



3DAW_3RP Series

3W - Single Output - Wide Input - Isolated & Regulated
DC-DC Converter

DC-DC Converter

3 Watt

- ⊕ Wide 2:1 Input voltage range
- ⊕ 100% burned in
- ⊕ Efficiency up to 81%
- ⊕ Isolation voltage 3KVDC
- ⊕ Short circuit protection (SCP)
- ⊕ Operating Temperature Range: -40°C to +85°C

The 3DAW_3RP series are isolated 3W DC-DC products with 2:1 input voltage and conventional voltage output. The product has a relatively compact DIP package and features high efficiency, operating temperature of -40°C~+85°C, remote control and continuous short-circuit protection.

The smaller size and fine cost design make the converter an ideal solution in communication, instruments, and industrial electronics applications.



Common specifications	
Short circuit protection:	Continuous, automatic recovery
Temperature rise at full load:	25°C TYP
Cooling:	Free air convection
Operating temperature:	-40°C~+85°C
Operation case temperature:	+110°C MAX
Storage temperature range:	-55°C to +125°C
Storage humidity range:	< 95%
Lead temperature range:	300°C MAX, 1.5mm from case for 10 sec
No-load power consumption:	50mW TYP / 150mW MAX
Temperature coefficient:	-40°C to +85°C ambient 0.015 %/°C MAX
Case material:	Non-conductive black plastic [UL94-V0]
Switching frequency (PFM mode):	100% load, nominal input voltage: 200KHz TYP
MTBF (MIL-HDBK 217F@25°C):	>1,500,000 hours
Weight:	12,8g

Input specifications					
Item	Test condition	Min	Typ	Max	Units
Input filter	Pi filter				
Hot plug	Unavailable				

Note:

1. Recommend to use module with more than 5% load, if not, the ripple of the product may exceeds the specification, but does not affect the reliability of the product;
2. Unless otherwise specified, parameters in this datasheet were measured under the conditions of Ta=25°C, humidity<75%RH with nominal input voltage and rated output load;
3. All index testing methods in this datasheet are based on Company's corporate standards;
4. We can provide product customization service;
5. Specifications are subject to change without prior notice.

Output specifications					
Item	Test condition	Min	Typ	Max	Units
Output accuracy	5%-100% load		±2		%
Line regulation	Full load, input voltage from low to high			±0.5	%
Load regulation	20% to 100% full load			±0.5	%
Ripple & Noise*	20MHz Bandwidth			100	mVp-p

* Ripple and noise are measured by "parallel cable" method, please see DC-DC Converter Application Notes for specific operation.

Isolation specifications					
Item	Test condition	Min	Typ	Max	Units
Isolation voltage	Tested for 1 min, leak current <1mA	3000			VDC
Isolation resistance	500VDC, input to output	1000			MΩ

Model selection:

WCTV_xxyyN##

W= Watt; C= Case; T= Type; V=Voltage Variation (omitted ± 10%);
xx= Vin; yy=Vout; N= Numbers of Output; ##= Isolation (kVDC)

Example:

3DAW_2405S3RP

3= 3Watt; D= DIP; A= series; W= wide input (2:1) 18-36Vin; 5Vout;
S= Single Output; 3= 3000VDC; R= Regulated output;
P= Short circuit protection

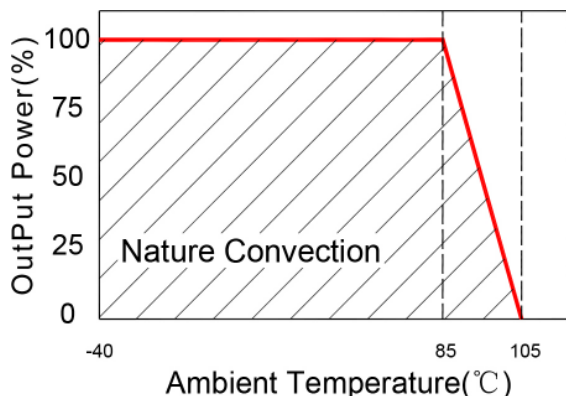
Part Number	Input Voltage [V]	Output Voltage [VDC]	Output Current [mA, max]	Efficiency [%, typ]	Max. Capacitive Load [µF]
3DAW_2405S3RP	24	5	600	81	4700

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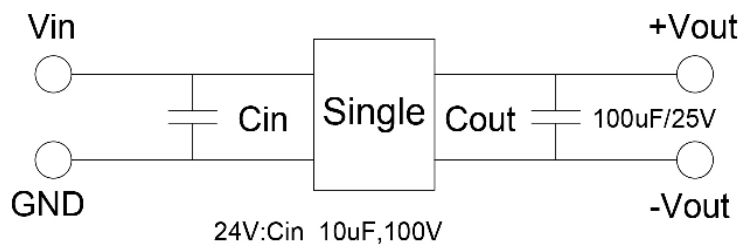
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Typical characteristics

Temperature derating graph

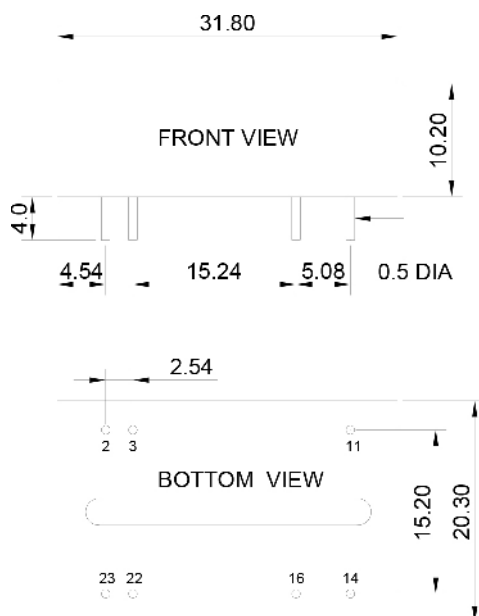


Recommended circuit



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



Pin	Single
2, 3	-Vin
11	NC
14	+Vout
16	-Vout
22, 23	+Vin

Unit: mm [inch]
Pin diameter tolerances: ± 0.10 [± 0.004]
General tolerances: ± 0.50 [± 0.020]