

## 15 Watts

- 4:1 Input range
- 2 x 1" Package
- Single and dual outputs
- 1500VDC Isolation
- -40 to 85°C Operation
- Remote on/off (Optional)
- 3 Year warranty



The HTA15 series of wide input DC-DC converters comes in both single and dual outputs. Inputs are available in 24 & 48V versions with 4:1 range and outputs from 3.3 to 15V single and dual. The units operate from -40 to +85°C. High volumes are held in stock for the popular models. All models have a FiDUS 3 year warranty.

Dimensions:

2.00 x 1.00 x 0.40" (50.80 x 25.40 x 10.16mm)

## Models & Ratings

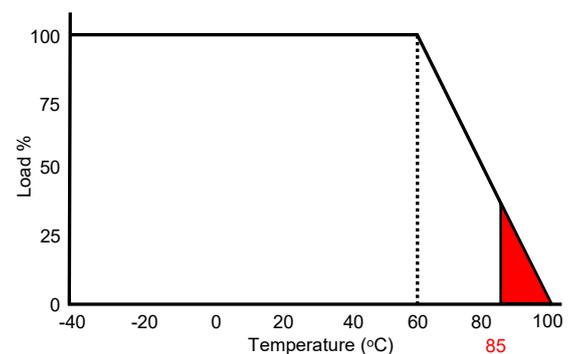
Model Number <sup>(2)</sup>	Input Voltage	Output Voltage	Output Current	Input Current		Maximum Capacitive Load	Efficiency
				No Load	Full Load		
HTA152403	9-36V	3.3V	3000mA	25mA	515mA	3300uF	80%
HTA152405 <sup>(1)</sup>		5V	3000mA	25mA	753mA	3300uF	83%
HTA152412		12V	1250mA	25mA	735mA	680uF	85%
HTA152415 <sup>(1)</sup>		15V	1000mA	25mA	726mA	470uF	86%
HTA152405D		±5V	±1500mA	25mA	753mA	±2200uF	83%
HTA152412D		±12V	±625mA	25mA	735mA	±470uF	85%
HTA152415D		±15V	±500mA	25mA	726mA	±330uF	86%
HTA154803	18-72V	3.3V	3000mA	20mA	257mA	3300uF	80%
HTA154805		5V	3000mA	20mA	376mA	3300uF	83%
HTA154812		12V	1250mA	20mA	367mA	680uF	85%
HTA154815		15V	1000mA	20mA	363mA	470uF	86%
HTA154805D		±5V	±1500mA	20mA	376mA	±2200uF	83%
HTA154812D		±12V	±625mA	20mA	367mA	±470uF	85%
HTA154815D		±15V	±500mA	20mA	363mA	±330uF	86%

## Notes

1. High stock items
2. Add 'C' to model number for remote on/off control
3. Under no load conditions the unit may not meet all specifications
4. Do not operate continuously in the red area of the 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 50V DC Max. 48V Models 100VDC Max.
Input filter	Pi type

## Derating curve



## Output

Parameter	Minimum	Typical	Maximum	Units	Notes & Conditions
Output voltage	3.3		15	VDC	See Model & Ratings table
Set point accuracy			±1	%	
Line regulation			±0.5	%	Low line to High line
Load regulation			±0.5	%	10 to 100% load change
			±1		Below 10% load
Cross regulation			±5	%	On dual output models when one load is varied by 25 to 100% and the other is 100% load.
Ripple & Noise			75	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
Remote on/off	Module on 2.5 to 5.5Vdc or open. Module off short circuit pin 2 and 6 or -0.7 to 0.8 Vdc. Off input current 2.5mA typ.				

