



1.5D8A Series

1.5W - Single Output DC-DC Converter - Fixed Input - Isolated & Unregulated

DC-DC Converter

1.5 Watt

- ⊕ Efficiency up to 70%
- ⊕ 1000VDC Isolation
- ⊕ Temperature Range: -40°C ~ +85°C
- ⊕ No Heatsink Required
- ⊕ No External Component Required
- ⊕ Internal SMD Construction
- ⊕ Industry Standard Pinout
- ⊕ RoHS Compliance



The 1.5D8A series are specially designed for applications where a group of polar power supplies are isolated from the input power supply in a distributed power supply system on a circuit board.

These products apply to:

- 1) Where the voltage of the input power supply is fixed (Voltage variation $\leq \pm 10\%$)
- 2) Where isolation is necessary between input and output (Isolation voltage $\leq 1000\text{VDC}$)
- 3) Where the regulation of the output voltage and the output ripple noise are not demanding.

Such as: purely digital circuits, ordinary low frequency analog circuits, and IGBT power device driving circuits.

Common specifications

Short circuit protection:	short term
Temperature rise at full load:	30°C MAX, 15°C TYP
Cooling:	Free air convection
Operation temperature range:	-40°C~+85°C
Storage temperature range:	-40°C ~+100°C
Lead temperature:	300°C MAX, 1.5mm from case for 10 sec
Storage humidity range:	< 95%
Case material:	Plastic [UL94-V0]
MTBF (MIL-HDBK-217F@25°C):	>3,500,000 hours
Weight:	1.75g

Output specifications

Item	Test condition	Min	Typ	Max	Units
Output power				1.5	W
Line regulation	For Vin change of $\pm 1\%$		± 1.2		%
Load regulation	10% to 100% load			± 15	%
Output voltage accuracy			± 5		%
Temperature drift	100% full load			± 0.03	%/°C
Ripple & Noise*	20MHz Bandwidth			100	mVp-p
Switching frequency	Full load, nominal input		100		KHz

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

Input specifications

Item	Test condition	Min	Typ	Max	Units
Input voltage range			± 10		%

Isolation specifications

Item	Test condition	Min	Typ	Max	Units
Isolation voltage	Tested for 1 minute and 1mA max	1000			VDC
Isolation resistance	Test at 500VDC	1000			MΩ

Model selection:

WCTP_xxyyN##O**

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

Example:

1.5D8A_0505S1U

W= 1.5 Watt; D8= DIP8; A= Pinning; 05= 5 Vin; 05= 5Vout; S= Single Output; 1= 1kVDC Isolation; U= Unregulated Output

Note:

1. 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.
2. All specifications measured at Ta=25°C, humidity<75%, nominal input voltage and rated output load unless otherwise specified.
3. Only typical models listed, other models may be different, please contact our technical person for more details.
4. In this datasheet, all the test methods of indications are based on corporate standards.

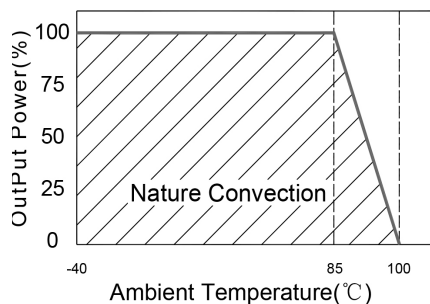
Part Number	Input Voltage [V]	Output Voltage [VDC]	Output Current [mA, max]	Efficiency [%, typ]
1.5D8A_0505S1U	5	5	300	70

1.5D8A Series

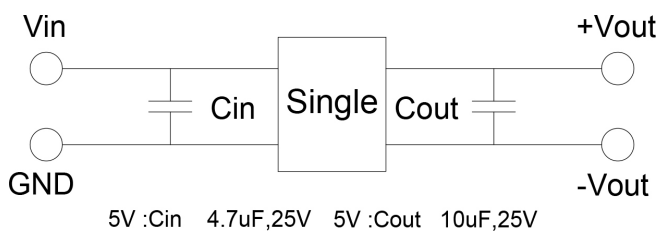
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Typical characteristics

Temperature derating graph

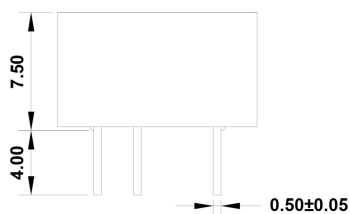
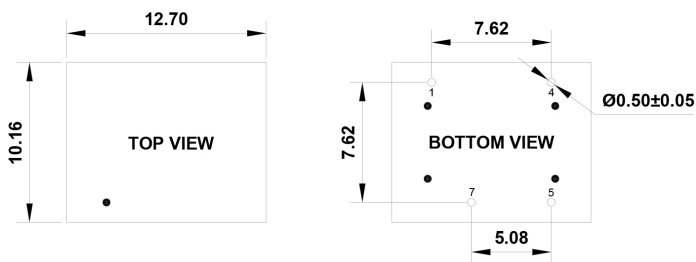


Recommended test circuit



To make sure the product work at perfect operation status with full loading external capacitor is necessary and it is recommended to use high frequency low resistance electrolytic capacitor.

Mechanical dimensions



Note:
Unit: mm
Unless otherwise specified,
all tolerances: $\pm 0.25\text{mm}$

PIN	1	4	5	7
Single	-Vin	+Vin	+Vout	-Vout