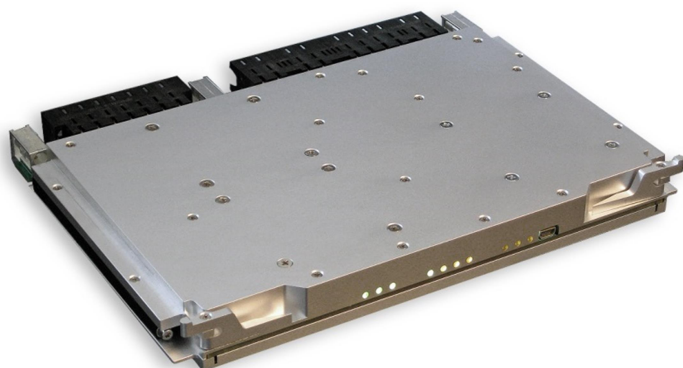




Key Features:

- 1 phase 85-230VAC 50/60Hz input
- 150msec hold time at 380W
- 2150V Isolation Between Input /Output
- Active Input EMI Filtering
- Transient look ahead/cut-off technology
- 5 Voltage output Rails
- Isolated 3.3V aux standby feature
- 600W Maximum Continuous Power
- 92% Typical Efficiency
- -40°C to 85°C Operating Temperature
- VITA 62 6U Form Factor
- Patent pending **FourRail** thermal interface

VITA 62 6U ISOLATED 600W 85-230VAC 50/60Hz POWERSUPPLY

This 6U power supply works with **1 phase 85-230VAC 50/60Hz input** and can be used for input frequencies from **48Hz to 65Hz** and isolates the input voltage ground from the output voltage ground. The power supply is **conduction cooled**, uses **poly-phase** technology on all voltage rails and can provide up to **600 watts**. It is suitable for use in **mission critical rugged applications**.

Overview	
P/N	PCI_800.306
Hold Up time	150ms/380W 100ms at +85 deg C.
VITA Compliant	VITA62
Size	6U
Temp. Range	-40 +85 C
Input (AC or DC)	AC
Input Range (AC-DC)	1 phase 85-230VAC 50/60Hz
Active EMI Filtering	YES
Power (W, max.)	600
Efficiency (% , typ.)	92
# of outputs	5

OUTPUTS (Total output not to exceed 600W)	
VS1, V@A	+12@40A
VS2, V@A	
VS3, V@A	+5@40A
AUX, V@A	+3.3@20A
AUX, V@A	+12@3A
AUX, V@A	-12@3A

FEATURES	
Over-current Protection	YES
Over-voltage Protection	YES
Over-temperature Protection	YES
Current Sharing	No
Remote Sense	YES
Standard Control	YES, VITA62
Extended Control	NO

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			360	V	
- Operating			264	V	Continuous
- Operating Transient Protection			280	V	100ms transient
Isolation Voltage			2500	V	
Operating Temperature	-40		85	C	
Storage Temperature	-55		105	C	
Electrical Characteristics					
Input Voltage					
- Continuous	85		264	V	
- Transient	85		280	V	Transient for 100 ms
Under-Voltage Lockout					
- Turn-On Input Voltage Threshold		85		V	

INPUT VOLTAGE SPIKES SUPPRESSION (Vin Centered)	
Designed to meet the following standards, additional circuitry in the chassis may be required	
+/- 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		+5V	+3.3V aux	+12V aux	-12V aux	Notes
Output Voltage Set Point, V	12		5	3.3	12	-12	Vin = 115VAC
- Drift -40 deg.C to 85degC +/- %	0.01		0.01	0.01	0.01	0.01	Vin = 115VAC
Output Voltage Trim Range, V	12		5	3.3	12	-12	Over Line/load/temp.
	+/- 10%		+/- 10%	+/- 10%	+/- 10%	+/- 10%	Over Line/load/temp.
Output Voltage Ripple (pk-pk), mV	120		50	40	80	80	Full load with 1 uF + 10 uF tantalum capacitor
Operating Current Range, A	0-40		0-40	0-20	0-3	0-3	600W Total, combined Output
Over-Voltage Protection, V	13		5.6	3.5	13	13	
Current Limit Inception, A	45		45	22	3.5	3.5	
Maximum Output Capacitance, mF	10		10	10	1	1	

