DC-DC Converters

Series LPA Single and Series LPA Dual

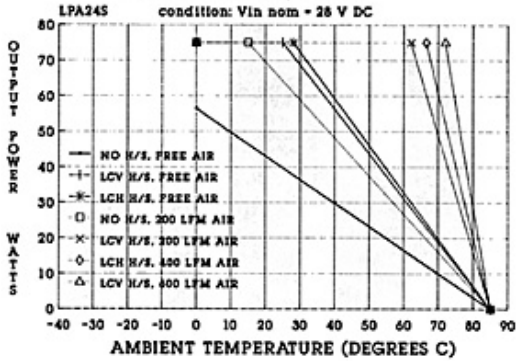
Isolated Regulated 75 Watts, Wide Input Range/18-36 VDC
Fully Regulated, Short Circuit Protected
Parallel Operation Available

Features:
• Dual isolated outputs
• Short circuit protection
• Input voltage protection
• Thermal, over temp. shutdown
• Line regulation
• Load regulation
• No external components required
• Hi density, hi efficiency design
• Remote shutdown
• Trim capabilities
• Fixed frequency-100 Khtz

Typical Characteristics:
Frequency: 100 Khtz
Base plate: Max. +85° C
Operating temperature: See thermal chart, Min. 0° C ambient, Max. +85° C base plate temp.
Test conditions: 25° C ambient
Isolation Base Input: 2121 VDC
Isolation Input Output: 4242 VDC
Isolation Output to Base: 1000 VDC
Storage temperature: -55° C to +105° C
• 21 Standard Models
Meets MIL STD 704 Surge Requirements
Fixed Frequency
• For all variations, call factory.
For Parallel Operation: Add suffix "P" (i.e. LPA5SP). Consult factory to optimize for your application.

The new PICO LPA Series of high power DC-DC Converters, allow a wide input voltage of 18-36 VDC, while maintaining a regulated output. They are fully safeguarded for over voltage, over temperature and continuous short circuit protection.
The availability of Dual Isolated Outputs, small size, and the capability of parallel operations as standard features should reduce your design and component costs, while the fixed frequency operation helps parallel connections for higher power requirements.
This high density unit is assembled in the USA with PICO quality and component selection, allowing it to meet the most stringent commercial requirements.

Full thermal analysis can be determined using application notes on page 124.
By using the efficiency and thermal resistance of your desired unit to the formula you can complete your evaluation.
The curves below were generated for Part #LPA24S using Application Notes
Please consult factory with any questions.



Larger Version of Graph

Series LPA Single * 75 Watts * Input 18-36 VDC

Pico Part No.	Input Voltage Range (V DC)	Output Voltage (V DC)	Max. Output Power * (W)	EFF. Full Load Typical ** (%)	Max. Load Regulation (%)		Max. Line Regulation At Full Load (%)		Output Voltage Ripple (Full Load) 1-1MHz BW (MV P-P)	Output Voltage Tolerance ** (± %)	Price (US $)
					10-50%	50-100%	18-28 V	28-36 V			
LPA3.3S	18-36	3.3	30	73	1.5	1.5	1.0	1.0	50	2.0	221.58
LPA5S	18-36	5.0	50	80	1.25	1.25	1.0	1.0	50	1.5	221.58
LPA5.2S	18-36	5.2	50	80	1.25	1.25	1.0	1.0	50	1.5	221.58
LPA9S	18-36	9.0	60	84	1.25	1.25	1.0	1.0	50	1.0	221.58
LPA12S	18-36	12	60	85	1.25	1.25	1.0	1.0	50	0.75	221.58
LPA15S	18-36	15	65	85	1.0	1.0	0.75	0.75	50	0.75	221.58
LPA24S	18-36	24	75	87	0.75	0.75	0.5	0.5	50	0.75	221.58
LPA28S	18-36	28	75	87	0.5	0.5	0.5	0.5	50	0.5	221.58
LPA48S	18-36	48	75	85	0.5	0.5	0.5	0.5	50	0.5	221.58
LPA100S	18-36	100	75	85	0.5	0.5	0.5	0.5	100	0.5	305.32

10% Minimum load required at all times.
* Using proper thermal management, maximum temp. of +85° C (case)
** Reading taken at nominal 28 VDC input

Series LPA Dual * 75 Watts * Input 18-36 VDC

Pico Part No.	Input Voltage Range (V DC)	Output Voltage Per Output (V DC)	Max. Output Power Per Output * (W)	EFF. Full Load Typical ** (%)	Max. Load Regulation (%)		Max. Line Regulation At Full Load (%)		Output Voltage Ripple (Full Load) 1-1MHz BW (MV P-P)	Output Voltage Tolerance ** (± %)	Price (US $)
					10-50%	50-100%	18-28 V	28-36 V			
LPA5D	18-36	5	25	80	1.25	1.25	1.0	1.0	50	1.5	298.87
LPA9D	18-36	9	30	84	1.25	1.25	1.0	1.0	50	1.0	298.87
LPA12D	18-36	12	30	85	1.25	1.25	1.0	1.0	50	0.75	298.87
LPA15D	18-36	15	32.5	85	1.0	1.0	0.75	0.75	50	0.75	298.87
LPA24D	18-36	24	37.5	87	0.75	0.75	0.5	0.5	50	0.5	298.87
LPA28D	18-36	28	37.5	87	0.5	0.5	0.5	0.5	50	0.5	298.87

LPA48D	18-36	48	37.5	85	0.5	0.5	0.5	0.5	50	0.5	321.22

10% Minimum load required at all times.
* Using proper thermal management, maximum temp. of +85° C (case)
** Reading taken at nominal 28 VDC input

*** HIGH VOLTAGE SERIES LPA
TO 200 VDC - 50 WATTS - INPUT 18-36 VDC

PICO PART NUMBER	INPUT VOLTAGE RANGE (VDC)	OUTPUT VOLTAGE (DC)	MAX. OUTPUT POWER (W)*	EFF. @ FULL LOAD TYPICAL (%)**	MAX. LOAD REGULATION (%)**		MAX. LINE REGULATION AT FULL LOAD (%)		OUTPUT VOLTAGE RIPPLE FULL LOAD 1-1 MHz BW (%)	OUTPUT VOLTAGE Tolerance (±%)**	PRICE (US $)
					20-50%	50-100%	18-28 V	28-36 V			
LPA125S	18-36	125	50	82	0.5	0.5	0.3	0.3	1	0.5	305.32
LPA150S	18-36	150	50	82	0.5	0.5	0.3	0.3	1	0.5	305.32
LPA175S	18-36	175	50	82	0.5	0.5	0.3	0.3	1	0.5	305.32
LPA200S	18-36	200	50	82	0.5	0.5	0.3	0.3	1	0.5	407.09

10% Minimum load required at all times
*Using proper thermal management maximum temp. Of +85°C)case.
**Reading taken at nominal 28 VDC input
*** UL recognition pending

GO TO APPLICATION NOTES GO TO HEAT SINK INFORMATION GO TO MECHANICAL CONFIGURATION

For immediate engineering assistance or to place an order:
Call Toll Free: 800-431-1064

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