

FEATURES

- Efficiency up to 88%
- SIP Package with Industry Standard Pinout
- Semi-regulated Output Voltage
- High Isolation Voltage 3000VDC
- UL/IEC/EN 60950-1 Safety
- Operating Temperature Range -40°C to +85°C
- Lead free, RoHs Compliant
- >2 MHours MTBF
- CSA / NRTL60950-1 safety approval
- 3 Years Product Warranty



The PF01S series are miniature, SIP Package, isolated 1W DC/DC converters with 3,000VDC isolation. It offers short circuit protection and allows a wide operating temperature range of -40°C to +85°C. These products provide a typical load regulation of 3.5% to 5.5% depending on each model. The PF01S/D DC/DC converters are a compromise between a fully regulated converter and a non-regulated converter. These isolated DCDC converters are the latest offering from a world leader in power systems technology and manufacturing — Delta Electronics, Inc

Model List

Model Number	Input Voltage (Range) VDC	Output Voltage VDC	Output Current		Input Current		Load Regulation % (max.)	Reflected Ripple mA(typ.)	Max. capacitive Load uF	Efficiency (typ.)
			Max.	Min.	@Max. Load	@No Load				@Max. Load
			mA	mA	mA(typ.)	mA(typ.)				%
PF01S0505A	5 (4.5 ~ 5.5)	5	200	4	238	30	6.2	11	220	84
PF01S0509A		9	110	2	229		5.5			86.5
PF01S0512A		12	84	1.5	231		5.5			87
PF01S0515A		15	67	1	230		5			87.5
PF01S1205A	12 (10.8 ~ 13.2)	5	200	4	99	12	5	5	220	84
PF01S1209A		9	110	2	96		3.3			86
PF01S1212A		12	84	1.5	95		3.6			88
PF01S1215A		15	67	1	95		2.9			88
PF01S2405A	24 (21.6 ~ 26.4)	5	200	4	50	11	5	4.7	220	84
PF01S2409A		9	110	2	48		3.5			86.5
PF01S2412A		12	84	1.5	48		3.5			87.5
PF01S2415A		15	67	1	48		3			87.5



Input Characteristics

Parameter	Model	Min.	Typ.	Max.	Unit
Input Surge Voltage (1 sec. max.)	5V Input Models	-0.7	---	9	VDC
	12V Input Models	-0.7	---	18	
	24V Input Models	-0.7	---	30	
Input Voltage Range	5V Input Models	4.5	5	5.5	VDC
	12V Input Models	10.8	12	13.2	
	24V Input Models	21.6	24	26.4	
Reverse Polarity Input Current	All Models	---	---	0.3	A
Input Filter		Internal Capacitor			
Internal Power Dissipation		---	---	450	mW

Output Characteristics

Parameter	Conditions	Min.	Typ.	Max.	Unit
Line Regulation	For Vin Change of 1%	---	±1.05	±1.2	%
Load Regulation	Io=20% to 100%	See Model Selection Guide			
Ripple & Noise (20MHz)		---	30	60	mV _{P-P}
Temperature Coefficient		---	±0.01	±0.02	%/°C
Short Circuit Protection	0.5 Second Max.				

General Characteristics

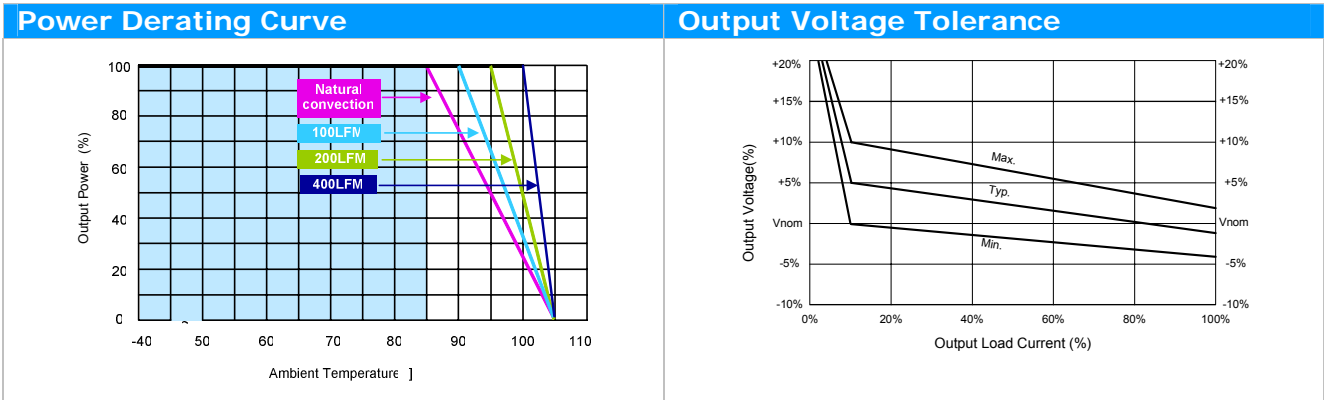
Parameter	Conditions	Min.	Typ.	Max.	Unit
I/O Isolation Voltage (rated)	60 Seconds	3000	---	---	VDC
I/O Isolation Test Voltage	Flash tested for 1 Second	3300	---	---	V _{PK}
I/O Isolation Resistance	1000 VDC	10	---	---	GΩ
I/O Isolation Capacitance	100KHz, 1V	30	60	120	pF
Switching Frequency		50	100	120	KHz
MTBF (calculated)	MIL-HDBK-217F@25°C, Ground Benign	2,000,000	---	---	Hours
Safety Approvals	CSA 60950-1 recognition, IEC/EN 60950-1 (CB-scheme)				

