

1D14A_DS3UP Series

1W - Dual Separate Output - Fixed Input - Isolated & Unregulated
 DIP PACKAGE



DC-DC Converter

1 Watt

- ⊕ 14PIN DIP package
- ⊕ Efficiency up to 80%
- ⊕ Temperature range:
-40°C ~ +85°C
- ⊕ No external component required
- ⊕ Short circuit protection (SCP)
- ⊕ 3KVDC isolation
- ⊕ Internal SMD construction
- ⊕ Unregulated output types
- ⊕ Industry standard pinout
- ⊕ RoHS compliance
- ⊕ Dual separate isolated outputs

The 1D14A_DS3UP Series are miniature, isolated 1W DC/DC-converters with twin output voltage in a DIP package. They offer the ideal solution in many space critical applications for board level power distribution. The internal SMD construction makes it possible to offer a product with high performance at low cost. The series offers smaller size, improved efficiency, lower output ripple noise and 3KVDC isolation.



Common specifications

Short circuit protection:	continuous, automatic recovery
Temperature rise at full load:	25°C MAX, 15°C TYP
Cooling:	Free air convection
Operation temperature range:	-40°C – +85°C
Storage temperature range:	-55°C – +130°C
Lead temperature:	300°C (1.5mm from case for 10 sec.)
Storage humidity range:	< 95%
Case material:	Plastic [UL94-V0]
MTBF:	>3,500,000 hours
Weight:	2.3g

Input specifications

Item	Test condition	Min	Typ	Max	Units
Voltage range	• 5V input types • 12V input types	4.5 11	5 12	5.5 13	V
Voltage tolerance	Vo, Io nom			±5	%
Filter	Capacitor				

Isolation specifications

Item	Test condition	Min	Typ	Max	Units
Isolation voltage	Tested for 1 minute	3000			VDC
Isolation resistance	Test at 1000VDC	1			GΩ

Output specifications

Item	Test condition	Min	Typ	Max	Units
Voltage tolerance	100% full load			±5	%
Line regulation	For Vin change of ±1%	1.0		1.2	%
Load regulation	10% to 100% full load • 3.3V/5V • 9V/12V/15V			14 9	% %
Temperature drift	100% full load			±0.03	%/°C
Ripple & Noise	20MHz Bandwidth	75		100	mVp-p
Switching frequency	Full load, nominal input	110			KHz

*Test ripple and noise by “parallel cable” method. See detailed operation instructions at Testing of Power Converter section, application notes.

Model selection:

WCTP_xxyyN##O**

W=Watt; **C**= Case; **T**=Type; **P**=Pinning; ******= Voltage Variation (omitted ± 10%); **xx**= Vin; **yy**= Vout; **N**= Numbers of Output; **##**= Isolation (kVDC); **O**= output regulation

Example:

1D14A_050503DS3UP

1=1Watt; **D14**= DIP14; **A**=Pinning; **5Vin**; **5Vout1**; **3.3Vout2**
DS= Dual Separate Output; **3**=3kVDC; **U**=Unregulated Output;
P= Short circuit protection

Note:

- Operation under minimum load will not damage the converter; However, they may not meet all specification listed, and that will reduce the life of product.
- All specifications measured at Ta=25°C, humidity<75%, nominal input voltage and rated output load unless otherwise specified.
- This series is compatible with RoHS soldering systems with a peak wave solder temperature of 300°C for 10 seconds. DIP types in this series are backward compatible with Sn/Pb soldering systems.
- In this datasheet, all the test methods of indications are based on corporate standards.
- Only typical models listed, other models may be different, please contact our technical person for more details.

