GTH15 Series

FiDUS
power in motion...

15 Watts

- High power density
- 4:1 Input range
- DIP24 Industry standard package
- Single and dual outputs
- -40 to +85°C Operation
- Remote on/off
- 3 Year warranty

The GTH15 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 15V single and dual. The units operate from –40 to +85°C. Meets EN55022 level A with no extra components. All models have a FiDUS 3 year warranty.

Dimensions:
1.25 x 0.8 x 0.40" (31.8 x 20.3 x 10.2mm)

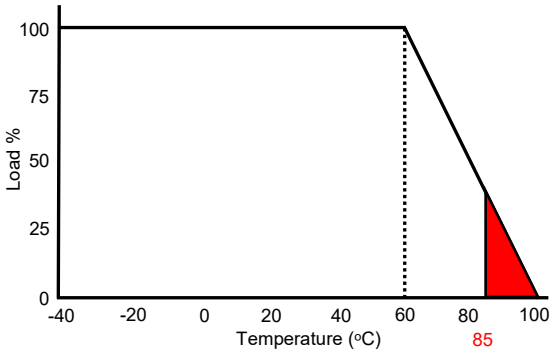
Models & Ratings

Model Number	Input Voltage	Output Voltage	Output Current	Input Current		Maximum Capacitive Load	Efficiency
				No Load	Full Load		
GTH152403	9-36V	3.3V	4000mA	15mA	640mA	4700uF	88%
GTH152405(1)		5.1V	3000mA	15mA	724mA	3300uF	90%
GTH152412		12V	1250mA	15mA	710mA	600uF	90%
GTH152415		15V	1000mA	15mA	710mA	400uF	90%
GTH152405D		±5V	±1500mA	15mA	744mA	±1500uF	86%
GTH152412D		±12V	±625mA	15mA	718mA	±288uF	89%
GTH152415D		±15V	±500mA	15mA	710mA	±200uF	90%
GTH154803	18-75V	3.3V	4000mA	15mA	316mA	4700uF	89%
GTH154805		5.1V	3000mA	15mA	366mA	3300uF	89%
GTH154812		12V	1250mA	15mA	355mA	600uF	90%
GTH154815		15V	1000mA	15mA	355mA	400uF	90%
GTH154805D		±5V	±1500mA	15mA	372mA	±1500uF	86%
GTH154812D		±12V	±625mA	15mA	359mA	±288uF	89%
GTH154815D		±15V	±500mA	15mA	359mA	±200uF	90%

Notes

1. High stock items
2. Under no load conditions the unit may not meet all specifications
3. 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	20mA pk-pk through 12uH inductor
Input surge (100mS max)	24V Models 50V DC Max. 48V Models 100VDC Max.
Input filter	Pi type

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Output

Parameter	Minimum	Typical	Maximum	Units	Notes & Conditions
Output voltage	3.3		15	VDC	See Model & Ratings table
Set point accuracy			±1	%	
Line regulation			±0.2	%	Single outputs. Low line to High line
			±0.5		Dual outputs. Low line to High line
Load regulation			±0.5	%	Single outputs. 0 to 100% load change
			±1		Dual outputs. 0 to 100% load change
Cross regulation			±5	%	On dual output models when one load is varied by 25 to 100% and the other is 100% load.
Ripple & Noise			60	mV pk-pk	All models measured with 1uF ceramic capacitor. 20 MHz bandwidth
Overvoltage protection	3.3V output 3.9V. 12V output 15V. ±5V output ±6.2V. ±15V output ±18V	5.1V output 6.2V. 15V output 18V. ±12V output ±15V.		VDC	
Transient response			±3	% Deviation	For a 25% load change, recovery to within 3% within 300uS typically.
Short circuit protection					Continuous with automatic recovery
Maximum capacitive load					See Model and Ratings table
Remote on/off	ON:3 to 12Vdc or open circuit. OFF <1.2Vdc or short circuit pins 12 & 3. Off idle current :5mA typical.				

General

Parameter	Minimum	Typical	Maximum	Units	Notes & Conditions
Efficiency	86		90	%	See Model & Ratings table
Isolation			1600	VDC	Input to output
Isolation resistance	1000			M Ohm	
Isolation capacitance		2000		pF	
Switching frequency	250		330	KHz	
Power density			37.5	W/In^3	
MTBF		>410		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	-55		125	°C	
Case temperature			105	°C	
Cooling					Convection cooled
Humidity			95	% RH	Non-condensing
Temperature coefficient			±0.02	%/°C	

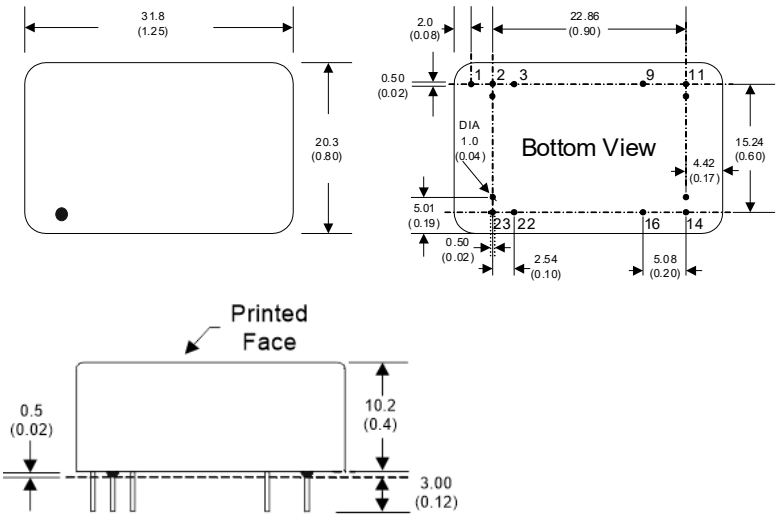
EMC: Emissions

	Standard	Test level	Notes & Conditions
Conducted	EN55022	Class A	No additional components required
Radiated	EN55022	Class A	

EMC: Immunity

	Standard	Test level	Criteria	Notes & Conditions
ESD	EN61000-4-2	3	B	
Radiated	EN61000-4-3	10V/m	A	
EFT/Burst	EN61000-4-4	3	B	Requires 680uF/100V capacitor
Surges	EN61000-4-5	Installation class 2	B	Requires 680uF/100V capacitor
Conducted	EN61000-4-6	10Vrms	A	
Magnetic fields	EN61000-4-8	1A/m	A	

Mechanical Details



Pin Connections		
Pin	Single	Dual
1	Remote On/Off	Remote On/Off
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 ±0.05 (0.02 ±0.002)
3. Case tolerance ±0.5 (±0.002)

Physical

Parameter	Rating
Case material	Nickel coated copper
Pin material	0.5mm Brass solder coated
Potting material	Epoxy (UL94V-0)
Weight	20g
Dimensions	1.25 x 0.8 x 0.4”
Soldering temperature	1.5mm from case ,10s and 260°C max.