

## 6 Watts

- 4:1 Input range
- DIP24 Industry standard package
- Single and dual outputs
- Optional isolation up to 3500VDC
- Full power from -40 to +85°C
- 5 Year warranty



The GTA06 series of wide input DC/DC converters come in both single and dual outputs in a DIP24 pin package. Inputs are available in 24 & 48V versions with 4:1 range and outputs from 3.3 to 24V single and dual. The units will deliver full 6W power from -40 to +85°C. All models have a FiDUS 5 year warranty.

Dimensions:

1.25 x 0.8 x 0.4" (31.75 x 20.32 x 10.16mm)

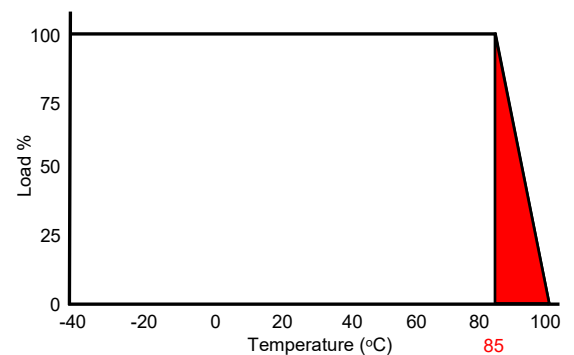
## Models & Ratings

Model Number <sup>(2)(3)</sup>	Input	Output voltage	Output Current	Input Current		Maximum Capacitive Load	Efficiency
				No Load	Full Load		
GTA062403	9-36V	3.3V	1400mA	12mA	253.3mA	1000uF	76%
GTA062405 <sup>(1)</sup>		5V	1200mA	10mA	312.5mA	1000uF	80%
GTA062412		12V	500mA	15mA	301.2mA	1000uF	83%
GTA062415		15V	400mA	18mA	301.2mA	470uF	83%
GTA062424		24V	250mA	18mA	304.9mA	47uF	82%
GTA062405D		±5V	±600mA	10mA	312.5mA	±680uF	80%
GTA062412D		±12V	±250mA	20mA	301.2mA	±330uF	83%
GTA062415D		±15V	±200mA	22mA	304.9mA	±100uF	82%
GTA062424D		±24V	±125mA	18mA	312.5mA	±22uF	80%
GTA064803		18-72V	3.3V	1400mA	15mA	126.4mA	1000uF
GTA064805	5V		1200mA	8mA	156.25mA	1000uF	80%
GTA064812	12V		500mA	10mA	150.6mA	1000uF	83%
GTA064815	15V		400mA	10mA	148.8mA	100uF	84%
GTA064824	24V		250mA	12mA	150.6mA	22uF	83%
GTA064805D	±5V		±600mA	10mA	158.22mA	±470uF	79%
GTA064812D	±12V		±250mA	10mA	152.4mA	±100uF	82%
GTA064815D	±15V		±200mA	15mA	148.8mA	±47uF	84%
GTA064824D	±24V		±125mA	15mA	154.3mA	±22uF	81%

## Notes

1. High stock items
2. Add 'H' to model number for 3500VDC isolation
3. Add 'P' to model number for plastic case
4. Under no load conditions the unit may not meet all specifications
5. Do not operate continuously in the red area of the derating curve

## Derating curve



Input	
Parameter	Rating
Input voltage range	See table
Input reflected ripple current	35mA pk-pk through 12uH inductor
Input surge (100mS max)	24V Models 40V DC Max. 48V Models 80VDC Max.
Input filter	Pi type

Output					
Parameter	Minimum	Typical	Maximum	Units	Notes & Conditions
Output voltage	3.3		24	VDC	See Model & Ratings table
Set point accuracy			±1	%	
Line regulation			±0.5	%	Low line to High line
Load regulation			±1.5	%	Output 3.3V / ±3.3V model. 0 to 100% load change
			±0.5		All other output models. 0 to 100% load change
Minimum load	0			%	
Ripple & Noise			60	mV pk-pk	All models measured with 1uF ceramic capacitor. 20 MHz bandwidth
Short circuit protection					Continuous with automatic recovery
Maximum capacitive load					See Model and Ratings table

