

8 Watts

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



The GTV08 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. All models have a FiDUS 5 year warranty.

Dimensions:

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

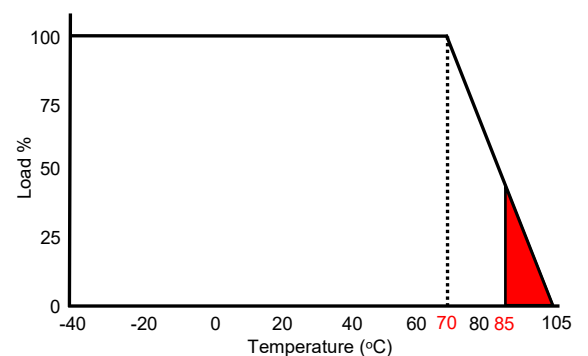
Models & Ratings

Model Number	Input Voltage	Output Voltage	Output Current	Input Current		Maximum Capacitive Load	Efficiency
				No Load	Full Load		
GTV082403	9-36V	3.3V	2000mA	10mA	345mA	1330uF	80%
GTV082405		5V	1500mA	10mA	380mA	1330uF	83%
GTV082412		12V	665mA	15mA	385mA	288uF	87%
GTV082415		15V	535mA	15mA	385mA	200uF	87%
GTV082405D		±5V	±800mA	10mA	400mA	±900uF	86%
GTV082412D		±12V	±335mA	15mA	390mA	±133uF	86%
GTV082415D		±15V	±265mA	15mA	385mA	±90uF	87%
GTV084803		18-75V	3.3V	2000mA	10mA	170mA	1330uF
GTV084805	5V		1500mA	10mA	185mA	1330uF	84%
GTV084812	12V		665mA	10mA	190mA	288uF	87%
GTV084815	15V		535mA	10mA	190mA	200uF	87%
GTV084805D	±5V		±800mA	10mA	200mA	±900uF	84%
GTV084812D	±12V		±335mA	10mA	190mA	±133uF	87%
GTV084815D	±15V		±265mA	10mA	190mA	±90uF	87%

Notes

1. Under no load conditions the unit may not meet all specifications
2. 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 and 47uF source capacitor
Input surge (100mS max)	24V Models 50V DC Max. 48V Models 100VDC Max.
Input filter	Pi type

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	%	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			75	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	5V output 6.2V. 15V output 18V. ±12V output ±15V.		VDC	
Transient response			±3	% Deviation	For a 25% load change, recovery to within 3% within 250uS 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 1, 2 / 3. Off idle current :5mA typical.				

General

Parameter	Minimum	Typical	Maximum	Units	Notes & Conditions
Efficiency	80		87	%	See Model & Ratings table
Isolation			1600	VDC	Input to output
Isolation resistance	1000			M Ohm	
Isolation capacitance		1500		pF	
Switching frequency		270		KHz	
Power density			20	W/In ³	
MTBF		>1		MHrs	As per MIL-HDBK-217F, 25°C GB

Environmental

Parameter	Minimum	Typical	Maximum	Units	Notes & Conditions
Operating temperature	-40		85	°C	100% load at 70°C . 50% 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	

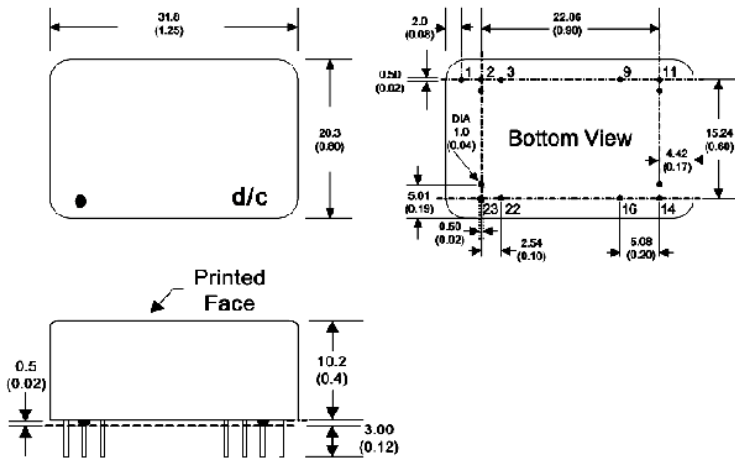
EMC: Emissions

	Standard	Test level	Notes & Conditions
Conducted	EN55032	Class A	See application notes
Radiated	EN55032	Class A	

EMC: Immunity

	Standard	Test level	Criteria	Notes & Conditions
ESD	EN61000-4-2	3	A	8kV air discharge, 6kV contact discharge
Radiated	EN61000-4-3	3	A	80~1000 MHz, 10V/m, 80% AM (1kHz)
EFT/Burst	EN61000-4-4	3	A	Requires a 2 x 330uF/100V capacitor. Power line : 2kV
Surges	EN61000-4-5	3	A	Requires a 2 x 330uF/100V capacitor. 1.2/50 µs Open Circuit Voltage, 8/20 µs Short Circuit Current, DC Port, Line to line : 1kV
Conducted	EN61000-4-6	3	A	0.15 ~ 80 MHz, 10Vrms, 80% AM (1kHz)
Magnetic fields	EN61000-4-8	1A/m	A	50Hz

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)

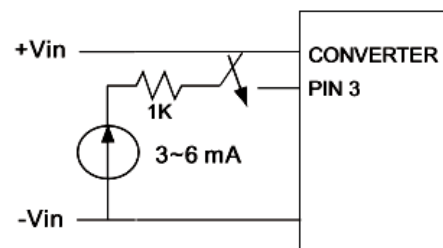
Physical

Parameter	Rating
Case material	Nickel plated copper
Pin material	0.5mm Brass solder coated
Potting material	Epoxy (UL94V-0)
Weight	18g
Dimensions	1.25 x 0.8 x 0.4"
Soldering temperature	1.5mm from case ,10s and 260°C max.

Application notes

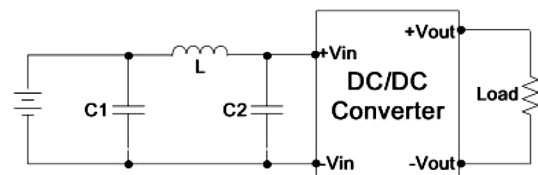
Remote ON/OFF

The GTV08 series output can be turned on and off using the remote on/off function. If Pin 3 is left open circuit or high impedance then the unit is ON. 3 - 6mA of idle current via a 1K resistor to turn OFF.



EMI Filter

The input filter components must 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 num-	C1	L	C2
HTF1524XX	2.2uF/100V	12uH	2.2uF/100V
HTF1548XX	2.2uF/100V	12uH	2.2uF/100V