VITA 62 Compliant 6U Power Supply for Conduction Cooled Systems

Features

- Continuous 580W output over temperature range of -40C to +85C
- True 6 Channel supply provides full Open VPX support
- Secondary Side Wedge lock conduction cooled
- 6U, 1 inch pitch form factor
- Compatible with Dawn’s HLD-6262 Holdup Module
- Fault monitoring and control
- Output over-voltage, over-current, and over-temperature shutdown protection
- Current/Load share compatible with up to 3 PSC-6265 units
- Standard INHIBIT*, ENABLE*, FAIL* and SYSRESET* control signals
- VBAT for support of VPX memory backup power bus
- Front I/O panel includes LED status indicator, and VBAT battery access
- VITA 48.2 Compliant Inject / Eject levers for easy installation

Overview

Dawn’s VITA 62 compliant 6U PSC-6265 can operate continuously in diverse environments over a wide range of temperatures at high power levels. The standard model is conduction to wedge lock cooled with an operating temperature range of -40C to +85C and a non-operating range of -55C to +105C.

The PSC-6265 operates continuously at a power level of 580 watts. For systems that require higher power levels, up to three supplies may be operated in parallel.

Fault monitoring and control circuits protect the system from over-voltage, over-current, and over-temperature conditions.

Power supply operational or fault status is displayed using colored LED’s on front panel.

Specifications

Mechanical
Card Guide Mechanical: Per VITA 48.2
Wedge Lock Mounting: Per VITA 62, Figure A-6, Secondary side
Connectors P0, P1: Per VITA 62, P0=TE 6450843-6, P1=TE 6450849-6
Dimensions: Per VITA 62 Figure A-5 and A-6, 1” Pitch, 9.187”x 6.634” x 0.970”
Weight: 4.10 Lbs. / 1.86 Kg.
Inject & Eject: Per VITA 48.2
Covers: ESD protected inputs and robust covers on both sides of the board accommodate military two-level maintenance

Electrical
Power Characteristics per MIL-STD-704F: Normal and abnormal transients and distortion spectrum compliant; Compatible with Dawn’s HLD-6262 50 mSec holdup module.
EMI Control per MIL-STD-461: CE102 Lab Tested with external filter,
Input Voltage: 85-265VAC Single Phase, 47-400 Hz, 3 Supplies may be used in parallel if three-phase input is required
Voltage Rails: +12V (P01), +12V (P02), +5V (P03), +12V_AUX, -12V_AUX, 3.3V_AUX, VBAT (+3.0V typical)
Total 12V cannot exceed 432 Watts
Total Maximum Power: Cannot exceed 580W (limited by PFC)
Ripple: <50mVp-p on +3.3V and +5V, <20mVp-p on +12V and -12V
Isolation Voltage: Input to Output (2000V)

Environmental
Operating Temperature: Per VITA 47, Class CC4, -40C to 85C
Non-Operating Temperature: Per VITA 47, Class C4, -55C to 105C
Temperature Cycling: Per VITA 47, Class C4, -55C to 105C
Vibration: Per VITA 47, Tested IAW MIL-STD-810, Method 514, Procedure 1
Shock: Per VITA 47, Tested IAW MIL-STD-810, Method 516, Procedure 1
Humidity: Per VITA 47, Section 4.6, 30C and 95% Non-condensing
Altitude: Per VITA 47, Section 4.7, Tested IAW MIL-STD-810, Method 500, Procedure II
Fungus Resistance: Per VITA 47, Section 4.10
Another Performance Design from the Team at Dawn

The module will assert the FAIL* signal when PO1, PO2, PO3, or AUX voltages are not within their voltage specifications.

VITA 62 Control Logic Table

<table>
<thead>
<tr>
<th>Control Inputs</th>
<th>Power Outputs</th>
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<tbody>
<tr>
<td>ENABLE*</td>
<td>INHIBIT*</td>
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<tr>
<td>High</td>
<td>High</td>
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<tr>
<td>High</td>
<td>Low</td>
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Other Products from Dawn:
Card cages and enclosures for commercial, aerospace and military applications
Enclosure 3D solid model design, manufacturing and production from commercial to full-rugged conduction cooled military
Custom and Standard product PCB design, layout, production
RuSh™ Rugged system health monitor, Backplanes for cPCI 2.1, cPCI 2.16, VME, VME64x, VXI, VXS, VPX, CUSTOM, Build to Print Powered Enclosures for Development, Prototype, Production, Deployment Prototype Boards, Extender Boards, Form Factor Extenders, Front Panels, Filler Panels, Custom Panels, Build to Print Panels, Build to print machining, fabrication and assembly