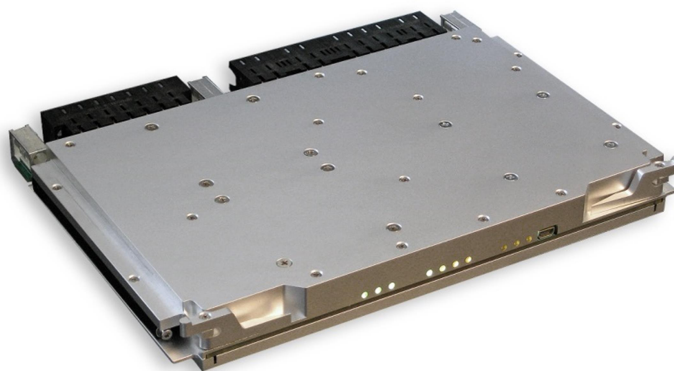
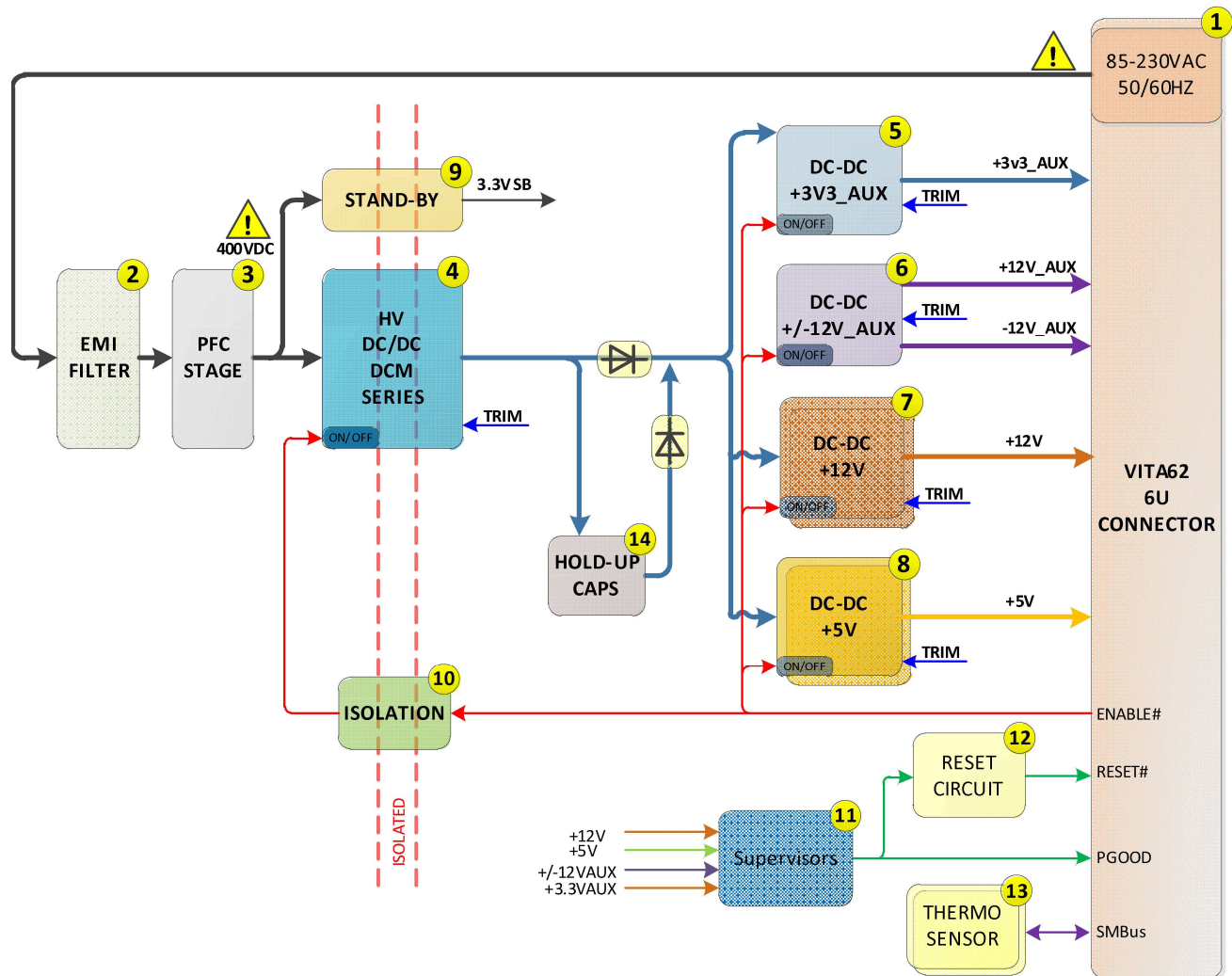
MODULE QUALIFICATION	
Designed to meet the following standards, additional circuitry in the chassis may be required	
Test Name	Method
Random Vibration	MIL-STD-810, 514.6 - Procedure I, Class V3
Shock	MIL-STD-810, 516.6 - Procedure I, VI, Class OS2
Altitude	MIL-STD-810, 500.5 - Procedure I, II, III
Fungus 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.

