

Key Features:

- 200V to 420V Continuous Input Voltage
- Extended Voltage Safety VITA62.2 connectors
- 100msec hold time at 1000W (HOLD_UP stage internal)
- 4.200V Isolation Between Input /Output
- Active Input EMI Filtering
- Transient look ahead/cut-off technology
- 12V Voltage Rail
- Isolated 3.3V aux standby feature
- 2.400W Maximum Continuous Power
- 90% Typical Efficiency
- -40°C to 85°C Operating Temperature
- VITA 62 6U Form Factor
- Patent pending **FourRail** thermal interface

VITA 62 6U ISOLATED 2.400W 270V nominal input POWER SUPPLY

This 6U power supply works with **270VDC input** and isolates the input voltage ground from the output voltage ground. The power supply is **conduction cooled**, uses **poly-phase** technology with phase shifted clock as well as SSC for extremely low EMI on all voltage rails and can provide up to **2.400 watts**. It is suitable for use in **mission critical rugged applications**.

[SMART.PSU]PCI-Systems Inc. intelligent power supplies integrate a **microcontroller** (MCU) for a fully programmable and flexible solution. Intelligent power conversion allows **configuration and reconfiguration** for different applications. With intelligent power conversion, the power supply becomes a platform solution for Vita 46.11 system management based systems. The power supply can easily be **reprogrammed** to support different **operating limits and control inputs**.

Features:

- Digital On/Off control for low standby power
- Input / Output Voltage rail setting /adjustment
- Spread Spectrum Clocking of power supply stages
- Power supply history logging and fault management
- Monitoring all input/output voltages, currents
- Automatic temperature drift compensation for all outputs
- Total-Elapsed-Time Recorder
- Communication via SMB/I2C (PMB)for Vita 46.11 system management
- Collects data from temperature sensors for over temperature protection
- Precision compensation of all output voltages using integrated 5ppm voltage reference



Overview	
P/N	PCI_800.321
Hold Up time	100ms/1000W
VITA Compliant	VITA62
Size	6U
Temp. Range	-40 +85 C
Input (AC or DC)	270DC
Input Range (AC)	
Active EMI Filtering	YES
Power (W, max.)	2.400
Efficiency (% , typ.)	90
# of outputs	2

OUTPUTS (Total output not to exceed 2400W)	
VS1, V@A	+12@200A
VS2, V@A	
VS3, V@A	
AUX, V@A	+3.3@20A
AUX, V@A	
AUX, V@A	

FEATURES	
Over-current Protection	YES
Over-voltage Protection	YES
Over-temperature Protection	YES
Current Sharing	NO
Remote Sense	YES
Standard Control	YES, VITA 62

COMPLIANCE	
Designed to meet the following standards, additional circuitry in the chassis may be required	
VITA62	YES
MIL-STD-704 (B-F)	YES
MIL-STD-461	YES
MIL-STD-810G	YES
* ESD Protection	YES
* Shock	YES
* Vibration	YES
* Rapid Decompression	YES
* Corrosion Resistance	YES
* Fungus Resistance	YES
* Altitude	YES
* Humidity	YES

INPUT CHARACTERISTICS					
Parameter	Min.	Typ.	Max.	Units	Notes
Absolute Maximum Ratings					
Input Voltage					
- Non-Operating			600	V	Continuous
- Operating			420	V	Continuous- Reverse input Protection
- Operating Transient Protection			450	V	100us transient, square wave
Isolation Voltage			4200	V	
Operating Temperature	-40		85	C	
Storage Temperature	-55		105	C	
Electrical Characteristics					
Input Voltage					
- Continuous	200	270	420	V	
Under-Voltage Lockout					
- Turn-On Input Voltage Threshold	200	210	220	V	



INPUT VOLTAGE SPIKES SUPPRESSION (Vin Centered)	
+/- 450V, 100 us	MIL-STD-1275D
+/- 490V, 10 us	MIL-STD-461C (CS06); DEF-STAN 61-5
+/- 450V, 5 us	MIL-STD-461C (CS06)
+/- 600V, 10 us	RTCA/DO-160E

OUTPUT CHARACTERISTICS					
Parameter	+12V			+3.3V aux	Notes
Output Voltage Set Point, V	12			3.3	Vin = 270VDC
- Drift -40 deg.C to 85degC +/- %	0.1			0.1	Vin = 270VDC
Output Voltage Trim Range, V	+/- 10%			+/- 10%	Over Line/load/temp.
Output Voltage Ripple (pk-pk), mV	120			80	Full load with 1 uF + 10 uF tantalum capacitor, all rails
Operating Current Range, A	0-200			0-20	2.400W Total max .
Over-Voltage Protection, V	13.6			3.6	programmable
Current Limit Inception, A	220			25	programmable
Maximum Output Capacitance, mF	10			10	

