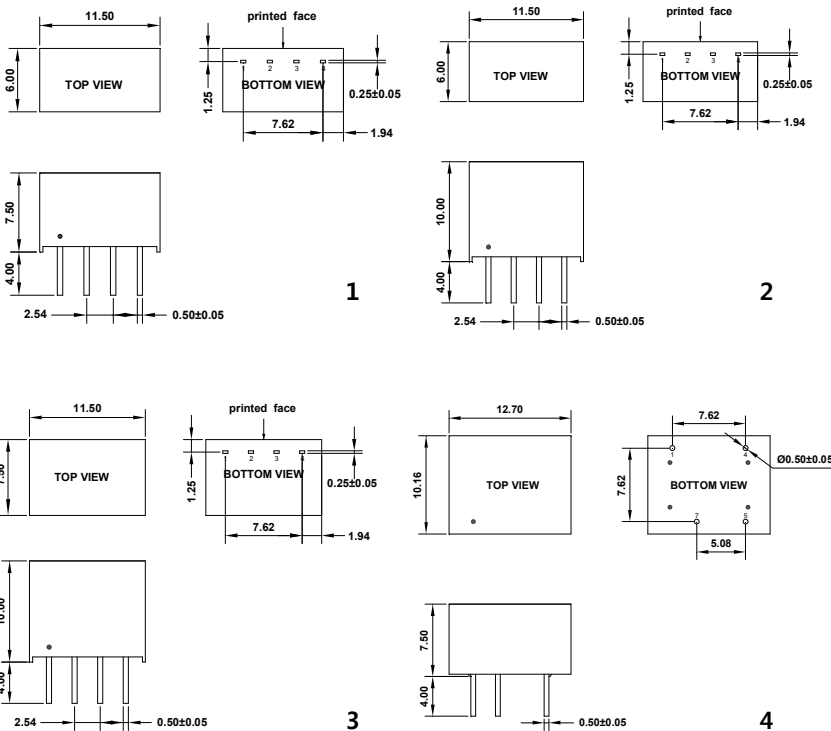


Part Number

13D1 - 03 S 05 N 2  
A B C D E F

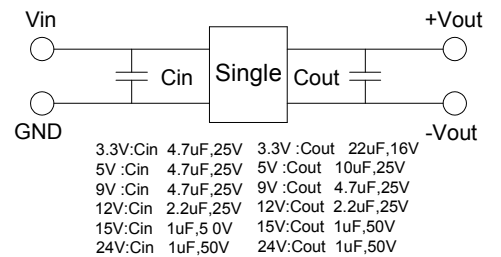
- A:Series
- B:Input Voltage
- C:Single Output
- D:Output Voltage
- E:Unregulated(N)
- F:Package

Markings and Dimensions



Unit:mm Unless otherwise specified, all tolerances are ±0.25

Recommended Test Circuit



PIN Connection

PIN	1	2	3	4	5	7
4in	-Vin	+Vin	-Vout	+Vout		
8in	-Vin			+Vin	+Vout	-Vout

