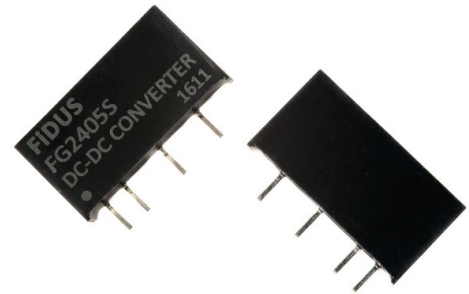


2 Watts

- Single & Dual output
- SIP or DIP package
- Industry standard pin out
- Up to 6KV Isolation
- -40 to +85°C Operation
- High stock on popular models
- 5 Year warranty



The FG series of low cost DC/DC converters come in both single and dual outputs in either a SIP 7 pin or DIP 14 pin package. Inputs are available in 5, 12, 24 & 48V versions and outputs from 3.3 to 24V 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 5 year warranty.

Dimensions:

SIP: 0.76 x 0.24 x 0.39" (19.5 x 6.0 x 10.00mm)

DIP: 0.80 x 0.40 x 0.27" (20.32 x 10.16 x 6.88mm)

Models & Ratings - Single output

Model Number ⁽²⁾⁽³⁾	Input ⁽⁶⁾	Output voltage	Output Current	Efficiency
FG0503S	5V	3.3V	400mA	72%
FG0505S ⁽¹⁾		5V	400mA	78%
FG0509S		9V	222.2mA	80%
FG0512S		12V	166.7mA	82%
FG0515S		15V	133.3mA	82%
FG0524S		24V	83.3mA	82%
FG1203S	12V	3.3V	400mA	65%
FG1205S		5V	400mA	77%
FG1209S		9V	222.2mA	80%
FG1212S ⁽¹⁾		12V	166.7mA	82%
FG1215S		15V	133.3mA	82%
FG1224S		24V	83.3mA	80%
FG2403S	24V	3.3V	400mA	72%
FG2405S ⁽¹⁾		5V	400mA	79%
FG2409S		9V	222.2mA	80%
FG2412S ⁽¹⁾		12V	166.7mA	80%
FG2415S		15V	133.3mA	82%
FG2424S		24V	83.3mA	80%
FG4803S	48V	3.3V	400mA	60%
FG4805S		5V	400mA	77%
FG4809S		9V	222.2mA	77%
FG4812S		12V	166.7mA	78%
FG4815S		15V	133.3mA	78%
FG4824S		24V	83.3mA	75%

Models & Ratings - Dual output

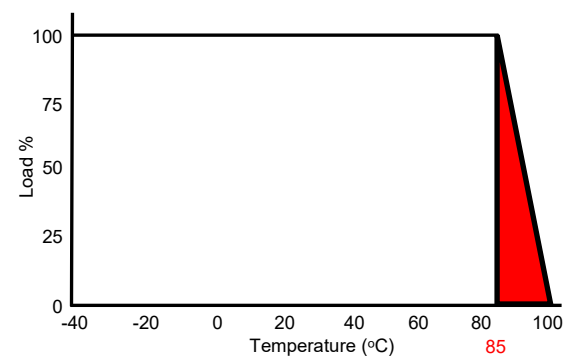
Model Number ⁽²⁾⁽³⁾	Input	Output voltage	Output Current ⁽⁴⁾	Efficiency
FG0503SD	5V	±3.3V	±200mA	65%
FG0505SD		±5V	±200mA	72%
FG0509SD		±9V	±111.1mA	77%
FG0512SD		±12V	±83.3mA	78%
FG0515SD		±15V	±66.67mA	80%
FG0524SD		±24V	±41.67mA	80%
FG1203SD	12V	±3.3V	±200mA	67%
FG1205SD		±5V	±200mA	75%
FG1209SD		±9V	±111.1mA	77%
FG1212SD		±12V	±83.3mA	82%
FG1215SD		±15V	±66.67mA	82%
FG1224SD		±24V	±41.67mA	82%
FG2403SD	24V	±3.3V	±200mA	68%
FG2405SD		±5V	±200mA	75%
FG2409SD		±9V	±111.1mA	80%
FG2412SD		±12V	±83.3mA	82%
FG2415SD		±15V	±66.67mA	82%
FG2424SD		±24V	±41.67mA	82%
FG4803SD	48V	±3.3V	±200mA	60%
FG4805SD		±5V	±200mA	73%
FG4809SD		±9V	±111.1mA	77%
FG4812SD		±12V	±83.3mA	80%
FG4815SD		±15V	±66.67mA	80%
FG4824SD		±24V	±41.67mA	80%

Notes

1. High stock items
2. For DIP package change 'S' for 'D'.
3. Add 'H' to model number for 3000VDC isolation. H6 for 6KV.
4. Dual outputs power-trade
5. Under no load conditions the unit may not meet all specifications
6. 3.3V input models available on request. Please contact Sales.
7. Do not operate continuously in the red area of derating curve

