

Military DC-DC Converters



Series LFA/LMA Single and Series LFA/LMA 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
- - **42 Standard Models**
- For all variations, call factory.
- For Parallel Operation: Add suffix "P"
- (i.e. LFA/LMA5SP). Consult factory to optimize for your application

SERIES LFA: -40°C to +85°C Operating Temperature

SERIES LMA: -55°C to +85°C Operating Temperature

Surge -- Meets MIL STD 704

Vibration -- Meets MIL STD 202 Method 204 Cond. D

Humidity -- Meets MIL STD 202 Method 106

Shock -- Meets MIL STD 202 Method 213 Cond. I

Altitude -- Meets MIL STD 202 Method 105 Cond. D

Selected MIL STD 883 Options also Available

Typical Characteristics:

- **Frequency:** 100 Khtz

Base plate: Max. +85° C

Operating temperature: See thermal chart: -40° C to +85° C base plate, -55° C to +85° C base plate.

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

Temperature Cycle -- MIL STD 883 Method 1010 Cond. B

This high density unit is assembled in the USA with PICO quality and component selection, allowing it to meet the most stringent commercial requirements.

Series LFA/LMA Single * 75 Watts * Input 18-36 VDC													
Input Volt. 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 Toler. ** (± %)	Series LFA Single (-40° C to +85° C)		Series LMA Single (-55° C to +85° C)	
				10-50%	50-100%	18-28V	28-36V			Pico Part Number	Price (US \$)	Pico Part Number	Price (US \$)
18-36	3.3	30	73	1.5	1.5	1.0	1.0	50	2.0	LFA3.3S	357.41	LMA3.3S	487.38
18-36	5	50	80	1.25	1.25	1.0	1.0	50	1.5	LFA5S	357.41	LMA5S	487.38
18-36	5.2	50	80	1.25	1.25	1.0	1.0	50	1.5	LFA5.2S	357.41	LMA5.2S	487.38
18-36	9	60	84	1.25	1.25	1.0	1.0	50	1.0	LFA9S	357.41	LMA9S	487.38
18-36	12	60	85	1.25	1.25	1.0	1.0	50	0.75	LFA12S	357.41	LMA12S	487.38
18-36	15	65	85	1.0	1.0	0.75	0.75	50	0.75	LFA15S	357.41	LMA15S	487.38
18-36	24	75	87	0.75	0.75	0.5	0.5	50	0.75	LFA24S	357.41	LMA24S	487.38
18-36	28	75	87	0.5	0.5	0.5	0.5	50	0.5	LFA28S	357.41	LMA28S	487.38
18-36	48	75	85	0.5	0.5	0.5	0.5	50	0.5	LFA48S	357.41	LMA48S	455.50
18-36	100	75	85	0.5	0.5	0.5	0.5	100	0.5	LFA100S	536.12	LMA100S	731.08
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 LFA/LMA Dual * 75 Watts * Input 18-36 VDC

Input Volt. 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 Toler. ** (± %)	Series LFA Dual (-40° C to +85° C)		Series LMA Dual (-55° C to +85° C)	
				10-50%	50-100%	18-28V	28-36V			Pico Part Number	Price (US \$)	Pico Part Number	Price (US \$)
18-36	5	50	80	1.25	1.25	1.0	1.0	50	1.5	LFA5D	482.09	LMA5D	657.40
18-36	9	60	84	1.25	1.25	1.0	1.0	50	1.0	LFA9D	482.09	LMA9D	657.40
18-36	12	60	85	1.25	1.25	1.0	1.0	50	0.75	LFA12D	482.09	LMA12D	657.40
18-36	15	65	85	1.0	1.0	0.75	0.75	50	0.75	LFA15D	482.09	LMA15D	657.40
18-36	24	75	87	0.75	0.75	0.5	0.5	50	0.5	LFA24D	482.09	LMA24D	657.40
18-36	28	75	87	0.5	0.5	0.5	0.5	50	0.5	LFA28D	482.09	LMA28D	657.40
18-36	48	75	85	0.5	0.5	0.5	0.5	50	0.5	LFA48D	482.09	LMA48D	657.40

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 LFA/LMA TO 200 VDC - 50 WATTS - INPUT 18-36 VDC

INPUT VOLTAGE RANGE (VDC)	OUTPUT VOLTAGE (V DC)	MAX. OUTPUT POWER (W)*	EFF. @ FULL LOAD TYP. (%)**	MAX. LOAD REGULATION (%)**		MAX. LINE REGULATION AT FULL LOAD (%)		OUTPUT VOLT. RIPPLE 1-1MHz BW (%)	OUTPUT VOLT. Tolerance (±%)**	SERIES LFA SINGLE (-40°C TO +85°C)		SERIES LMA SINGLE (-55°C TO +85°C)	
				20-50%	50-100%	18-28V	28-36V			PICO PART Number	PRICE (US \$)	PICO PART Number	PRICE (US \$)
18-36	125	50	82	0.5	0.5	0.3	0.3	1	0.5	LFA125S	536.12	LMA125S	731.08

18-36	150	50	82	0.5	0.5	0.3	0.3	1	0.5	LFA150S	536.12	LMA150S	731.08
18-36	175	50	82	0.5	0.5	0.3	0.3	1	0.5	LFA175S	536.12	LMA175S	731.08
18-36	200	50	82	0.5	0.5	0.3	0.3	1	0.5	LFA200S	714.83	LMA200S	974.77

10% Minimum load required at all times

*Using proper thermal management maximum temp of +85°C (case)

**Reading taken at nominal 28 VDC input

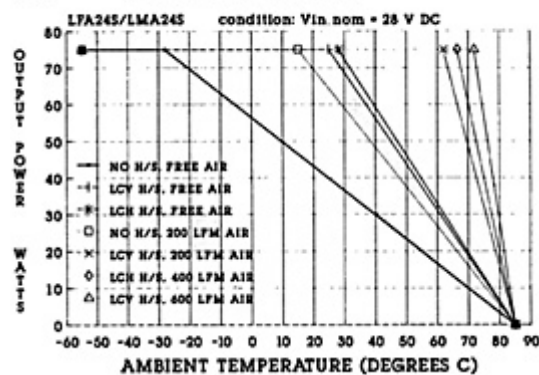
***UL approval recognition pending

[VIEW HEAT SINKS](#)

[GO TO APPLICATION NOTES](#)

[GO TO MECHANICAL CONFIGURATION](#)

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 #LFA24S/LMA24S using Application Notes. Please consult factory with any questions.



[Larger Version of Graph](#)

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

PICO Electronics, Inc.

143 Sparks Ave. Pelham, NY 10803

Tel: 914-738-1400 Fax: 914-738-8225