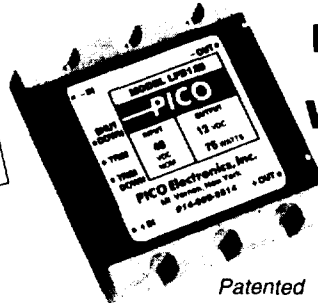


# MILITARY SERIES LFB (-40°C to +85°C Operating Temperature) SERIES LMB (-55°C to +85°C Operating Temperature)

- Dual Isolated Outputs  
Special Voltage  
Combinations Available
- Fixed Frequency
- 100 VDC  
Output  
Models
- Parallel  
Operation  
Add Suffix P  
ie: LFB5SP
- Hi Density  
75 Watts



**Isolated Regulated 75 Watts  
DC-DC Converters  
Wide Input Range/36-72 VDC  
Fully Regulated  
Short Circuit Protected  
Parallel Operation**

The new PICO Series LFB and Series LMB of high power DC-DC Converters, allow a wide input voltage of 36-72 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 military requirements.

## SERIES LFB/LMB SINGLE • 75 WATTS • INPUT 36-72 VDC

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 (%) (±)	Series LFB Single (-40°C to +85°C)		Series LMB Single (-55°C to +85°C)	
				10-50%	50-100%	36-48V	48-72V			PICO PART NUMBER	PRICE	PICO PART NUMBER	PRICE
36-72	3.3	30	74	1.5	1.5	0.75	0.75	50	2	LFB3.3S	258.00	LMB3.3S	387.00
36-72	5	50	80	1	1	0.75	0.75	50	1.5	LFB5S	258.00	LMB5S	387.00
36-72	5.2	50	80	1	1	0.75	0.75	50	1.5	LFB5.2S	258.00	LMB5.2S	387.00
36-72	9	65	84	1	1	0.75	0.75	50	1	LFB9S	258.00	LMB9S	387.00
36-72	12	75	84	0.75	0.75	0.5	0.5	50	1	LFB12S	258.00	LMB12S	387.00
36-72	15	75	84	0.75	0.75	0.5	0.5	50	1	LFB15S	258.00	LMB15S	387.00
36-72	24	75	87	0.5	0.5	0.5	0.5	50	0.5	LFB24S	258.00	LMB24S	387.00
36-72	28	75	87	0.5	0.5	0.5	0.5	50	0.5	LFB28S	258.00	LMB28S	387.00
36-72	48	75	85	0.5	0.5	0.5	0.5	50	0.5	LFB48S	258.00	LMB48S	387.00
36-72	100	75	85	0.5	0.5	0.5	0.5	100	0.5	LFB100S	258.00	LMB100S	387.00

10% Minimum load required at all times  
\*\*Reading taken at nominal 48 VDC input  
\*Using proper thermal management, maximum temp. of +85°C (case)

## SERIES LFB/LMB DUAL • 75 WATTS • INPUT 36-72 VDC

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 (%) (±)	Series LFB Dual (-40°C to +85°C)		Series LMB Dual (-55°C to +85°C)	
				10-50%	50-100%	36-48V	48-72V			PICO PART NUMBER	PRICE	PICO PART NUMBER	PRICE
36-72	5	50	80	1	1	0.75	0.75	50	1.5	LFB5D	348.00	LMB5D	522.00
36-72	9	65	84	1	1	0.75	0.75	50	1	LFB9D	348.00	LMB9D	522.00
36-72	12	75	84	0.75	0.75	0.5	0.5	50	1	LFB12D	348.00	LMB12D	522.00
36-72	15	75	85	0.75	0.75	0.5	0.5	50	1	LFB15D	348.00	LMB15D	522.00
36-72	24	75	87	0.5	0.5	0.5	0.5	50	0.5	LFB24D	348.00	LMB24D	522.00
36-72	28	75	87	0.5	0.5	0.5	0.5	50	0.5	LFB28D	348.00	LMB28D	522.00
36-72	48	75	85	0.5	0.5	0.5	0.5	50	0.5	LFB48D	348.00	LMB48D	522.00

\*\*Reading taken at nominal 48 VDC input  
10% Minimum load required at all times  
\*Using proper thermal management, maximum temp. of +85°C (case)

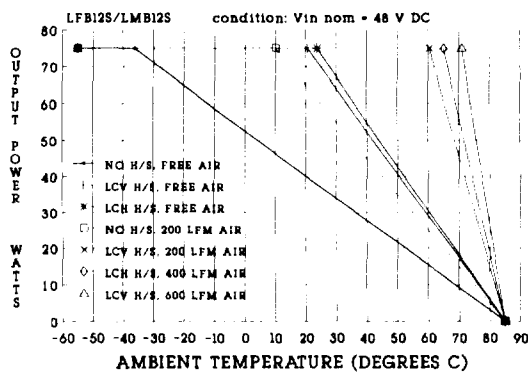
### FEATURES:

- 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 KHz

### TYPICAL CHARACTERISTICS:

Frequency: 100 KHz  
Base plate: Max. +85°C  
Operating Temp.: 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: 1000 VDC  
isolation Input Output: 1000 VDC  
isolation Output to Base: 1000 VDC  
Storage Temp.: -55°C to +105°C  
For All Variations Call Factory

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 #LFB12S/LMB12S using Application Notes. Please consult factory with any questions.



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

**PICO Electronics, Inc.**  
143 Sparks Avenue, Pelham, NY 10803-1889  
914-699-5514 • FAX 914-699-5565

Delivery—  
stock to one week

Application Notes  
Page 124  
Mechanical  
Configuration  
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34 Standard  
Models

Series LFB  
-40°C to +85°C  
Operating Temp.

Series LMB  
-55°C to +85°C  
Operating Temp.

VIBRATION	Meets MIL STD 202 Method 204 Cond. D
HUMIDITY	Meets MIL STD 202 Method 106
SHOCK	Meets MIL STD 202 Method 213 Cond. D
ALTITUDE	Meets MIL STD 202 Method 105 Cond. D
Selected MIL STD 883 Options also Available	
STABILIZATION	MIL STD 883
BAKE	Method 1003 24 Hrs TA=125°C
BURN IN	MIL STD 883 Method 1015 160 Hrs at 90°C
TEMPERATURE CYCLE	MIL STD 883 Method 1010 Cond. B