

FEATURES :

- Small Footprint
- 14PIN SMD Package
- High Efficiency up to 74%
- Unregulated Output Types
- High Power Density
- No External Component Required
- Operating Temperature:-40°C TO +85°C
- Industry Standard Pinout

YUAN DEAN SCIENTIFIC



DC-DC Converter

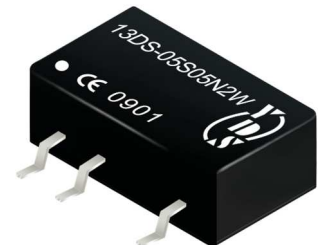
13DS-2W SERIES

2Watt

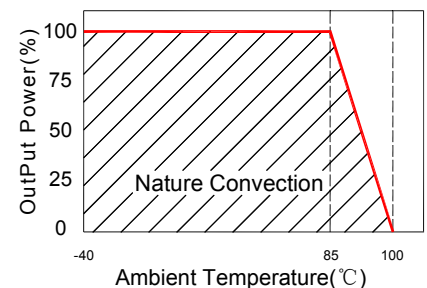
1KV Isolated

Single Output

SMD



Temperature Derating Graph



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	%TYP
13DS-03S03N2W	3.3	606	67
13DS-03S05N2W	5	400	72
13DS-03S09N2W	9	222	72
13DS-03S12N2W	12	167	72
13DS-05S03N2W	3.3	606	70
13DS-05S05N2W	5	400	72
13DS-05S09N2W	9	222	74
13DS-05S12N2W	12	167	74
13DS-09S03N2W	3.3	606	72
13DS-09S05N2W	5	400	74
13DS-09S09N2W	9	222	74
13DS-09S12N2W	12	167	74
13DS-12S03N2W	3.3	606	72
13DS-12S05N2W	5	400	72
13DS-12S09N2W	9	222	74
13DS-12S12N2W	12	167	74

Input Specifications

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



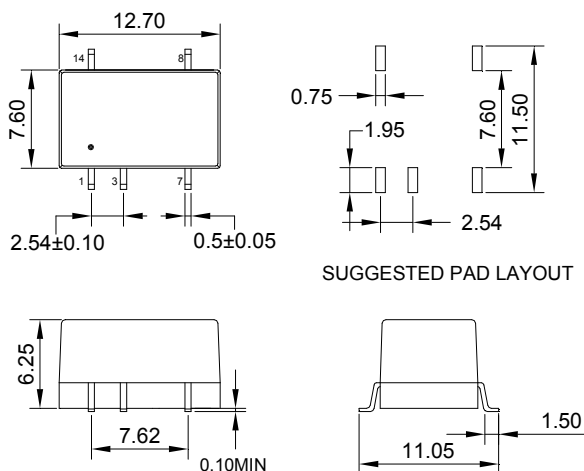
Output Specifications

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 (10% To 100% F.L)		15		%
Load Regulation	5V,9V (10% To 100% F.L)			15&9.0	%
Load Regulation	12V (10% To 100% F.L)			7.5	%
Ripple & Noise	BW=DC To 20MHz			100	mVp-p
Transient response setting time	50% load step change		350		us

General Specifications

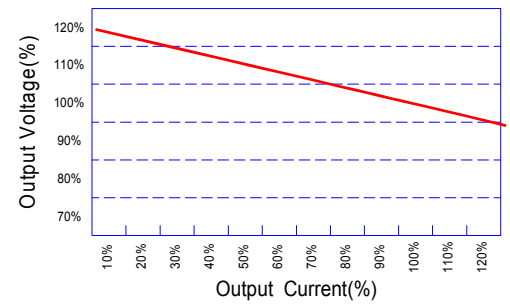
Parameters	Conditions	Min	Typ	Max	Units
Isolation Resistance	500Vdc	1000			MΩ
Switching Frequency	Full load, nominal input		100		KHz
Operating Temperature		-40		+85	°C
Humidity	Non Condensing			95	%
Cooling	Free air Convection				
Case material	DAP				
MTBF	MIL-HDBK-217F @25°C	3500000			Hours
Weight			1.2		g
Dimensions			12.7x7.6x6.25		mm

Markings and dimensions



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

Tolerance Envelope Graph

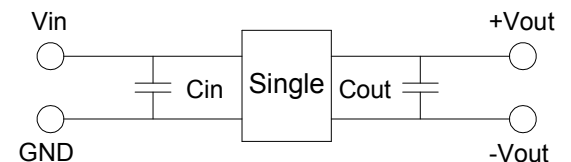


Part Number

13DS - 03 S 03 N 2W
A B C D E

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

Recommended Test Circuit



3.3V:Cin 4.7uF,25V 3.3V :Cout 22uF,16V
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

PIN Connection

Pin	1	3	7	8	14
Single	-Vin	+Vin	-Vout	+Vout	NC