Power factor is better than 0.98

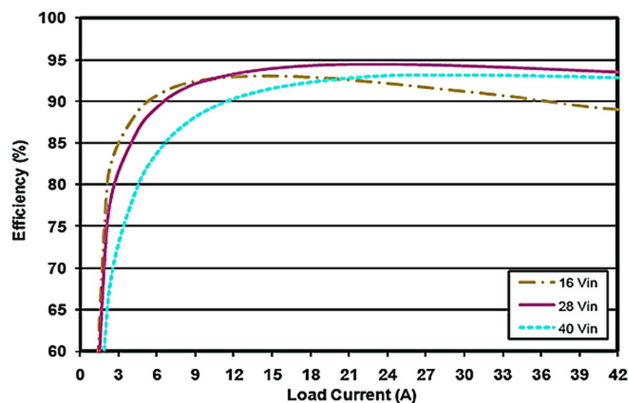
Block Diagram:



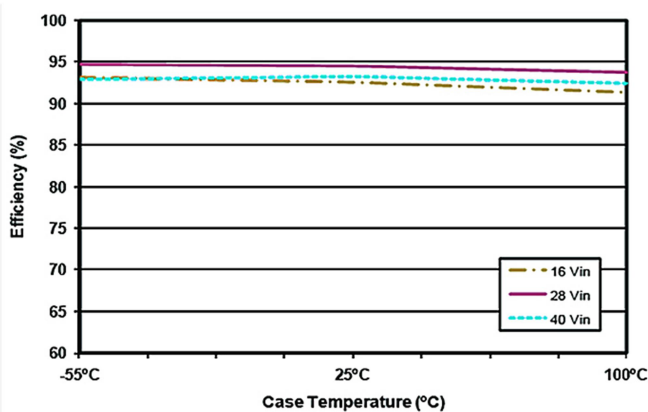
Pin-out: **As per VITA 62 specification**

Mechanical Dimensions: **As per VITA 62 specification (1" pitch)**

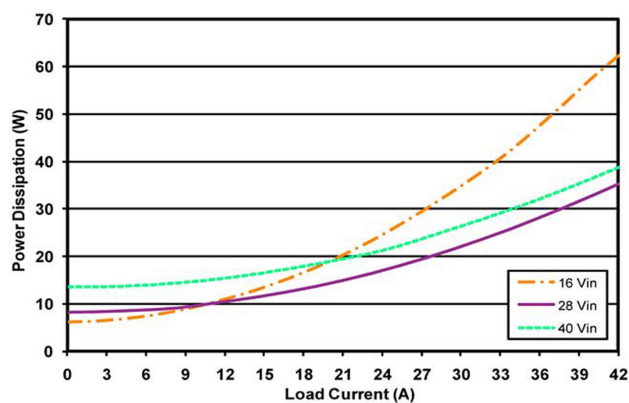
Efficiency for internal DC-DC stages:



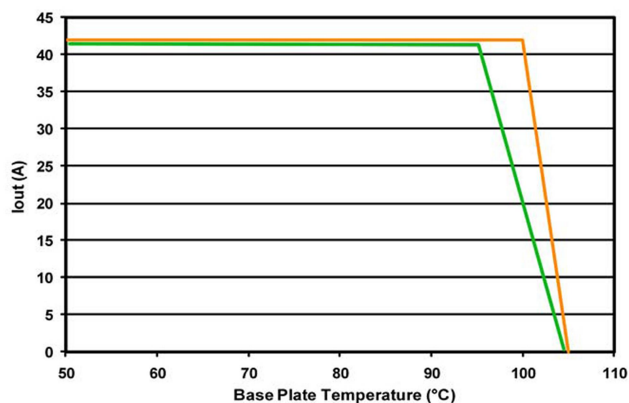
Efficiency at nominal output voltage vs. load current for min, nom, max input V at 25°C



Efficiency at nominal output voltage and 60% rated power vs. case temp for min, nom, max input voltage



Power Dissipation at nominal output voltage vs. current at module cover 25°C (Delta T to wedge-lock 7°C)



Thermal derating max current vs. temp at module cover. (Delta T to wedge-lock 7°C)

ORDERING INFORMATION:

PCI_800.306
PCI_800.306.C

6U VITA 62700W 85-230VAC 50-60Hz –non intelligent Isolated Rugged Power Supply
Version with Conformal Coating

Release_September_07_2019