



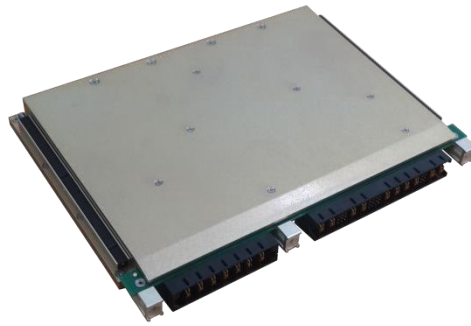
VITA 62 VPX SOLUTIONS Single Phase

DPM4069 SERIES

DPM4069 SERIES

6U VITA 62 COMPLIANT
HIGH DENSITY, FIVE OUTPUTS,
SINGLE-PHASE AC / DC CONVERTERS

Up to 1kW



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



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Ver. 1.0

Applications

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

Special Features

- VITA 62 / 6U / 1.0 Pitch
- High efficiency
- Wide input range
- Input / Output isolation
- Power Factor Correction
- Remote sense
- Fixed switching frequency
- EMI filters included
- I²C communication
- Remote Inhibit (Off/On)
- Remote Enable (On/Off)
- Indefinite short circuit protection with auto-recovery
- Over-voltage shutdown with auto-recovery
- Over temperature shutdown with auto-recovery

Electrical Specifications

AC Input

85 to 265 V_{AC}
50/60/400
Single-Phase

DC Outputs (standard version)

PO1/PO2 12 V_{DC} / 60 A Sense
PO3 5 V_{DC} / 35 A Sense
3.3V_Aux 3.3 V_{DC} / 35 A Sense
+12V_Aux +12 V_{DC} / 1 A
-12V_Aux -12 V_{DC} / 1 A
Total power output: 1030 W

Isolation

Input to Output: 500 V_{DC}
Input to Case: 500 V_{DC}
Output to Case: 200 V_{DC}

Output Voltage Regulation

±1% or better
(no load to full load, low line to high line, -55 °C to +70 °C).

Power Factor

≥ 97% (115 V_{AC}, 60 Hz, full load)

EMC

Designed to meet MIL-STD-461F (with 5 μH LISNs) CE101, CE102, CS101, CS114, CS115, CS116

Ripple and Noise

Less than 50 mV_{p-p}, typical, without external capacitance. When connected to system capacitance ripple drops significantly.

Transient Over-and-under-shoot

Output resistance at load change of 50%-100% is 30-120 mΩ (adding output capacitance lowers the output resistance at load). Output back to steady stated within 300 to 500 μs.

Efficiency

Typical 85% (Nominal line, nominal load, room temperature)

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).

Input

- **Inrush Current Limiter:**
peak value of $5 \times I_{IN}$ for less than 1 ms.
- **Under Voltage Lock-Out**
Unit protects itself (no damage) below 72 V_{AC}.
- **Catastrophic Failure Protection**
Fuses are available to protect from catastrophic failure. The fuses are rated not to engage due to any normal type operation.

Output

- **Active Over Voltage Protection**
Set to engage at $120\% \pm 10\%$ of nominal voltage.
- **Passive Over Voltage Protection**
Set to engage at $135\% \pm 15\%$ of nominal voltage.
- **Overload / Short Circuit Protection**
Continuous protection (5-35% above maximum current) for unlimited time (Hiccup).

General

- **Over temperature protection:**
Shutdown at temperature of $+105\text{ }^\circ\text{C} \pm 10\text{ }^\circ\text{C}$.
Automatic recovery when temperature drops below $+95\text{ }^\circ\text{C} \pm 10\text{ }^\circ\text{C}$.

Environmental Conditions

Designed to meet MIL-STD-810F

Temperature

Operating: $-55\text{ }^\circ\text{C}$ to $+70\text{ }^\circ\text{C}$ (at plug-in card wedgelock, IAW VITA 62)

Storage: $-55\text{ }^\circ\text{C}$ to $+125\text{ }^\circ\text{C}$

Humidity

Method 507.4
Up to 95%.

Altitude

Method 500.4
Procedures I & II, 40,000 ft. and 70,000 ft. Operational

Vibration and

Method 514.5
Procedure I
Category 24 - General minimum integrity exposure IAW figure 514.5C-17, 1 hour per axis.

Salt Fog

Method 509.4

Shock

Method 516.6
20 g, 11 ms terminal peak saw-tooth.

