



FEATURES

- Efficiency up to 80%
- Wide 2:1 Input Range
- Fully regulated Outputs
- Operating Temperature Range -40°C to +85°C
- Low Ripple and Noise
- Isolation Voltage 1500VDC
- Short-circuit Protection
- Lead free, RoHs Compliant
- 3 Years Product Warranty

The PL01S/D series are miniature, SIP Package, isolated 1W DC/DC converters with 1,500VDC isolation. It offers continuous short circuit protection and allows a wide operating temperature range of -40°C to +85°C. These isolated DC/DC 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)	Output Voltage	Output Current		Input Current		Max. capacitive Load	Reflected Ripple current	Efficiency (typ.)
			Max.		@Max. Load	@No Load			@Max. Load
		VDC	mA		mA(typ.)	mA(typ.)		mA (typ.)	%
PL01S0505A	5 (4.5 ~ 9)	5	200		263	40	1680	80	76
PL01S0512A		12	83		259		820		77
PL01S0515A		15	67		254		680		79
PL01D0512A		±12	±42		262		470*		77
PL01D0515A		±15	±33		254		330*		78
PL01S1205A	12 (9 ~ 18)	5	200		108	20	1680	40	77
PL01S1212A		12	83		108		820		77
PL01S1215A		15	67		105		680		80
PL01D1212A		±12	±42		106		470*		79
PL01D1215A		±15	±33		106		330*		78
PL01S2405A	24 (18 ~ 36)	5	200		54	10	1680	30	77
PL01S2412A		12	83		52		820		80
PL01S2415A		15	67		52		680		80
PL01D2412A		±12	±42		53		470*		80
PL01D2415A		±15	±33		52		330*		80
PL01S4805A	48 (36 ~ 75)	5	200		27	7	1680	20	77
PL01S4812A		12	83		27		820		78
PL01S4815A		15	67		27		680		78
PL01D4812A		±12	±42		27		470*		79
PL01D4815A		±15	±33		26		3308		79

* For each output

Input Characteristics

Parameter	Model	Min.	Typ.	Max.	Unit
Input Surge Voltage (1 sec. max.)	5V Input Models	-0.7	---	15	VDC
	12V Input Models	-0.7	---	25	
	24V Input Models	-0.7	---	50	
	48V Input Models	-0.7	---	100	
Start-Up Threshold Voltage	5V Input Models	---	---	4.5	
	12V Input Models	---	---	9	
	24V Input Models	---	---	18	
	48V Input Models	---	---	36	
Internal Filter Type	All Models	Capacitor			

Output Characteristics

Parameter	Conditions	Min.	Typ.	Max.	Unit
Output Voltage Setting Accuracy	At 50% Load and Nominal Vin	---	---	±1.0	%Vnom.
Line Regulation	Vin=Min. to Max.	---	---	±0.2	%
Load Regulation	No Load to Full Load	Single Output Models	---	±1.0	%
		Dual Output Models	---	±1.0	%
	10% to 90% Load	Single Output Models	---	±0.5	%
		Dual Output Models	---	±0.8	%
Min.Load	No minimum Load Requirement				
Ripple & Noise (20MHz)		---	50	---	mV _{P-P}
Transient Recovery Time	25% Load Step Change	---	250	---	µsec
Temperature Coefficient		---	---	±0.02	%/°C
Short Circuit Protection	Continuous				

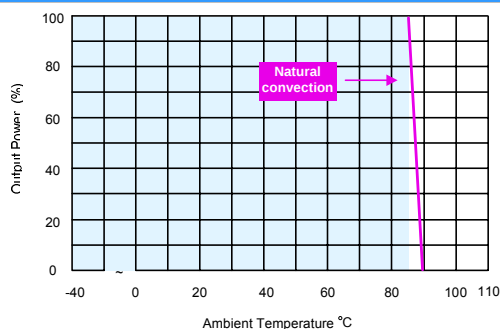
General Characteristics

Parameter	Conditions	Min.	Typ.	Max.	Unit
I/O Isolation Voltage (rated)	60 Seconds	1500	---	---	VDC
I/O Isolation Resistance	500 VDC	1000	---	---	MΩ
I/O Isolation Capacitance	100KHz, 1V	---	---	50	pF
Switching Frequency		---	250	---	KHz
MTBF(calculated)	MIL-HDBK-217F@25°C, Ground Benign	2,800,000	---	---	Hours

