



3DAW_1.5 Series

3W - Dual/Single Output - Ultra Wide Input - Isolated & Regulated

DC-DC Converter

3 Watt

- ⊕ 2:1 Wide Input Voltage
- ⊕ 3 Watt 24PIN DIL package
- ⊕ Operating Temperature: -40°C to +85°C
- ⊕ Efficiency up to 80%
- ⊕ 1500VDC Isolation
- ⊕ MTBF: >1,500,000 hrs

The 3DAW_1.5 series offers 3W of output, with 2:1 wide input voltage of 4.5-9VDC, 9-18VDC, 18-36VDC and 36-72VDC, and features 1500VDC isolation, over current, over voltage and short-circuit protection, as well as six sided shielding.

All models are applied to wide voltage range input situation such as data transmission device, battery power supply device, telecommunication device, distributed power supply system, remote control system, industrial robot system etc



Common specifications

Short circuit protection:	Continuous
Operation temperature:	-40°C~+85°C
MTBF (MIL-HDBK-217F@25°C):	>1500 Khours
Case material:	Nickel Coated Copper With Non-Conductive Base
Cooling:	Free air convection
Dimensions:	31.60 x 20.10 x 11.0 mm
Weight:	16.2g Typ.

Input specifications

Item	Test condition	Min	Typ	Max	Units
Voltage Types				2:1	mA
Input Filter	Capacitor				

Isolation specifications

Item	Test condition	Min	Typ	Max	Units
Isolation voltage	Input-output electric strength test for 1 minute with a leakage current of 1mA max.	1500			VDC
Isolation resistance	Input-output resistance at 500VDC	1000			MΩ

Output specifications

Item	Test condition	Min	Typ	Max	Units
Voltage accuracy				±1.2	%
Line regulation				±0.5	%
Load regulation	• Single • Dual			±0.5 ±2.0	%
Ripple & Noise*	BW=DC To 20MHz			100	mVp-p
Transient response setting time	50% load step change		350		us
Switching frequency			200		kHz

Example:

3DAW_2415S1.5

3 = 3Watt; D = DIP; A = series; W = wide input (2:1) 18-36Vin; 15Vout; S = single output; 1.5 = 1500VDC

Note:

1. The recommended unbalance degree of the dual output module load is $\leq \pm 5\%$; if the degree exceeds $\pm 5\%$, then the product performance cannot be guaranteed to comply with all parameters in the datasheet. Please contact our technicians directly for specific information;
2. The maximum capacitive load offered were tested at input voltage range and fullload;
3. Unless otherwise specified, parameters in this datasheet were measured under the conditions of $T_a = 25^\circ\text{C}$, humidity $< 75\%\text{RH}$ with nominal input voltage and rated output load;
4. All index testing methods in this datasheet are based on Company's corporate standards;
5. We can provide product customization service, please contact our technicians directly for specific information;
6. Specifications are subject to change without prior notice.

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Product Selection Guide

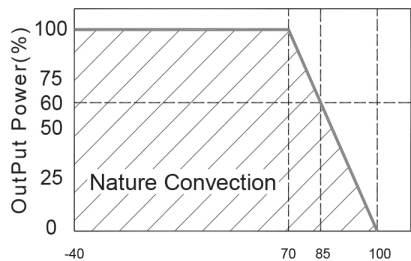
Part Number	Input Voltage [V]	Output Voltage [VDC]	Output Current [mA, max/min]	Efficiency [%, typ @max load]
3DAW_0505S1.5	4.5-9	5	600	71/75
3DAW_0512S1.5	4.5-9	12	250	76/80
3DAW_0515S1.5	4.5-9	15	200	79/83
3DAW_1205S1.5	9-18	5	600	79/83
3DAW_1212S1.5	9-18	12	250	74/80
3DAW_1215S1.5	9-18	15	200	77/83
3DAW_2405S1.5	18-36	5	600	79/83
3DAW_2412S1.5	18-36	12	250	74/80
3DAW_2415S1.5	18-36	15	200	77/83
3DAW_4805S1.5	36-72	5	600	79/83
3DAW_4812S1.5	36-72	12	250	74/80
3DAW_4815S1.5	36-72	15	200	77/83

Part Number	Input Voltage [V]	Output Voltage [VDC]	Output Current [mA, max/min]	Efficiency [%, typ @max load]
3DAW_1205D1.5	9-18	±5	±300	79/83
3DAW_1212D1.5	9-18	±12	±125	74/80
3DAW_1215D1.5	9-18	±15	±100	77/83
3DAW_2405D1.5	18-36	±5	±300	79/83
3DAW_2412D1.5	18-36	±12	±125	74/80
3DAW_2415D1.5	18-36	±15	±100	77/83
3DAW_4805D1.5	36-72	±5	±300	79/83
3DAW_4812D1.5	36-72	±12	±125	74/80
3DAW_4815D1.5	36-72	±15	±100	77/83

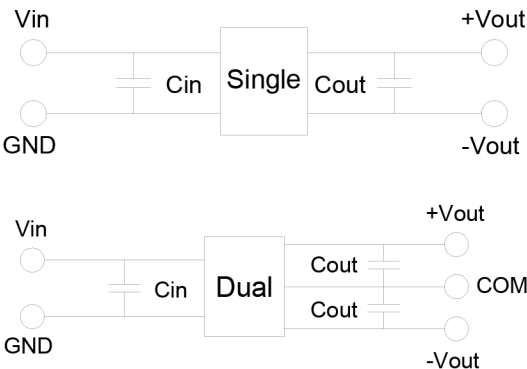
Specifications typical at TA=25°C, nominal input voltage and rated output current unless otherwise specified

Typical characteristics

Temperature Derating Graph



Recommended Test Circuit



Single

Vin	Cin	Vout	Cout
5VDC	10uF,25V	5VDC	100uF,25V
12VDC	10uF,50V	12VDC	100uF,25V
24VDC / 48VDC	10uF,100V	15VDC	1μF/25V

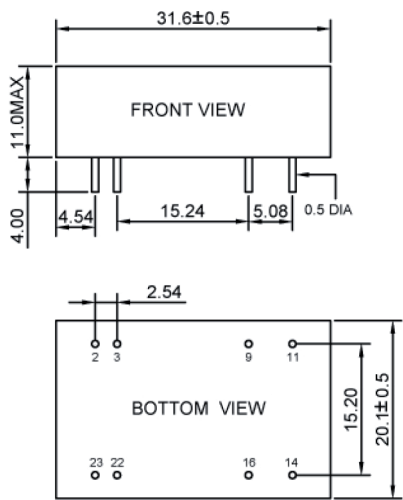
Dual

Vin	Cin	Dual Vout	Cout*
5VDC	10uF,25V	5VDC	100uF,25V
12VDC	10uF,50V	12VDC	100uF,25V
24VDC / 48VDC	10uF,100V	15VDC	1μF/25V

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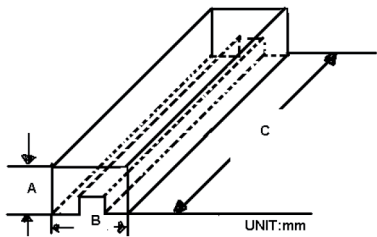
Mechanical dimensions



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

PIN connection	2,3	9	11	14	16	22,23
Single	-Vin	NO PIN	NC	+Vout	-Vout	+Vin
Dual	-Vin	Com	-Vout	+Vout	Com	+Vin

Packaging



Size(mm)		
A	B	C
18.71	23.00	522