



# VITA 62 VPX SOLUTIONS Three Phase

DPM4705 SERIES

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## DPM4705 SERIES

*AC/DC POWER SUPPLY*



### PRODUCT HIGHLIGHTS

- VITA 62 COMPLIANT
- VITA 48.7 Class A AFB COMPLIANT
- 6U VPX FORM FACTOR
- SOSA™ ALIGNED
- AC/DC CONVERTER
- Up to 1200W Steady State
- Cyber Secure

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



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Ver. 1.0

## Applications

Military (Airborne, ground-fix, shipboard), Ruggedized, Telecom, Industrial

## Special Features

- VITA 62 6U
- SOSA™ Aligned
- High efficiency
- Input / Output isolation
- Remote sense
- EMI filters included
- Fixed switching frequency
- Parallel configuration
- 46.11 Tier 2 communication
- External Inhibit & Enable
- Indefinite short circuit protection with auto-recovery
- Over temperature shutdown with auto recovery

## Electrical Specifications

### AC Input

115VAC  $\pm$  10% 400Hz Three-Phase  
Ride-through Mil-STD-704F normal transient

### Line/Load regulation

$\pm$ 1% or better (no load to full load, low line to high line  $-55^{\circ}\text{C}$  to  $+55^{\circ}\text{C}$  @ 27 CFM)

### Ripple and Noise

Less than 50mVp-p, typical (max. 1%), measured across 0.1 $\mu\text{F}$  and 10 $\mu\text{F}$  on Load

### System Management Options

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

Data available:

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

### DC Outputs

PO1, PO2, & PO3 12V/90A  
3.3Vaux 3.3V/20A  
 $\pm$ 12Vaux - Optional

Total Steady state Power 1200W ( $-55^{\circ}\text{C}$  to  $+55^{\circ}\text{C}$ ).

### Hold Up

N/A

### Current Share

12V Active Current share  
3.3Vaux Passive Current Share (3.3Vaux ACS optional)

### Load Transient

Output dynamic response up to 5% at step load of 30%-90%.  
Output return to steady stated within 300-500 $\mu\text{Sec}$

### Power Factor

$\geq$  0.87 (Full load)<sup>3</sup>

### Isolation

500VDC Input to Output  
500VDC Input to Case  
500VDC Output to Case

### EMC

Designed to meet with External Filter MIL-STD-461F<sup>2</sup>  
CE102, CS101, CS114, CS115 & CS116, RE102

### Efficiency

Typical 87% (Nominal line, nominal load, room temperature)

## Notes:

<sup>1</sup> Contact Factory for peak power options

<sup>2</sup> Deviation under 70KHz, See EMI Paragraph. RE102 Supported at system Level

<sup>3</sup> P.F Leading, lagging optional with external Filter

## 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.



**Protections** (Thresholds and protections can be modified / removed – please consult factory).

<p><b><u>Input</u></b></p> <ul style="list-style-type: none"> <li>• <b>Inrush Current Limiter:</b> peak value of 5 x IIN for inrush currents lasting longer than 100µs.</li> <li>• <b>Under Voltage Lock-Out</b> Unit shuts down when input voltage is below 70Vacrms ± 5Vacrms.</li> <li>• <b>Catastrophic Failure Protection</b> Fuses are available to protect from catastrophic failure. The fuses are rated not to engage due to any normal type operation.</li> </ul>	<p><b><u>Outputs</u></b></p> <ul style="list-style-type: none"> <li>• <b>Over Voltage Protection:</b> 12V Active &amp; Passive OVP 3.3Vaux Active &amp; Passive OVP ±12Vaux Active &amp; Passive OVP</li> <li>• <b>Overload / Short Circuit Protection</b> 12V Output-Continuous Hiccup protection (110-130%). 3.3Vaux – Typical 33A ±12Vaux – Typical 3A</li> </ul>	<p><b><u>General</u></b></p> <ul style="list-style-type: none"> <li>• <b>Over temperature Protection:</b> Shutdown at +100 °C ± 5°C Recovery at +90 °C ± 5°C Temperature measured at Unit Cover.</li> </ul>
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<p><b><u>Environmental</u></b> Designed to meet MIL-STD-810G and VITA 47</p>		
<p><b><u>Temperature</u></b> Operating: -55°C to +55°C @ 27 CFM (at inlet, IAW VITA 62 AC2) Storage: -55°C to +125°C</p> <p><b><u>Humidity</u></b> 810G Method 507.5 &amp; VITA 47 Para. 5.6, Up to RH 95%.</p> <p><b><u>Reliability</u></b> &gt; 314,000 hours, calculated per MIL-STD-217F Notice 2 at +65°C at wedge lock edge, Ground Fixed.</p>	<p><b><u>Altitude</u></b> 810G Method 500.5, Procedure II (Operational) &amp; VITA 47 para. 5.7 60,000 ft.</p> <p><b><u>Vibration</u></b> 810G Method 514.6 Procedure I. General minimum integrity exposure. (1 hour per axis) &amp; VITA 47 Vibration Class V2</p>	<p><b><u>Salt Fog</u></b> Method 509.5</p> <p><b><u>Shock</u></b> 810G Method 516.6 Procedure I &amp; VITA 47 Shock Class OS1 Saw-tooth, 20g peak, 11ms</p>