Input	
Parameter	Rating
Input voltage range	Nominal ±10%
Input reflected ripple current	20mA pk-pk through 12uH inductor
Input current no load/ full load	5V Models 38/555mA. 12V Models 25/222mA. 24V Models 10/105mA. 48V Models 6/57mA
Input surge (100mS max)	5V Models 7V DC Max. 12V Models 15VDC Max. 24V Models 28VDC Max. 48V Models 54VDC Max.
Input reverse voltage protection	None

Derating curve

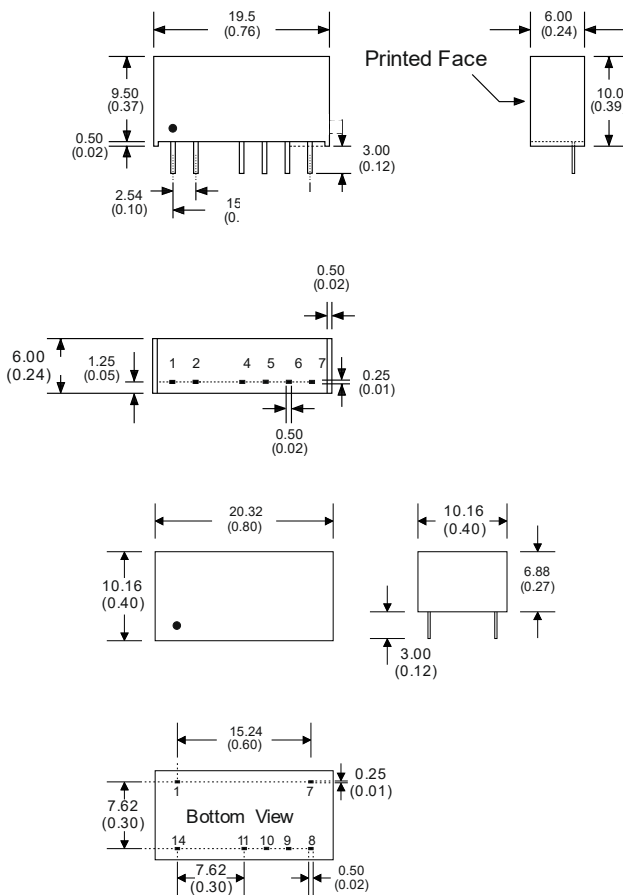


Output	
Parameter	Rating
Output voltage	See model ratings table
Line regulation	1.2%/1% change in Vin
Load regulation	±10% (20 - 100% load change)
Set point accuracy	±3%
Minimum load	None
Ripple & noise	75mV pk-pk. 20MHz bandwidth
Maximum capacitive load	

General	
Parameter	Rating
Efficiency	See model ratings table
Isolation voltage	1000VDC. Optional to 6000VDC
Isolation resistance	1000M Ohm
Isolation capacitance	60pF typical
Switching frequency	Variable. 80KHz typical
MTBF	>1.21 Mhrs
Soldering temperature	260°C

Environmental	
Parameter	Rating
Operating temperature	-40 - 85°C (See derating curve)
Storage temperature	-40 - 125°C
Case temperature	100°C
Cooling	Convection
Humidity	95% RH non-condensing

Physical	
Parameter	Rating
Case material	Non-conductive black plastic (UL94V-0)
Pin material	0.5mm Alloy42 solder coated
Potting material	Epoxy (UL94V-0)
Weight	SIP 2.3g, DIP 2.6g
Dimensions	SIP 0.76 x 0.24 x 0.39", DIP 0.8 x 0.4 x 0.27"



SIP Pin Connections				
Pin	Single	Dual	Single (H)	Dual (H)
1	+Vin	+Vin	+Vin	+Vin
2	-Vin	-Vin	-Vin	-Vin
4	-Vout	-Vout	N.P.	N.P.
5	N.P.	0V	-Vout	-Vout
6	+Vout	+Vout	N.P.	0V
7	N.P.	N.P.	+Vout	+Vout

DIP Pin Connections				
Pin	Single	Dual	Single (H)	Dual (H)
1	-Vin	-Vin	-Vin	-Vin
7	N.C.	N.C.	N.C.	N.C.
8	N.P.	0V	+Vout	+Vout
9	+Vout	+Vout	N.P.	0V
10	N.P.	N.P.	-Vout	-Vout
11	-Vout	-Vout	N.P.	N.P.
14	+Vin	+Vin	+Vin	+Vin

Dimension notes

- All dimensions shown in millimetres (inches)
- Pin diameter 0.5 ±0.05 (0.02 ±0.002)
- Case tolerance ±0.5 (±0.002)