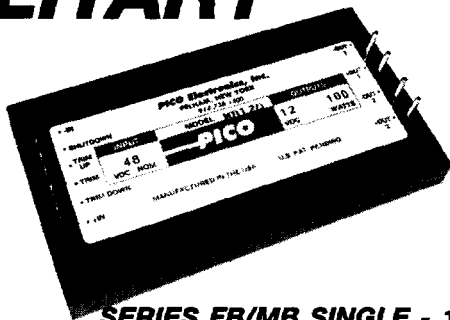


MILITARY



SERIES FB (-40°C to +85°C Operating Temperature)
SERIES MB (-55°C to +85°C Operating Temperature)

3.3 to 300 VDC Outputs Available
Isolated Regulated 100 Watts
DC-DC Converters
Wide Input Range/36-72 VDC
Short Circuit Protected
± Parallel Operation



SERIES FB/MB SINGLE - 100 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 1-1 MHz BW (MVP-P)	OUTPUT VOLTAGE TOLERANCE (±%)*	Series FB single (-40°C to +85°C)		Series MB 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	50	76	1.50	1.50	0.75	0.75	50	2.0	FB3.3S	208.00	MB3.3S	312.00
36-72	5	75	78	1.00	1.00	0.75	0.75	50	1.5	FB5S	208.00	MB5S	312.00
36-72	5.2	75	78	1.00	1.00	0.75	0.75	50	1.5	FB5.2S	208.00	MB5.2S	312.00
36-72	9	100	82	1.00	1.00	0.75	0.75	50	1.0	FB9S	208.00	MB9S	312.00
36-72	12	100	84	0.75	0.75	0.50	0.50	50	1.0	FB12S	208.00	MB12S	312.00
36-72	15	100	85	0.75	0.75	0.50	0.50	50	1.0	FB15S	208.00	MB15S	312.00
36-72	24	100	87	0.50	0.50	0.50	0.50	50	0.5	FB24S	208.00	MB24S	312.00
36-72	28	100	87	0.50	0.50	0.50	0.50	50	0.5	FB28S	208.00	MB28S	312.00
36-72	48	100	88	0.50	0.50	0.50	0.50	50	0.5	FB48S	208.00	MB48S	312.00
36-72	100	100	87	0.50	0.50	0.50	0.50	50	0.5	FB100S	312.00	MB100S	468.00

10% Minimum load required at all times

**Reading taken at nominal 48 VDC input

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

The new PICO Series FB and MB 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 operation 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.

SERIES FB/MB DUAL - 100 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 1-1 MHz BW (MVP-P)	OUTPUT VOLTAGE TOLERANCE (±%)*	Series FB single (-40°C to +85°C)		Series MB single (-55°C to +85°C)	
				10-50%	50-100%	36-48V	48-72V			PICO PART NUMBER	PRICE	PICO PART NUMBER	PRICE
36-72	5	37.5/37.5	78	1.00	1.00	0.75	0.75	50	1.5	FB5D	298.00	MB5D	447.00
36-72	9	50/50	82	1.00	1.00	0.75	0.75	50	1.0	FB9D	298.00	MB9D	447.00
36-72	12	50/50	84	0.75	0.75	0.50	0.50	50	1.0	FB12D	298.00	MB12D	447.00
36-72	15	50/50	85	0.75	0.75	0.50	0.50	50	1.0	FB15D	298.00	MB15D	447.00
36-72	24	50/50	87	0.50	0.50	0.50	0.50	50	0.5	FB24D	298.00	MB24D	447.00
36-72	28	50/50	87	0.50	0.50	0.50	0.50	50	0.5	FB28D	298.00	MB28D	447.00
36-72	48	50/50	88	0.50	0.50	0.50	0.50	50	0.5	FB48D	298.00	MB48D	447.00

10% Minimum load required at all times

**Reading taken at nominal 48 VDC input

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

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 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: 2121 VDC
Isolation Input output: 4242 VDC
Isolation Output to Base: 1000 VDC
Storage Temp.: - 55° C to +105° C

±HIGH VOLTAGE SERIES FB/MB TO 300 VDC - 100 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 1-1 MHz BW (V)	OUTPUT VOLTAGE TOLERANCE (±%)**	PICO PART NUMBER	PRICE	PICO PART NUMBER	PRICE
				10-50%	50-100%	36-48V	48-72V						
36-72	125	100	85	0.5	0.5	0.3	0.3	1	0.5	FB125S	312.00	MB125S	468.00
36-72	150	100	85	0.5	0.5	0.3	0.3	1	0.5	FB150S	312.00	MB150S	468.00
36-72	175	100	85	0.5	0.5	0.3	0.3	1	0.5	FB175S	312.00	MB175S	468.00
36-72	200	100	85	0.5	0.5	0.3	0.3	1	0.5	FB200S	416.00	MB200S	624.00
36-72	225	100	85	0.5	0.5	0.3	0.3	1	0.5	FB225S	416.00	MB225S	624.00
36-72	250	100	85	0.5	0.5	0.3	0.3	1	0.5	FB250S	416.00	MB250S	624.00
36-72	275	100	85	0.5	0.5	0.3	0.3	1	0.5	FB275S	416.00	MB275S	624.00
36-72	300	100	85	0.5	0.5	0.3	0.3	1	0.5	FB300S	520.00	MB300S	780.00

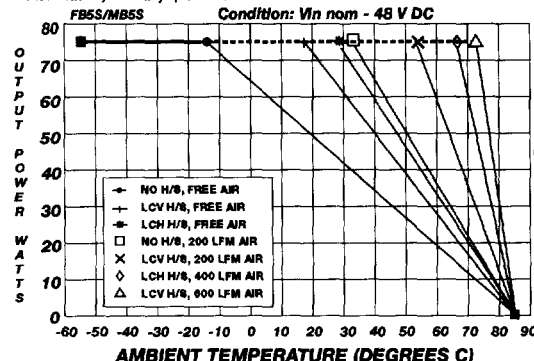
**Reading taken at nominal 48 VDC input

10% Minimum load required at all times

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

†UL approval recognition pending

Full thermal analysis can be determined using application notes on page 138. 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 #FB5S/MB5S using Application Notes. Please consult factory with any questions.



Application Notes
 page 138
 Mechanical
 Configuration
 page 142

Dual Isolated Outputs
Special Voltage
Combinations Available

±Parallel Operation
 Consult factory to optimize for your application

For All Variations Call Factory

SERIES FB

(-40°C to +85°C Operating Temperature)

SERIES MB

(-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	
STABILIZATION BAKE	MIL STD 883 Method 1008 24 Hrs TA=125°C
BURN IN	MIL STD 883 Method 1015 160 Hrs at 90°C
TEMPERATURE CYCLE	MIL STD 883 -55°C to +105°C Method 1010 Cond. B