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With the principle of "Quality Parts, Customers Priority, Honest Operation, and Considerate Service", our business mainly focus on the distribution of electronic components. Line cards we deal with include Microchip, ALPS, ROHM, Xilinx, Pulse, ON, Everlight and Freescale. Main products comprise IC, Modules, Potentiometer, IC Socket, Relay, Connector. Our parts cover such applications as commercial, industrial, and automotives areas.

We are looking forward to setting up business relationship with you and hope to provide you with the best service and solution. Let us make a better world for our industry!



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PA01S series

1W DC/DC Converter, SIP-Package





















FEATURES

- Efficiency up to 80%
- SIP Package with Industry Standard Pinout
- Package Dimension:

3.3V&5V & 12V Models:

11.5 x6.1 x10.2mm (0.45" x0.24" x0.40") 24V Models,:

11.5 x7.1 x10.2mm (0.45" x0.28" x0.40")

- Isolation Voltage 1000VDC
- Operating Temperature range 40°C to +85°C
- Lead free ,RoHs Compliant
- >2 MHours MTBF
- 3 Years Product Warranty

The PA01S series are miniature, SIP Package, isolated 1W DC/DC converters with 1,000VDC isolation. It offers 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	Output Voltage	Output	it Current Input Current		Load Regulation	Maxcapacitive Load	Efficiency (typ.)	
	(Range)		Max.	Min.	@Max. Load	@No Load			@Max. Load
	VDC	VDC	mA	mA	mA(typ.)	mA(typ.)	% (max.)	uF	%
PA01S0303A	3.3	3.3	260	6	351	35	14	33	74
PA01S0305A	(2.97 ~ 3.63)	5	200	4	394	33	14	33	77
PA01S0503A		3.3	260	6	238		11		72
PA01S0505A	5 (4.5 ~ 5.5)	5	200	4	290	30	11	33	69
PA01S0509A		9	110	2	260		8		76
PA01S0512A		12	84	1.5	262		7		77
PA01S0515A		15	67	1	258		6		78
PA01S1205A		5	200	4	117		9		71
PA01S1209A	12	9	110	2	107	13	5	33	77
PA01S1212A	(10.8 ~ 13.2)	12	84	1.5	106	13	5	33	79
PA01S1215A		15	67	1	105		4		80
PA01S2405A		5	200	4	60		8		70
PA01S2409A	24	9	110	2	54	7	5	33	76
PA01S2412A	(21.6 ~ 26.4)	12	84	1.5	53	'	4	33	79
PA01S2415A		15	67	1	53		4		79

Input Characteristics					
Item	Model	Min.	Тур.	Max.	Unit
	3.3V Input Models	2.97	3.3	3.63	
Innut Voltage Dange	5V Input Models	4.5	5	5.5	
Input Voltage Range	12V Input Models	10.8	12	13.2	
	24V Input Models	21.6	24	26.4	VDC
	3.3V Input Models	-0.7		6	VDC
Innut Curso Voltage (1 and may)	5V Input Models	-0.7		9	
Input Surge Voltage (1 sec. max.)	12V Input Models	-0.7		18	
	24V Input Models	-0.7		30	
Reverse Polarity Input Current				0.3	Α
Input Filter	All Models	Internal Capacitor			
Internal Power Dissipation	7			450	mW

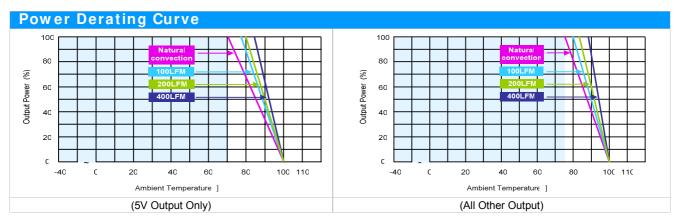


Output Characteristics							
Item	Conditions	Min.	Тур.	Max.	Unit		
Output Voltage Accuracy			±1.0	±3.0	%		
Line Regulation	For Vin Change of 1%		±1.2	±1.5	%		
Load Regulation	lo=20% to 100%	See Model -List					
Ripple & Noise (20MHz)			100	150	mV _{P-P}		
Ripple & Noise (20MHz)	Over Line, Load & Temp.			200	mV _{P-P}		
Ripple & Noise (20MHz)				15	mV rms		
Temperature Coefficient			±0.01	±0.02	%/°C		
Short Circuit Protection		0.5 Second Max.					

General Characteristics								
Item	Conditions	Min.	Тур.	Max.	Unit			
I/O Isolation Voltage (rated)	60 Seconds	1000			VDC			
I/O Isolation Resistance	500 VDC	1000			ΜΩ			
I/O Isolation Capacitance	100KHz, 1V		60	100	pF			
Switching Frequency		50	90	110	KHz			
MTBF (calculated)	@25°C, Ground Benign	2,000,000			Hours			

Recommended Outside Input Fuse							
3.3V Input Models	5V Input Models	12V Input Models	24V Input Models				
800mA Slow-Blow Type	500mA Slow-Blow Type	200mA Slow-Blow Type	100mA Slow-Blow Type				

Environmental Specifications						
Parameter	Conditions	Min.	Max.	Unit		
Operating Temperature Range (with Derating)	Ambient	-40	+85	°C		
Case Temperature			+90	°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		

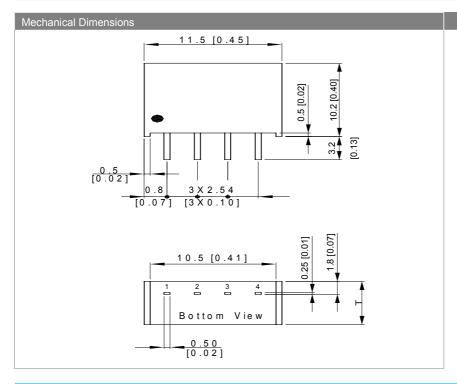


Notes

- 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 are subject to change without notice.



Mechanical Drawing



Pin C	Pin Connections					
Pin	Function					
1	-Vin					
2	+Vin					
3	-Vout					
4	+Vout					

T: 6.1mm(0.24 inch) for 3.3V&5V&12V Input Models

T: 7.1mm(0.28 inch) for 24V Input Models

- > 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

CaseSize(3.3V,5V,12V : 11.5x6.1x10.2mm (0.45x0.24x0.40 Inches)

Input)

Case Size(24V Input) : 11.5x7.1x10.2mm (0.45x0.28x0.40 Inches)

Non-Conductive Black Plastic (flammability to UL 94V-0

Case Material : rated)

Weight(3.3V,5V, 12V Input) : 1.3g Weight(24V Input) : 1.7g

Part Numbering System							
Р	А	01	s	03	03	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.

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