**Environmental Stress Screening (ESS)**

Including random vibration and thermal cycles is also available. **Please consult factory for details.**

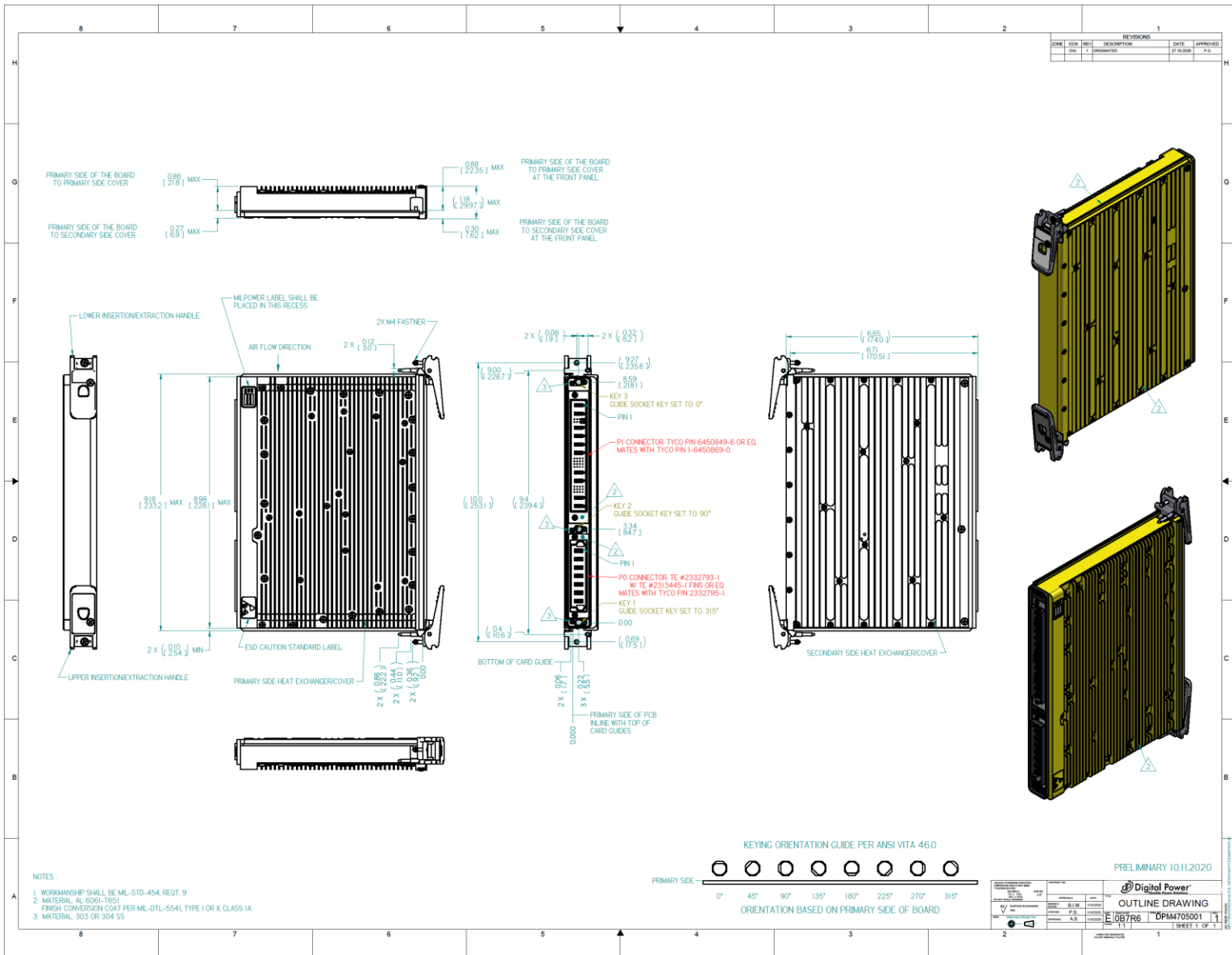
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# Outline Drawing



\* Specifications are subject to change without prior notice by the manufacturer.

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