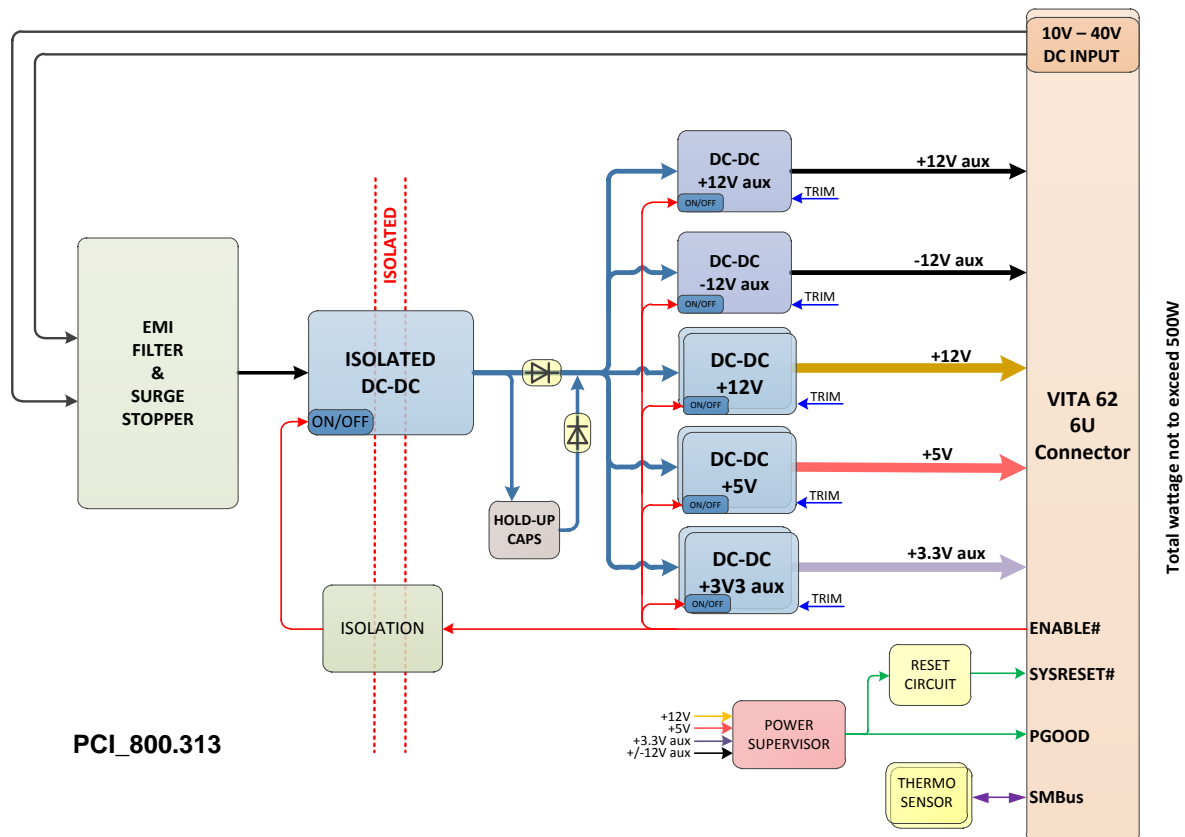


Key Features:

- 10-40V Continuous Input Voltage
- Hold up time 150msec at 500W
- 2250V Isolation between Input /Output
- Active Input EMI Filtering
- Transient look ahead/cut-off technology
- 5 Voltage output Rails
- 500W Maximum Power
- 93% Typical Efficiency
- -40°C to 85°C Operating Temperature
- VITA 62 6U Form Factor
- Patent pending **FourRail** thermal interface

VITA 62 6U ISOLATED 500W 28VDC POWER SUPPLY

This 6U power supply works with **10 to 40 VDC (28VDC nominal)** input voltage 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 **500 watts**. It is suitable for use in **mission critical rugged applications**.



Overview	
P/N	PCI_800.313
Hold Up time min.	150ms/500W 120ms at +85 deg C.
VITA Compliant	VITA62
Size	6U
Temp. Range at rail	-40 +85 C
Input (AC or DC)	DC
Input Range (VDC)	10-40
Active EMI Filtering	YES
Power (W, max.)	500
Efficiency (% , typ.)	93
# of outputs	5

OUTPUTS (Total output not to exceed 500W)	
VS1, V@A	+12@40A
VS2, V@A	
VS3, V@A	+5@40A
AUX, V@A	+3.3@20A
AUX, V@A	+12@1A
AUX, V@A	-12@1A

FEATURES	
Over-current Protection	YES
Over-voltage Protection	YES
Over-temperature Protection	YES
Current Sharing	VS1, VS2, VS3
Remote Sense	YES
Standard Control	YES, VITA62
Extended Control	no

COMPLIANCE	
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	-60		60	V	Continuous
- Operating	-40		40	V	Continuous- Reverse input Protection
- Operating Transient Protection			100	V	100ms transient, square wave
Isolation Voltage			2250	V	
Operating Temperature	-40		85	C	
Storage Temperature	-55		105	C	
Electrical Characteristics					
Input Voltage					
- Continuous	10		40	V	
- Transient			50	V	100V Transient for 100 ms
Under-Voltage Lockout					
- Turn-On Input Voltage Threshold	9.6	10	10.3	V	