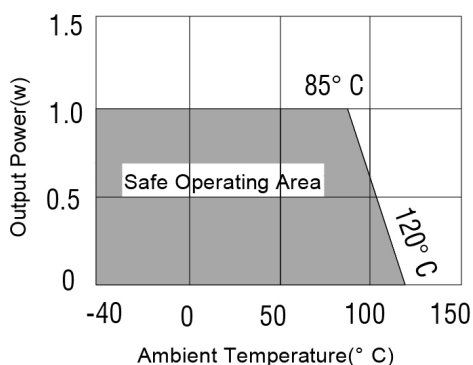
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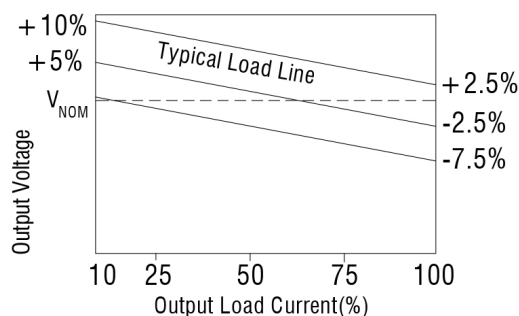
Part Number	Input Voltage [V]	Output Voltage 1 [VDC]	Output Voltage 2 [VDC]	Output Current 1 [mA]	Output Current 2 [mA]	Efficiency [% , max]	Package Style
1D14A_050503DS3UP	5	5	3.3	100	151	69	DIP
1D14A_050505DS3UP	5	5	5	100	99	70	DIP
1D14A_050509DS3UP	5	5	9	100	55	79	DIP
1D14A_050512DS3UP	5	5	12	100	41	80	DIP
1D14A_050515DS3UP	5	5	15	100	35	79	DIP
1D14A_120505DS3UP	12	5	5	100	99	70	DIP
1D14A_120509DS3UP	12	5	9	100	55	80	DIP
1D14A_120512DS3UP	12	5	12	100	41	80	DIP
1D14A_120515DS3UP	12	5	15	100	35	79	DIP

Typical characteristics

Temperature derating graph

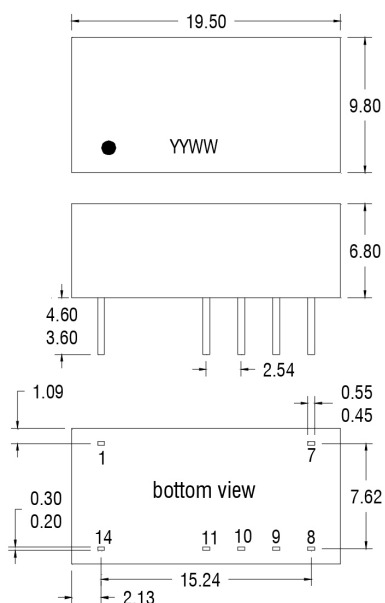


Tolerance envelope graph



Mechanical Dimensions

DIP Package



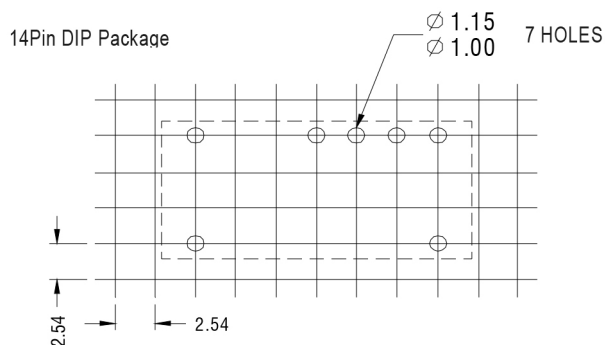
PIN CONNECTIONS-14PIN DIP	
Pin	Function
1	-Vin
7	NC
8	-Vout2
9	+Vout2
10	-Vout1
11	+Vout1
14	+Vin

All dimensions in mm ± 0.25 mm. All pins on a 2.54mm pitch and within ± 0.25 mm of true position.
Weight: 2.3g

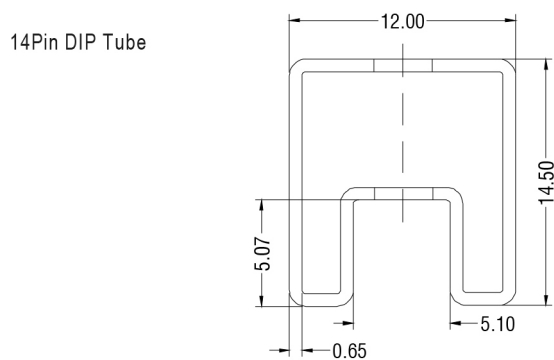
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Recommended footprint



Tube outline dimensions



Unless otherwise stated all dimensions in mm ± 0.5 mm.

Tube length (14 Pin DIP) : 520mm ± 2 mm Tube Quantity : 25