Recommended Outside Input Fuse

5V Input Models	12V Input Models	24V Input Models
500mA Slow-Blow Type	200mA Slow-Blow Type	100mA Slow-Blow Type

Environmental Specifications

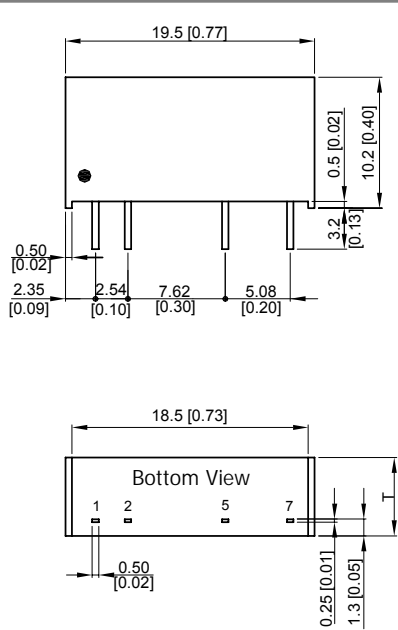
Parameter	Conditions	Min.	Max.	Unit
Operating Temperature Range (without Derating)	Ambient	-40	+85	°C
Case Temperature		---	+95	°C
Storage Temperature Range		-50	+125	°C
Humidity (non condensing)		---	95	% rel. H
Cooling	Free-Air convection			
Lead Temperature (1.5mm from case for 10Sec.)		---	260	°C



- ### Notes
- 1 Specifications typical at Ta=+25°C, resistive load, nominal input voltage and rated output current unless otherwise noted.
 - 2 Ripple & Noise measurement bandwidth is 0-20MHz.
 - 3 These power converters require a minimum output loading to maintain specified regulation, operation under no-load conditions will not damage these modules; however they may not meet all specifications listed.
 - 4 All DC/DC converters should be externally fused at the front end for protection.
 - 5 Specifications subject to change without notice.

Mechanical Drawing

Mechanical Dimensions



Pin Connections

Pin	Function
1	+Vin
2	-Vin
5	-Vout
7	+Vout

5V & 12V Input Models:
T=6.1[0.24]

24V Input Models:
T=7.1[0.28]

- ▶ All dimensions in mm (inches)
- ▶ Tolerance: X.X±0.25 (X.XX±0.01)
 X.XX±0.13 (X.XXX±0.005)
- ▶ Pins ±0.05(±0.002)

Physical Outline

Case Size (5&12V Input)	: 19.5x6.1x10.2mm (0.77x0.24x0.40 Inches)
Case Size (24V Input)	: 19.5x7.1x10.2mm (0.77x0.28x0.40 Inches)
Case Material	: Non-Conductive Black Plastic (flammability to UL 94V-0 rated)
Weight (5&12V Input)	: 2.2g
Weight (24V Input)	: 2.6g



Part Numbering System						
P	F	01	S	05	05	A
Form factor	Family series	Watt	Number of Outputs	Input Voltage	Output Voltage	Option Code
D-DIP	A~Z	01:1W	S - Single	03:3.3V	03:3.3V	A - Std. Functions
P-SIP		02:2W	D- Dual	05: 5V	05: 5V	
S-SMD		03:3W		12:12V	12:12V	
		04:4W		24: 24V	15: 15V	
		06:6W		48:48V	24: 24V	

WARRANTY

Delta offers a three (3) years limited warranty. Complete warranty information is listed on our web site or is available upon request from Delta.

Information furnished by Delta is believed to be accurate and reliable. However, no responsibility is assumed by Delta for its use, nor for any infringements of patents or other rights of third parties, which may result from its use. No license is granted by implication or otherwise under any patent or patent rights of Delta. Delta reserves the right to revise these specifications at any time, without notice.

X-ON Electronics

Largest Supplier of Electrical and Electronic Components

Click to view similar products for [Isolated DC/DC Converters](#) category:

Click to view products by [Delta](#) manufacturer:

Other Similar products are found below :

[ESM6D044440C05AAQ](#) [FMD15.24G](#) [PSL486-7LR](#) [Q48T30020-NBB0](#) [JAHW100Y1](#) [SPB05C-12](#) [SQ24S15033-PS0S](#) [18952](#) [19-130041](#)
[CE-1003](#) [CE-1004](#) [GQ2541-7R](#) [RDS180245](#) [MAU228](#) [J80-0041NL](#) [DFC15U48D15](#) [XGS-0512](#) [XGS-1205](#) [XGS-1212](#) [XGS-2412](#) [XGS-](#)
[2415](#) [XKS-1215](#) [06322](#) [NCT1000N040R050B](#) [SPB05B-15](#) [SPB05C-15](#) [L-DA20](#) [DCG40-5G](#) [QME48T40033-PGB0](#) [XKS-2415](#) [XKS-2412](#)
[XKS-1212](#) [XKS-1205](#) [XKS-0515](#) [XKS-0505](#) [XGS-2405](#) [XGS-1215](#) [XGS-0515](#) [PS9Z-6RM4](#) [73-551-5038I](#) [AK1601-9RT](#) [VI-N61-CM](#) [VI-](#)
[R5022-EXWW](#) [PSC128-7iR](#) [RPS8-350ATX-XE](#) [DAS1004812](#) [PQA30-D24-S24-DH](#) [VI-M5F-CQ](#) [VI-LN2-EW](#) [VI-PJW01-CZY](#)