

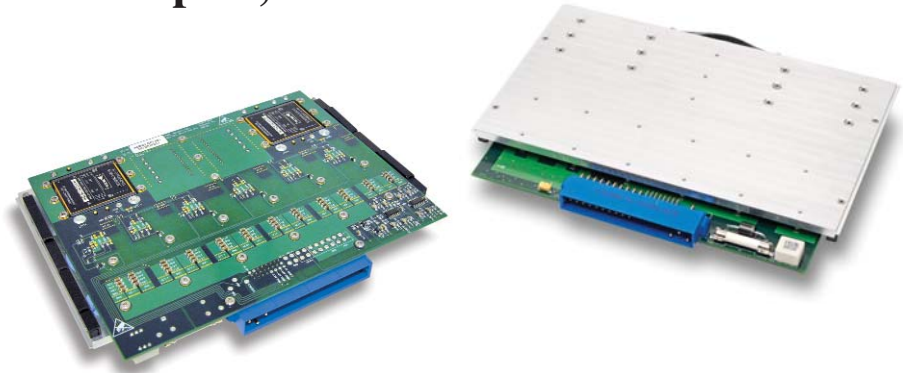
Data Sheet

VME450-01

28 Vdc VME Power Supply 4 Outputs, 550 W

Features

- 28 Vdc per MIL-STD-704F
- 4 Output voltages, 550 W
- MIL-STD-810F environment
- MIL-STD-461E EMI
- Utilizes Vicor's cutting edge V•I Chips for industry leading power density
- Single slot VME power supply



Product Highlights

The single-slot VME450 power supply — filtered 28 Vdc, four output (3.3, 5, ±12 V), 550 W — is a military COTS solution that is compliant to the vibration requirements of MIL-STD-810F and EMI per MIL-STD-461E. When compared to VME power supplies using conventional technology, the one-slot VME450 provides users with higher efficiency (85%), lower weight (2.4 pounds), and higher power (up to 550 W). Built with Vicor V•I Chips, it uses two M-FIAM modules, six PRMs and six VTMs.

Aegis Power Systems, a subsidiary of the Vicor Corporation, specializes in the design, development, and manufacture of rapid response custom switching power supplies and power systems for the defense industry.

Maximum Ratings

Parameter	Rating	Unit	Notes
Vin max range	18 to 36	Vdc	
Temperature	-40 to +85	°C	Use output derating Fig. 1
Combined output power	550	W	
Input power	650	W	@ 550 Wout
Max +5 V power	224	W	
Max +3.3 V power	224	W	
Max +12 V power	100	W	
Max -12 V power	100	W	

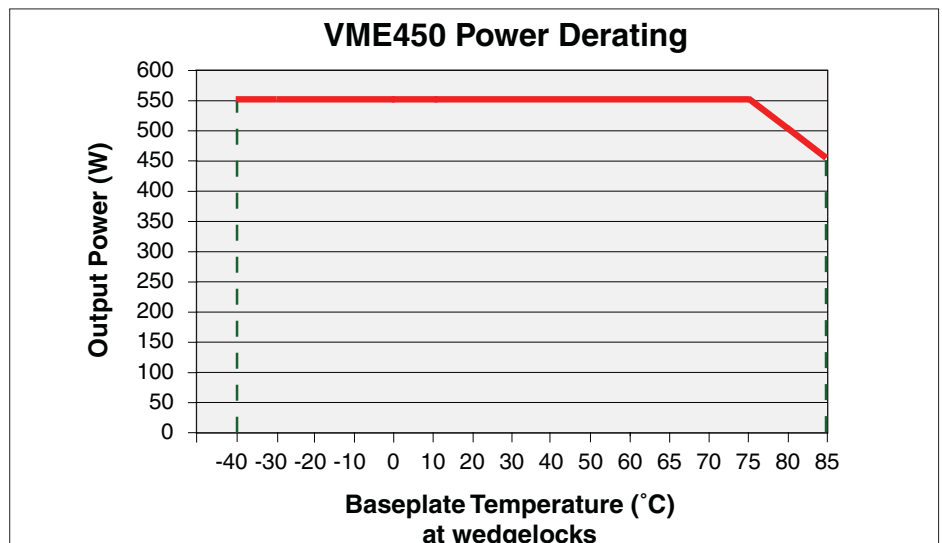


Fig. 1

SPECIFICATIONS

(typical at 25°C, nominal line and 100% load, unless otherwise specified)

