

**FEATURES :**

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

YUAN DEAN SCIENTIFIC



DC-DC Converter

13D-2W SERIES

2Watt

1KV Isolated

Single Output

SIP4

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

Part Number	Output Voltage	Output Current	Efficiency
	Vdc	mA	%
13D-XXS05N2WNL	5	400	70
13D-XXS09N2WNL	9	222	75
13D-XXS12N2WNL	12	167	80
13D-XXS15N2WNL	15	133	80
13D-XXS24N2WNL	24	84	85

**Note:**

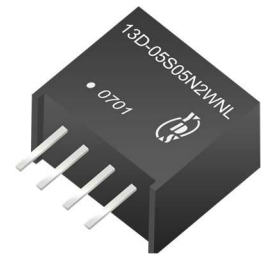
- 1."XX" Is Input Voltage : 05=5Vdc,09=9Vdc,12=12Vdc,15=15Vdc,24=24Vdc.
- 2.The input voltage increases, there will be an increase in efficiency.

**Input Specifications**

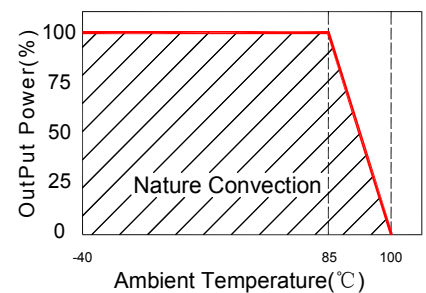
Parameters	Conditions	Min	Typ	Max	Units
Voltage Tolerance	Vo,Io Nom			±10	%
Filter	Capacitor				

**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			100	mVp-p
Transient response setting	50% load step change		350		us



**Temperature Derating Graph**



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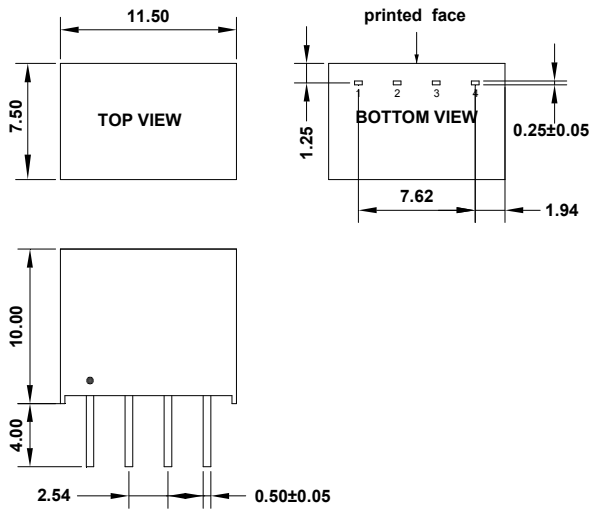
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Rev:1 2018/10/02

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			1.8		g
Dimensions			11.50x7.50x10.00		mm

Markings and Dimensions

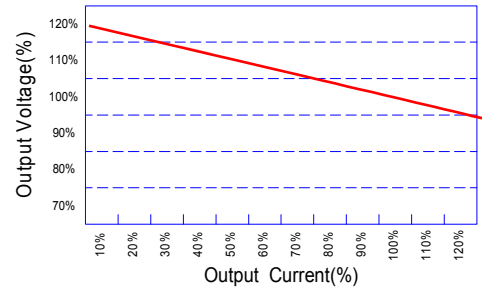


Unit:mm Unless otherwise specified, all tolerances are ±0.25

PIN Connection

PIN	1	2	3	4
Single	-Vin	+Vin	-Vout	+Vout

Tolerance Envelope Graph

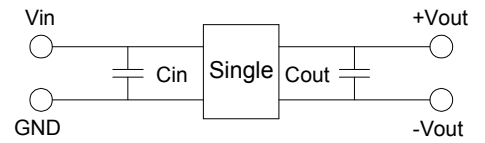


Part Number

13D - 05 S 05 N 2W NL  
 A B C D E F G

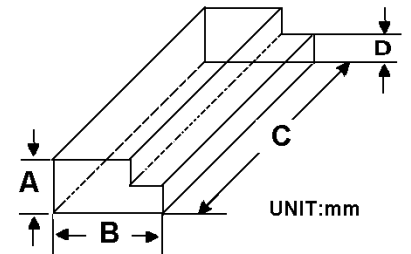
- A:Series
- B:Input Voltage
- C:Single(S)
- D:Output Voltage
- E:Unregulated(N)
- F:Output Power
- G:RoHS Version

Recommended Test Circuit



5V :Cin	4.7uF,25V	5V :Cout	10uF,25V
9V :Cin	4.7uF,25V	9V :Cout	4.7uF,25V
12V :Cin	2.2uF,25V	12V :Cout	2.2uF,25V
15V :Cin	1uF,50V	15V :Cout	1uF,50V
24V :Cin	1uF,50V	24V :Cout	1uF,50V

Packaging



Size(mm)			
A	B	C	D
9.50	16.50	522	5.00

