



VITA 62 VPX SOLUTIONS - DC/DC

DPM4094 SERIES

DPM4094 SERIES

DC/DC POWER SUPPLY



PRODUCT HIGHLIGHTS

- VITA 62.2 COMPLIANT
- SOSA™ ALIGNED
- 3U FORM FACTOR
- UP TO 800 W
- OPERATING TEMP: -55°C to +85°C
- EMI: Compliant to MIL-STD-461G
- Environmental: MIL-STD-810
- Input Options:
 - MIL-STD-704
- Cyber secure

For quotes and customization requests, please
contact us at (877) 634-0982 or sales@digipwr.com



Learn more:
www.digipwr.com

A DIVISION OF TUGTECHNOLOGIES™

Ver. 1.0

Electrical Specifications

DC Input

270V_{DC}

- Works Through MIL-STD-704 (A-F) Normal and Abnormal Steady State
- Works Through MIL-STD-704(E-F) Normal transients
- Protected MIL-STD-704(B-D) Normal/Abnormal Transients
- Protected MIL-STD-704(E-F) Abnormal Transients

DC Output

VS1: 12V up to 64A
3.3VAux: 3.3V up to 15A

Isolation

Over 20 MΩ at test voltage:
500V between Input to Output and case (while Output & Case shorted together).
100V between Output to Case.

Efficiency

Up to 91%

EMC

Designed to meet:
MIL-STD-461G CE101,
CE102, CS101, CS114,
CS115, CS116

Line/Load regulation

See table 2

Ripple and Noise

Typically, less than 50mV_{p-p} (max. 1%_p). Measured across a 0.1μF capacitor and 10μF capacitor on load across Temperature Range.

System management options:

- 1) I2C
- 2) IPMI
- 3) VITA 46.11 Tier II IPMC

Data available:

- Output voltages and currents
- Input voltage
- Card temperature
- Card status

Load Transient Overshoot and Undershoot

Output dynamic response of less than 5% at load Step of 60%-90%.

Output returns to regulation in less than 1mSec

Normal Quiescent Current:

Inhibited Output: 20mA (3.3VAux Only)

Disabled Input: 17mA (All Outputs Off)

About Digital Power

Digital Power Corporation designs and manufactures full custom, value-added, and standard comprehensive power solutions for the most demanding applications in the defense, healthcare, telecom, and industrial markets.

 **Digital Power**
Flexible Power Solutions

Learn more:
www.digipwr.com

Environmental¹

Design to Meet MIL-STD-810G

Temperature

Operating: -55°C to +85°C at unit edge

Storage: -55°C to +125°C

Designed to meet 600 thermal cycles durability test

Fungus

Does not support fungus growth, in accordance with the guidelines of MIL-STD-454, Requirement 4.

Altitude

Method 500.5, Procedure I & II Storage/Air Transport: 40 kft
Operation/Air carriage: 70 kft

Salt Fog:

Method 509.5

Humidity

Method 507.5, Up to 95% RH

Shock

Method 516.6
40g, 11msec saw-tooth (all directions)

Vibration

Vibration: Figure 514.6E-1. General minimum integrity exposure. (1 hour per axis.)

Reliability: 375,135 Hours, calculated IAW MIL-HDBK-217F Notice 2 at +65 °C, GF

Note 1: ***Environmental Stress Screening (ESS)*** Including random vibration and thermal cycles is also available. **Please consult factory for details.**

About Digital Power

Digital Power Corporation designs and manufactures full custom, value-added, and standard comprehensive power solutions for the most demanding applications in the defense, healthcare, telecom, and industrial markets.

 **Digital Power**
Flexible Power Solutions

Learn more:
www.digipwr.com

Pin Assignment

Pin Number	Pin Name
P1	-DC_IN
P2	+DC_IN
LP1	CHASSIS
P3	VS1
P4	POWER_RETURN
P5	POWER_RETURN
LP2	3.3Vaux
P6	VS1
A8	VS1_SENSE
B8	3.3Vaux_SENSE
C8	VS1_SENSE / N.C
D8	SENSE_RETURN
A7	VS1_SHARE
B7	3.3Vaux_SHARE
C7	VS1_ACS
D7	SiG_RTN
A6	SCL_B
B6	SDA_B
C6	N.C.
D6	SYSRESET*
A5	GA0*
B5	GA1*
C5	SCL_A
D5	SDA_A
A4	N.C.
B4	N.C.
C4	N.C.
D4	N.C.
A3	Sync_In / N.C.
B3	N.C.
C3	N.C (NED)
D3	N.C (NED RETURN)
A2	N.C.
B2	FAIL*
C2	INHIBIT*
D2	ENABLE*
A1	N.C.
B1	N.C.
C1	GA2*
D1	3.3Vaux_ACS / N.C.

Notes:

Pin assigned as Function/N.C is optional and can be configured as not connected

Previous configurations had 3.3Vaux_ACS on Pin B4 and Sync_In (labeled as Ref Clk(+)) on Pin A1.

Pin D1 was previously labeled as Alert/N.C. and was unused.

Pin A3 was previously labeled as Ref_Clk (-) / N.C. and was unused

About Digital Power

Digital Power Corporation designs and manufactures full custom, value-added, and standard comprehensive power solutions for the most demanding applications in the defense, healthcare, telecom, and industrial markets.

 **Digital Power**
Flexible Power Solutions

Learn more:
www.digipwr.com