■ SPECIFICATIONS

Parameters	Notes
DC input voltage	Meets MIL-STD-704F normal range 22 Vdc to 29 Vdc, 28 Vdc nominal 50 Vdc 12.5 msec transient, shut down for longer automatic restart Shuts down for abnormal range automatic restart
DC input line current	24.1 A max. @ 22 Vdc; 18.5 A typical @ 28 Vdc input (450 Wout) 29.4 A max. @ 22 Vdc; 22.6 A typical @ 28 Vdc input (550 Wout)
Input power	529 W max @ 450 Wout, 650 W max @ 550 Wout
Output power	450 to 550 W max. all outputs combined (see Fig. 1)
Output voltages	See table 1
Efficiency	85% min., 87% typical
Start up time	500 ms. max.
Voltage set point, Line, Load regulation	+/- 2% Vout nominal (for any combination)
Temperature regulation	+/- 0.01% / °C
Output ripple	50 mV pk-pk Max. (20 MHz BW) all except; +/-12 Vdc 100 mV pk-pk Max. (20 MHz BW)
Current Limit	Short circuit protected, automatic recovery
Temperature	-40°C to +75°C Operating baseplate wedgelocks 550 W -40°C to +85°C Operating baseplate wedgelocks 450 W -55°C to +100°C Non-operating
Size /Weight	6U x 4hp x 160 mm (see mech drawing) / 2.4 lb. typical
Connector	1ea Positronics PCIH47M400A1 or equivalent (see drawing for pin assignments)
Vibration	MIL-STD-810F, Method 514.5, Procedure I
Shock	MIL-STD-810F, Method 516.5, Procedure I
Humidity	0 – 95% non-condensing
EMI	MIL-STD-461E, CE102, CS101

■ TABLE 1

VME450-xx	V1	V2	V3	V4
01	+5 Vdc 40 A 200 W	+3.3 Vdc 55 A 182 W	+12 Vdc 7.1 A 85 W	-12 Vdc 7.1 A 85 W

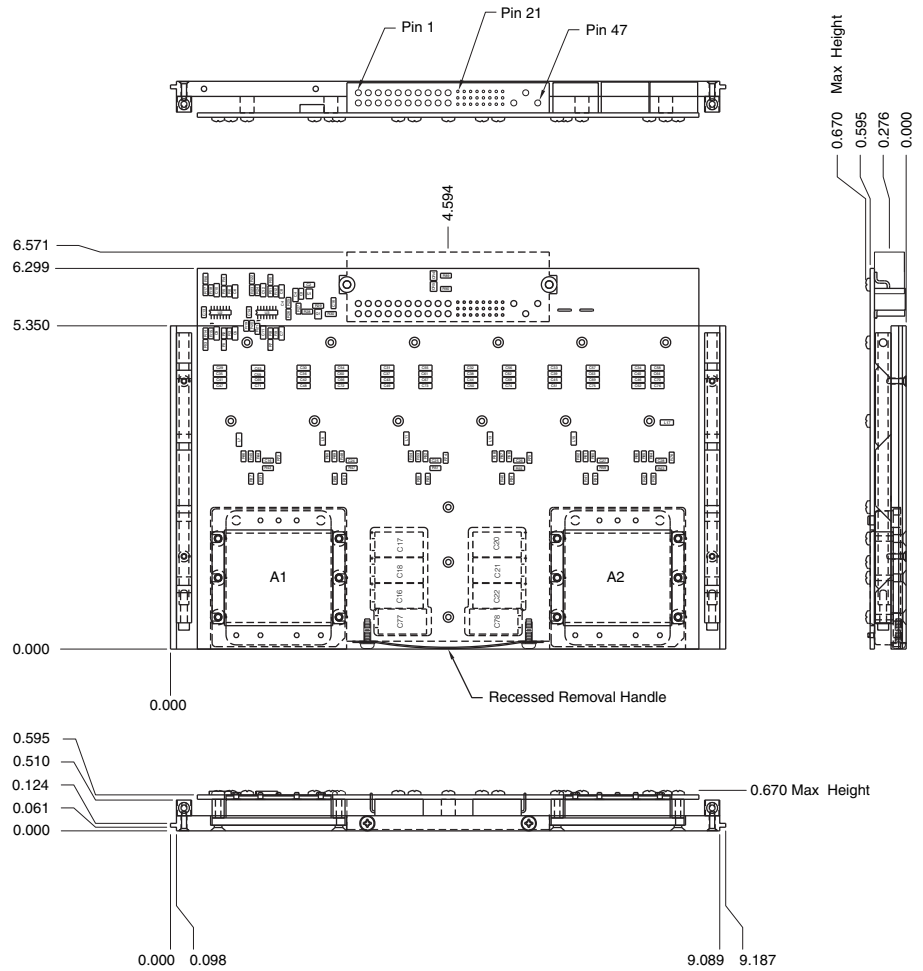
Output voltage variants are possible—contact your Vicor Sales Representative for details.

SPECIFICATIONS

MECHANICAL DRAWING

Table 2

Connector Positronic P/N PCIH47M400A1, OR EQ.	
Pins 1, 2, 3, 4	+5 Vdc
Pins 5, 6, 7, 8	+5 V RTN (Common)
Pins 9, 10, 11, 12	+3.3 V RTN (Common)
Pins 13, 14, 15, 16	+3.3 Vdc
Pin 17	+12 Vdc
Pin 18	+12 V RTN (Common)
Pin 19	-12 Vdc
Pin 20	-12 V RTN (Common)
Pin 21	NC
Pin 22	Signal RTN (Common)
Pins 23, 24, 25, 26, 27, 28, 29	NC
Pin 30	NC
Pin 31	NC
Pin 32	NC
Pins 33, 34, 35, 36, 37, 38	NC
Pin 39	Inhibit (Connect pin to negative input to disable)
Pins 40, 41	NC
Pin 42	Power OK, (Open collector = Fail)
Pins 43, 44	NC
Pin 45	Chassis Ground
Pin 46	Positive
Pin 47	Negative Input



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