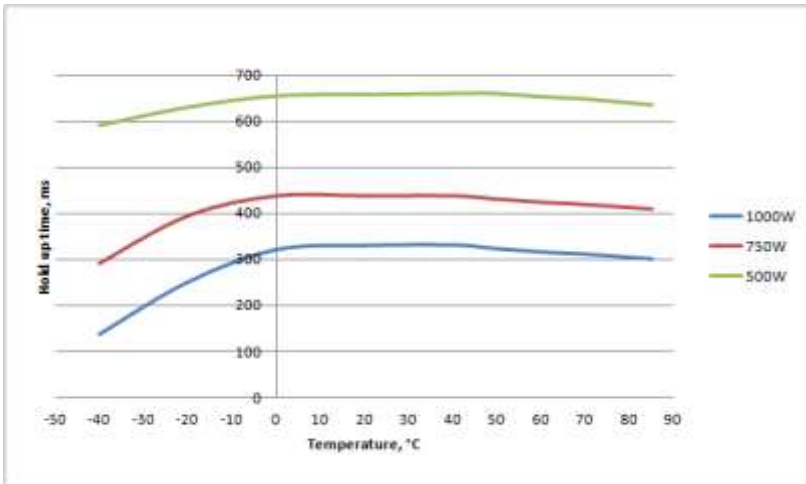
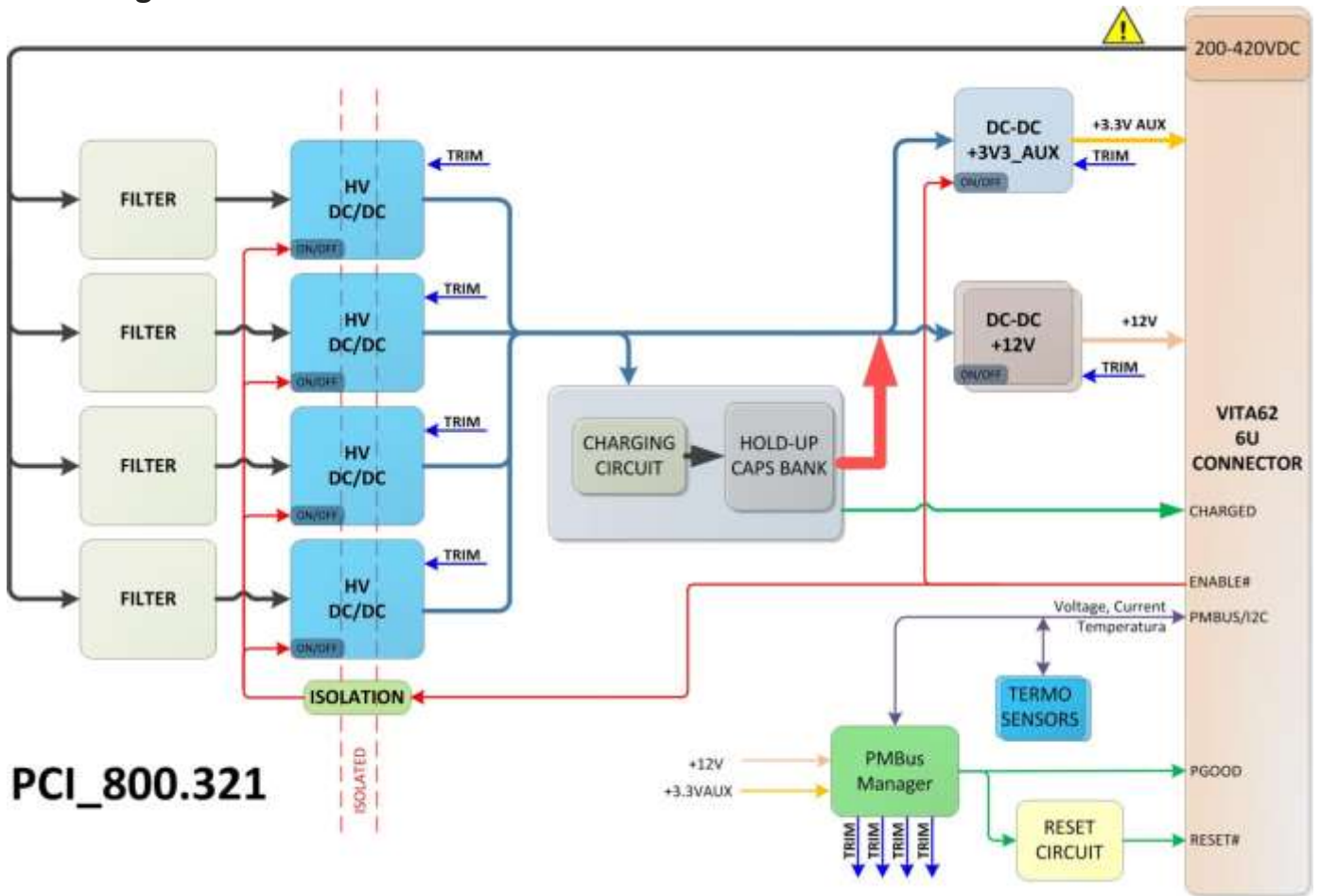
MODULE	
Designed to meet the following standards, additional circuitry in the chassis may be required	
Test Name	Method
Random Vibration	MIL-STD-810, 514.6 - Procedure I, Class V3
Shock	MIL-STD-810, 516.6 - Procedure I, VI, Class OS2
Altitude	MIL-STD-810, 500.5 - Procedure I, II, III
Fungus Resistance	MIL-STD-810, 508.6
Corrosion Resistance	ASTM G85, Annex A4
Humidity	MIL-STD-810, 507.5 - Procedure II
High Temperature	MIL-STD-810, 501.5 - Procedure I, II
Low Temperature	MIL-STD-810, 502.5 - Procedure I, II
Temperature Cycling	MIL-STD-202, 107 - Class C4
ESD	EN61000-4-2, Level 4; 15kV Air Discharge

RELIABILITY CHARACTERISTICS

Calculated MTBF per MIL-HDBK-217F (GB) at 70 deg C. 4.1 280.000 Hrs.
 Calculated MTBF per MIL-HDBK-217F (GM) at 70 deg C. 0.92 280.000 Hrs.



Block Diagram:



Hold-up time vs. Temperature

Pin-out: As per VITA 62.2 specification / custom because of high output current

Mechanical Dimensions: As per VITA 62 specification (2" pitch)



ORDERING INFORMATION:

PCI_800.321

PCI_800.321_C

6U VITA 62.2, 2.400W 270VDC HoldUp 12V out, Isolated Rugged Power Supply
Version with Conformal Coating

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