Reliability

100'000 hours, calculated IAW MIL-STD-217F Notice 2 at $+40\text{ }^\circ\text{C}$ at card wedgelock, Ground Fix conditions.

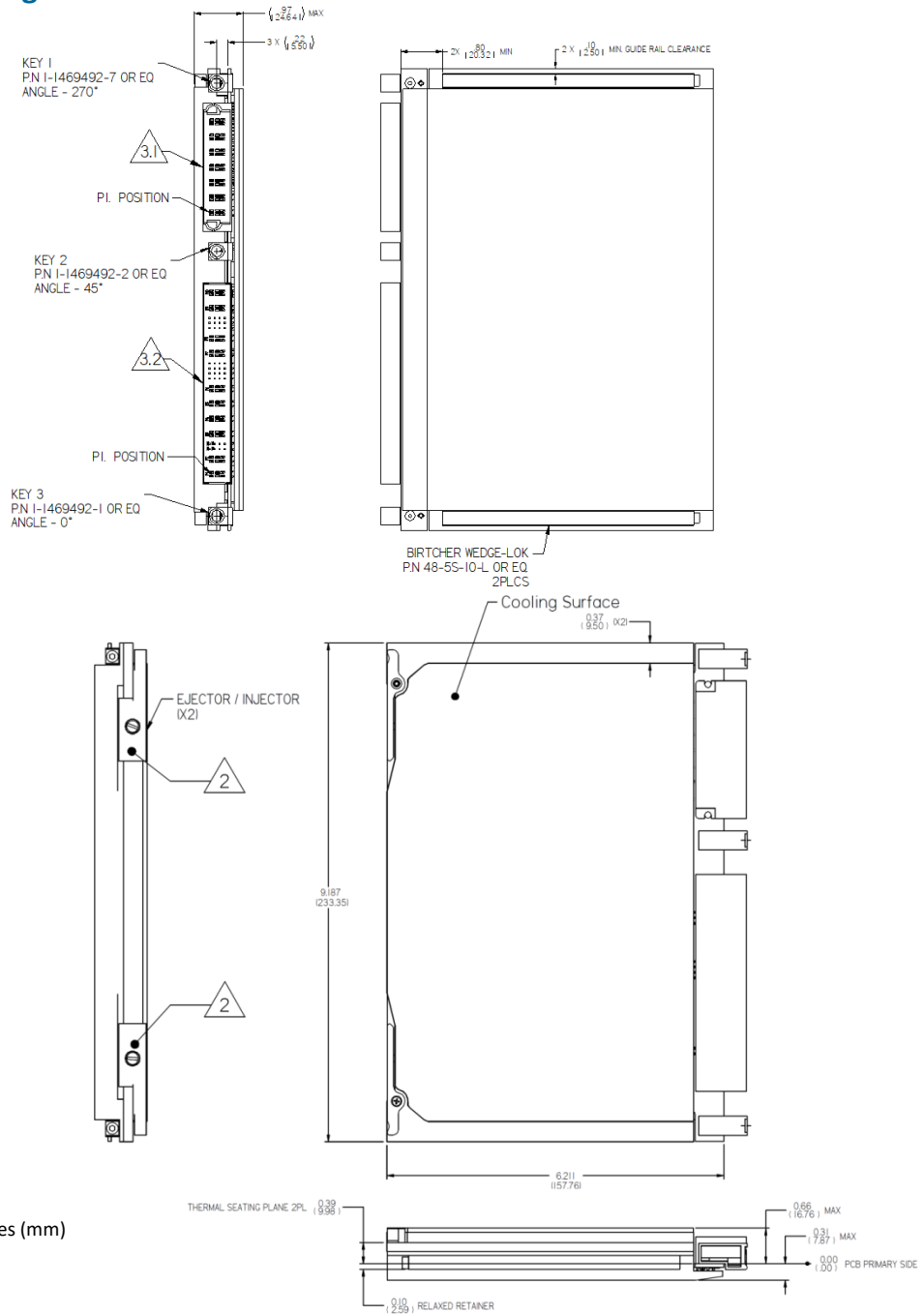
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Outline Drawing



Notes

1. Dimensions are in inches (mm)
2. Tolerance is:
.XX ± 0.01 in
.XXX ± 0.005 in
3. Weight: 4lbs max

Note: Specifications are subject to change without prior notice by the manufacturer.

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