INPUT VOLTAGE SPIKES SUPPRESSION (Vin Centered)	
+/- 250V, 100 us	MIL-STD-1275D
+/- 200V, 10 us	MIL-STD-461C (CS06); DEF-STAN 61-5
+/- 400V, 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 = 28V
- Drift -40 deg.C to 85degC +/- %	0.1	0.1	0.1	0.1	0.1	Vin = 28V
Output Voltage Ripple (pk-pk), mV	80	50	40	80	80	Full load with 1 uF + 10 uF tantalum capacitor
Operating Current Range, A	0-40	0-40	0-20	0-1	0-1	500W Total, combined Output
Over-Voltage Protection, V	13	6	3.6	13	13	
Current Limit Inception, A	42	42	22	1	1	
Maximum Output Capacitance, mF	10	10	10	1	1	

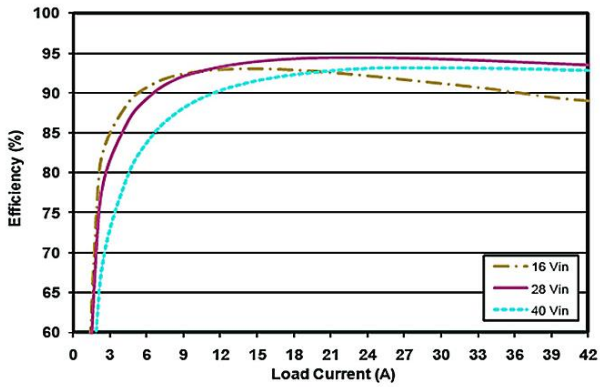
MODULE QUALIFICATION	
Test Name	Method
Random Vibration	MIL-STD-810, 514.6 - Procedure I, Class V3
Shock	MIL-STD-810, 516.6 - Procedure I, VI, Class OS2
Altitude	MIL-STD-810, 500.5 - Procedure I, II, III
Fungus Resistance	MIL-STD-810, 508.6
Corrosion Resistance	ASTM G85, Annex A4
Humidity	MIL-STD-810, 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

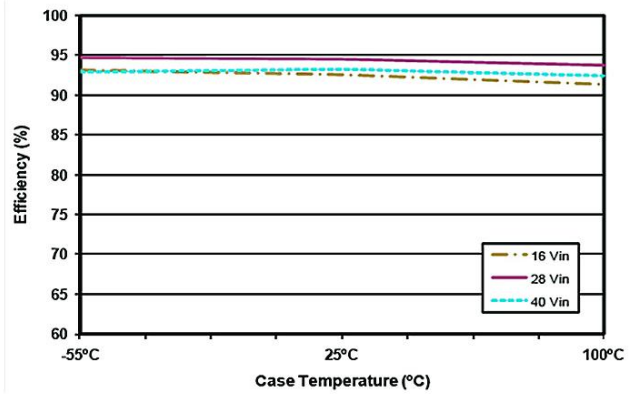
Calculated MTBF per MIL-HDBK-217F (GB) at 70 deg C. 2.500.000 Hrs.
Calculated MTBF per MIL-HDBK-217F (GM) at 70 deg C. 480.000 Hrs.

Pinout: As per VITA 62 specification

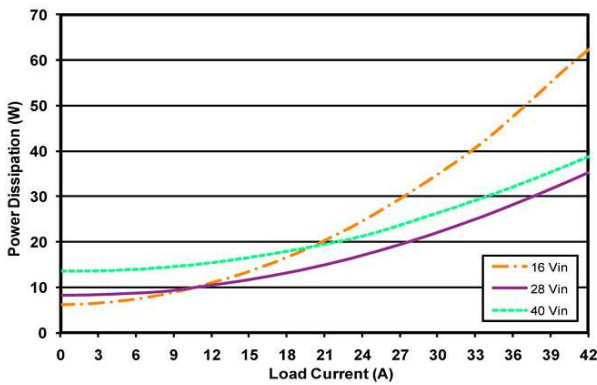
Mechanical Dimensions: As per VITA 62 specification (1" pitch)



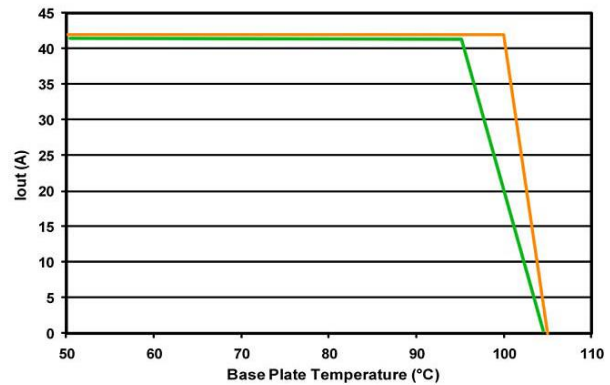
Efficiency at nominal output voltage vs. load current for min, nom, max input V at 25°C



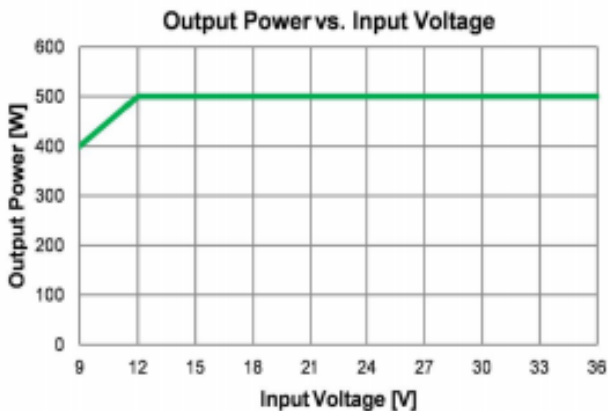
Efficiency at nominal output voltage and 60% rated power vs. case temp for min, nom, max input voltage



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



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



ORDERING INFORMATION:

PCI_800.313
PCI_800.313_C

6U VITA 62 28VDC 500W Isolated Rugged Power Supply
Version with Conformal Coating

Release_May_03_2016