## General

Parameter	Minimum	Typical	Maximum	Units	Notes & Conditions
Efficiency	80		86	%	See Model & Ratings table
Isolation			1500	VDC	Input to output
Isolation resistance	1000			M Ohm	
Isolation capacitance		1200		pF	
Switching frequency		300		KHz	
Power density			18.75	W/in <sup>3</sup>	
MTBF		>1.121		KHrs	As per MIL-HDBK-217F, 25°C GB

## Environmental

Parameter	Minimum	Typical	Maximum	Units	Notes & Conditions
Operating temperature	-40		85	°C	100% load at 60°C. 40% load at 85°C
Storage temperature	-40		125	°C	
Case temperature			100	°C	
Cooling					Convection cooled
Humidity			95	% RH	Non-condensing
Temperature coefficient			±0.02	%/°C	

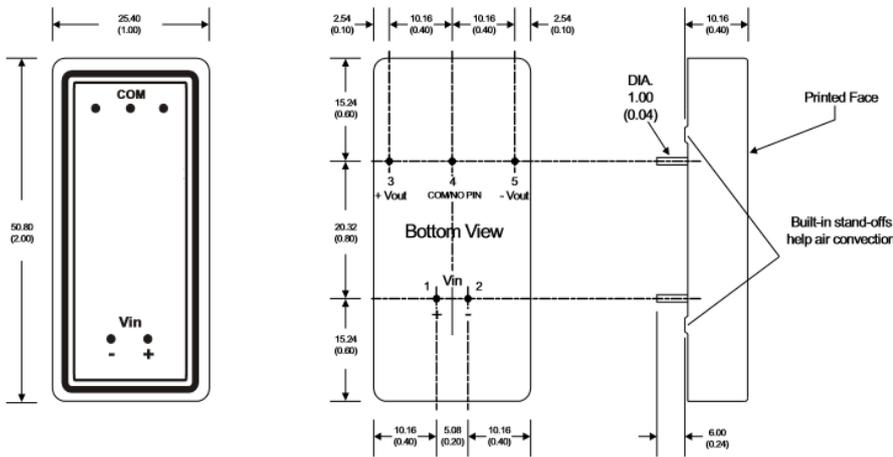
## EMC: Emissions

	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	B	
Radiated	EN61000-4-3	3	A	
EFT/Burst	EN61000-4-4	3	A	
Surges	EN61000-4-5	3	A	A 220uF/100V capacitor required
Conducted	EN61000-4-6	10Vrms	A	
Magnetic fields	EN61000-4-8	1A/m	A	

## Mechanical Details



Pin	Pin Connections			
	Standard		Remote Control (optional)	
	Single	Dual	Single	Dual
1	+Vin	+Vin	+Vin	+Vin
2	-Vin	-Vin	-Vin	-Vin
3	+Vout	+Vout	+Vout	+Vout
4	N.P	0V	N.P	0V
5	-Vout	-Vout	-Vout	-Vout
6	N.P	N.P	CTRL	CTRL

### Notes

1. All dimensions shown in millimetres (inches)
2. Pin diameter  $1.00 \pm 0.05$  ( $0.04 \pm 0.002$ )
3. Case tolerance  $\pm 0.5$  ( $\pm 0.002$ )

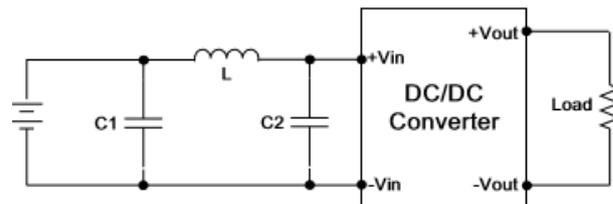
## Physical

Parameter	Rating
Case material	Nickel coated brass
Pin material	1.00mm brass solder coated
Potting material	Epoxy (UL94V-0)
Weight	31g
Dimensions	2.00 x 1.00 x 0.40"
Soldering temperature	1.5mm from case, 10s and 260°C max.

## Application notes

### EMI Filter

The input filter components C1, L and C2 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.



Model number	C1	L	C2
HTA1524XX	330uF/100V	12uH	100uF/100V
HTA1548XX	330uF/100V	12uH	100uF/100V