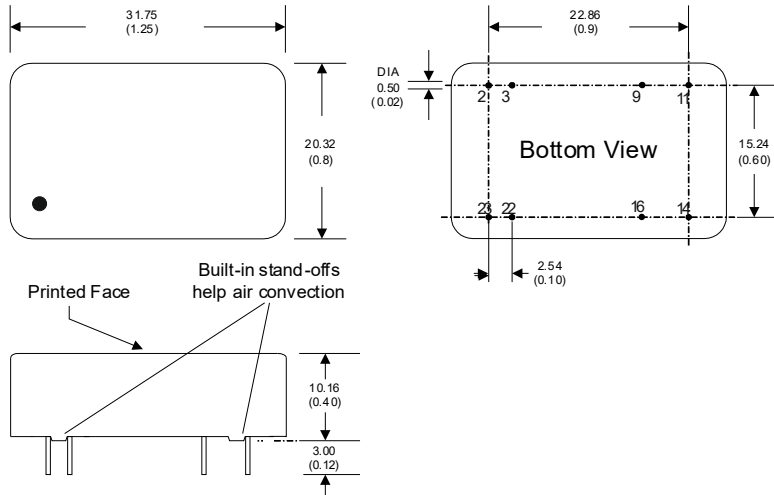
General					
Parameter	Minimum	Typical	Maximum	Units	Notes & Conditions
Efficiency	76		84	%	See Model & Ratings table
Isolation	1500		3500	VDC	Plastic case. Input to output
		1000			Metal case. Input to output
Isolation resistance			1000	M Ohm	
Isolation capacitance		500		pF	
Switching frequency		266		KHz	
Power density			15	W/in <sup>3</sup>	
MTBF		>1.121		MHrs	As per MIL-HDBK-217F, 25°C GB

Environmental					
Parameter	Minimum	Typical	Maximum	Units	Notes & Conditions
Operating temperature	-40		85	°C	See derating curve
Storage temperature	-40		125	°C	
Case temperature			100	°C	
Cooling					Convection cooled
Humidity			95	% RH	Non-condensing
Temperature coefficient			±0.02	%/°C	

EMC: Emissions			
	Standard	Test level	Notes & Conditions
Conducted	EN55022	Class A	See application notes
Radiated	EN55022	Class A	

EMC: Immunity				
	Standard	Test level	Criteria	Notes & Conditions
ESD	EN61000-4-2	3	A	
Radiated	EN61000-4-3	10V/m	A	
EFT/Burst	EN61000-4-4	3	A	
Surges	EN61000-4-5	Installation class 2	A	Requires a 220uF/100V capacitor
Conducted	EN61000-4-6	10Vrms	A	
Magnetic fields	EN61000-4-8	1A/m	A	

## Mechanical Details



Pin Connections		
Pin	Single	Dual
2	-Vin	-Vin
3	-Vin	-Vin
9	N.P	0V
11	N.C	-Vout
14	+Vout	+Vout
16	-Vout	0V
22	+Vin	+Vin
23	+Vin	+Vin

### Notes

1. All dimensions shown in millimetres (inches)
2. Pin diameter  $0.5 \pm 0.05$  ( $0.02 \pm 0.002$ )
3. Case tolerance  $\pm 0.5$  ( $\pm 0.002$ )

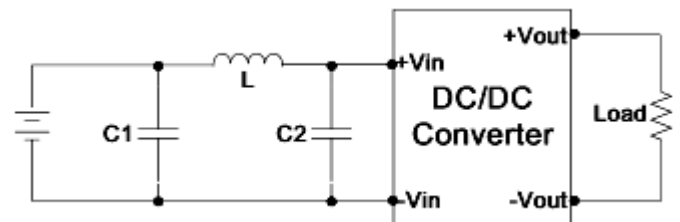
## Physical

Parameter	Rating
Case material	Nickel coated copper (standard) Non-conductive black plastic (UL94V-0)
Pin material	0.5mm Brass solder coated
Potting material	Epoxy (UL94V-0)
Weight	17g metal case. 13.5g plastic case
Dimensions	1.25 x 0.8 x 0.4"
Soldering temperature	1.5mm from case ,10s and 260°C max.

## Application notes

### EMI Filter

The input filter components C1, C2 and L can be fitted to help meet conducted emission requirements for the system. They should be mounted as close as possible to the module. Lead lengths should be minimized and where possible, avoid running input and output tracks under the module as part of good design practice for best EMC performance. If the module is embedded in a system running from a AC/DC converter, this will have its own additional immunity protection and EMI filtering that will impact the overall system EMI performance.



C1	L	C2
68uF, 100V	12uH	33uF, 100V