Environmental Characteristics

Parameter	Conditions	Min.	Max.	Unit
Operating Ambient Temperature Range (See Power Derating Curve)	Natural Convection	-40	+85	°C
Case Temperature		---	+105	°C
Storage Temperature		-55	+125	°C
Humidity (non condensing)		---	95	% rel. H
Lead Temperature (1.5mm from case for 10Sec.)		---	260	°C

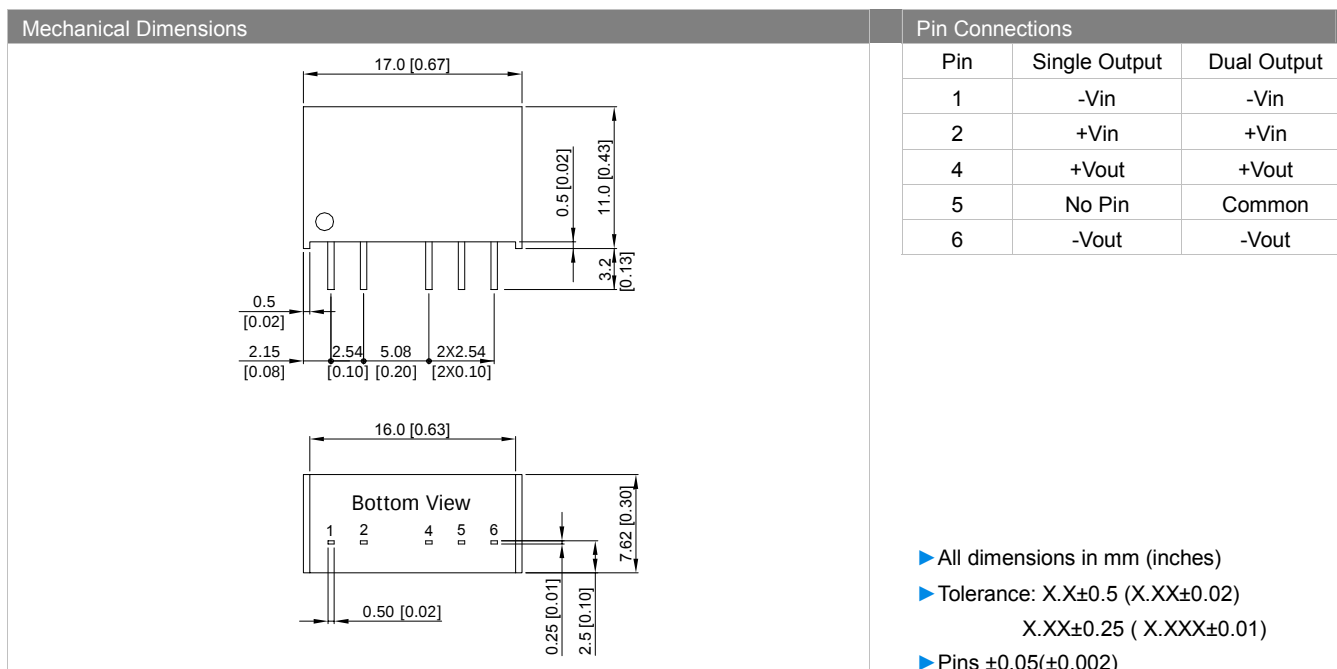
Power Derating Curve



Notes

- 1 Specifications typical at $T_a = +25^\circ\text{C}$, resistive load, nominal input voltage, rated output current unless otherwise noted.
- 2 Ripple & Noise measurement bandwidth is 0-20 MHz.
- 3 All DC/DC converters should be externally fused at the front end for protection.
- 4 That "natural convection" is about 20LFM but is not equal to still air (0 LFM).
- 5 Specifications subject to change without notice.

Mechanical Drawing



Physical Outline

Case Size : 17.0x7.62x11.0mm (0.67x0.30x0.43 inches)

Case Material : Non-Conductive Black Plastic (flammability to UL 94V-0 rated)

Pin Material : Alloy 42

Weight : 12.9g



Part Numbering System

P	L	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.

Mouser Electronics

Authorized Distributor

Click to View Pricing, Inventory, Delivery & Lifecycle Information:

Delta Electronics:

[PL01D2412A](#) [PL01D0515A](#) [PL01S1205A](#) [PL01S2405A](#) [PL01S0505A](#) [PL01D2415A](#) [PL01S1215A](#) [PL01S1212A](#)
[PL01D1215A](#) [PL01D1212A](#) [PL01S2412A](#) [PL01S4812A](#) [PL01S2415A](#) [PL01D4812A](#) [PL01S0512A](#) [PL01S4805A](#)
[PL01D4815A](#) [PL01S0515A](#) [PL01S4815A](#) [PL01D0512A](#)