

# MIL-VIPAC Array

MILITARY

CHASSIS MOUNT DC-DC

## FEATURES

- 24, 28 or 300 V input  
48, 72, 110, 150, and 375 V inputs also available
- -55°C operation
- Configurable single, dual, triple & quad outputs
- Outputs 2 – 48 Vdc; Up to 650 W
- Compliant to MIL-STD-810F for shock (Method 516.5, Procedure I) & vibration (Method 514.5, Procedure I)
- Current share option for high power / redundant operation
- High temperature capability
- Rugged, low profile, coldplate chassis
- Fully connectorized input & output for simplified hook up

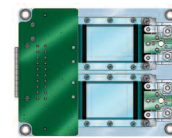


## PRODUCT INFORMATION

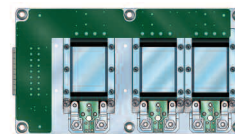
MIL-VIPAC Arrays are a highly flexible system of DC input power building-blocks that can be configured with as many as four user-definable outputs on a low profile, coldplate chassis. Using Vicor's VCAD design tool, designers are able to specify MIL-VIPAC Arrays with Maxi, Mini and Micro Family H- or M- Grade converters with inputs of 24, 28 or 300 Vdc (additional input voltages available) and outputs from 2 to 48 Vdc at power levels up to 500 W per output. MIL-VIPAC Arrays are ideal for use in distributed and modular power systems where power density and reliable operation are critical. Fully connectorized input and output terminations speed system installation and a versatile coldplate chassis simplifies thermal management.

Consult Powerbox Sales for additional technical or design information to configure a tailored system.

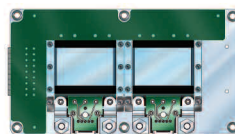
## CONFIGURATIONS



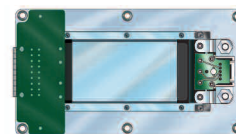
- 2 Micros**
- 3.62" x 4.39" (92,0 x 112,0 mm)
  - 0.7 lbs (318 g)
  - Single or dual outputs
  - Up to 300 W



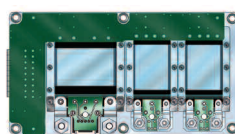
- 3 Micro**
- 3.62" x 6.69" (92,0 x 170,0 mm)
  - 1.3 lbs (590 g)
  - Dual or triple outputs
  - Up to 450 W



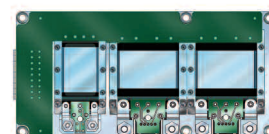
- 2 Minis**
- 3.62" x 6.69" (92,0 x 170,0 mm)
  - 1.25 lbs (567 g)
  - Single or dual outputs
  - Up to 500 W



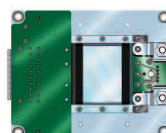
- 1 Maxi**
- 3.62" x 6.69" (92,0 x 170,0 mm)
  - 1.05 lbs (476 g)
  - Single output
  - Up to 500 W



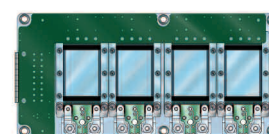
- 1 Mini, 2 Micros**
- 3.62" x 6.69" (92,0 x 170,0 mm)
  - 1.3 lbs (590 g)
  - Dual or triple outputs
  - Up to 550 W



- 1 Micro, 2 Minis**
- 3.62" x 7.52" (92,0 x 191,0 mm)
  - 1.35 lbs (612 g)
  - Dual or triple outputs
  - Up to 650 W



- 1 Mini**
- 3.62" x 4.39" (92,0 x 112,0 mm)
  - 0.7 lbs (318 g)
  - Single output
  - Up to 250 W
  - Current share option



- 4 Micros**
- 3.15" x 6.8" (92,0 x 191,0 mm)
  - 1.3 lbs (590 g)
  - Dual, triple or quad outputs
  - Up to 600 W

# MIL-VIPAC Array

## CHASSIS MOUNT DC-DC

### GENERAL SPECIFICATIONS

(Typical at 25°C, nominal line and load, unless otherwise specified)

PARAMETER	MIN	TYPE	MAX	UNIT	NOTE
<b>Operating – 24 V Input</b>					
Operating input voltage	18	24	36	Vdc	For 16 V operation <sup>[a]</sup>
Input surge withstand			50	Vdc	<100 ms
Output voltage set point			±1	% Vout nom.	Nominal input; full load; 25°C

PARAMETER	MIN	TYPE	MAX	UNIT	NOTE
<b>Operating – 28 V Input</b>					
Operating input voltage	9	28	36	Vdc	From 9 – 10 V, available power is reduced to 75% of max rating. Selected Maxi modules have a minimum operating voltage of 10 V
Input surge withstand			50	Vdc	<100 ms
Output voltage set point			±1	% Vout nom.	Nominal input; full load; 25°C

PARAMETER	MIN	TYPE	MAX	UNIT	NOTE
<b>Operating – 300 V Input</b>					
Operating input voltage	180	300	375	Vdc	
Input surge withstand			400	Vdc	<100 ms
Output voltage set point			±1	% Vout nom.	Nominal input; full load; 25°C

PARAMETER	MIN	TYPE	MAX	UNIT	NOTE
<b>Input – 24 V Input</b>					
Undervoltage turn-on		17.5	17.9	Vdc	
Undervoltage turn-off	14.8	15.3		Vdc	
Overvoltage turn-off / on	36.3	37.8	39.6	Vdc	

PARAMETER	MIN	TYPE	MAX	UNIT	NOTE
<b>Input – 28 V Input</b>					
Undervoltage turn-on		8.75	8.9	Vdc	For selected Maxi modules, undervoltage turn-on is 9.9 Vdc max.
Input surge withstand		8.5		Vdc	For selected Maxi modules, undervoltage turn-off is 9.5 Vdc typ.
Overvoltage turn-off / on	36.3	37.8	39.6	Vdc	

PARAMETER	MIN	TYPE	MAX	UNIT	NOTE
<b>Input – 300 V Input</b>					
Undervoltage turn-on		174.6	178.2	Vdc	
Undervoltage turn-off	147.4	152.8		Vdc	
Overvoltage turn-off / on				Vdc	Not included

PARAMETER	MIN	TYPE	MAX	UNIT	NOTE
<b>Environmental</b>					
Dielectric withstand, input to chassis	1500 / 2121			Vrms / Vdc	
Dielectric withstand, input to output	3000 / 4242			Vrms / Vdc	
Operating temperature - Ambient					
H-Grade	-40		+65	°C	Max chassis temp., 95°C
M-Grade	-55		+65	°C	
Shock	MIL-STD-810F, Method 516.5, Procedure I				40 g for 15 – 23 ms 75 g for 8 – 13 ms
Vibration	MIL-STD-810F, Method 514.5, Procedure I				20 – 2000 Hz at 5 G rms

<sup>[a]</sup> The following models will operate down to 16 V at 75% rated power after start up at >17.9 V  
 Maxi — selected models, Mini — all models, Micro — all models