

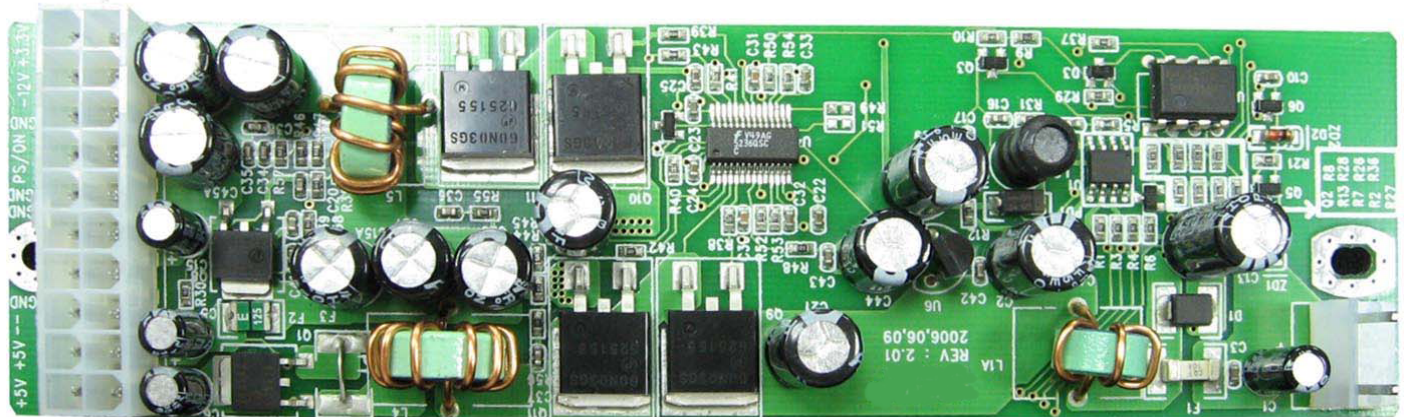


integration with integrity

User's Manual

90W DC to DC Power Converter 3107763

Version 1.0, September 23, 2004



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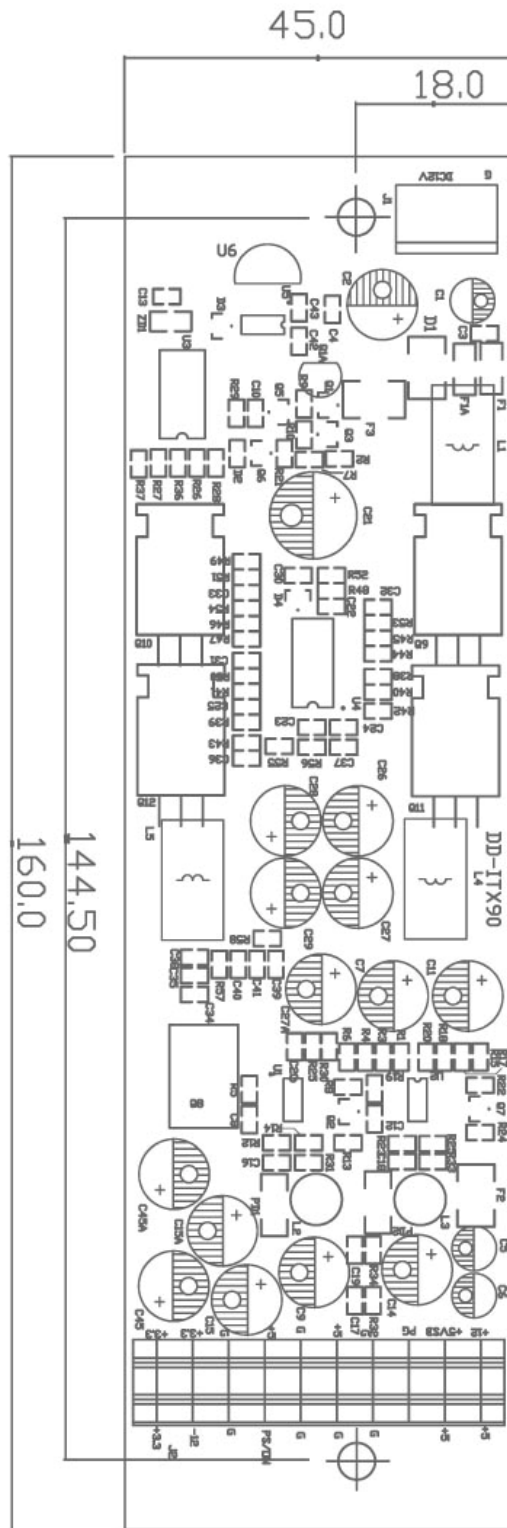
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3107763 Dimensional Drawing



1. Input Characteristics

1.1 Input Voltage Range ----- 11.4Vdc To 12.6Vdc,

1.2 Input De Current (Max) ----- 9A Max. Full Load.

2. Output Characteristics

2.1 Static Output Characteristics.

	Output Voltage	Load Range		Regulation		Ripple	Ripple & Noise
		Min	Max	Min	Max	Max mV	Max mV P-P
1.	+3.3	0.1 A	7.0 A	- 5 %	+ 5 %	50	100 mV
2.	+5.0	1.0 A	7.0 A	- 5 %	+ 5 %	50	100 mV
3.	+12.0	0.5 A	2.0 A	- 5 %	+ 5 %	100	150 mV
4.	-5.0	NON	NON	NON	NON	NON	NON mV
5.	-12.0	0.0 A	0.1 A	- 10 %	+10 %	150	200 mV
6.	SB +5.0	0.0 A	1.0 A	- 5 %	+ 5 %	50	100 mV

Note:

1. Noise Test ---- Noise Bandwidth Is From Dc To 20MHz.
2. Ripple Frequencies Greater Than 1 MHz Shall Be Attenuated By the Measurement System.
3. Add 0.1uF / 10uF Capacitor At Output Connector Terminals For Ripple & Noise Measurements.
4. Combined Total Power From +3.3V And +5V Rails Shall Not Exceed 50W.
5. The Total Output Power Shall Not Exceed 90W.

2.2 Dynamic Output Characteristics:

2.2.1 Rise Time ---- 100 ms Max. At Nominal Line Full Load.

2.2.2 Turn-on Delay Time ----- 600ms Max. At Nominal Line Full Load.

2.2.3 Hold-up Time ----- 1 ms Min. For + 5V Output At Nominal Line Full Load.

2.2.4 Transient Overshoot ----- 10% Max. Of Delay State After Load Change Of 25% Within The Range Of 50% To 100% Of Full Load.

2.2.5 Temperature Coefficient ----- 0.05% Per °C Max.

3. Protections

3.1 Over Voltage Protection --- Standard On
+5.0V Output Set At 6.5Vdc MAX

3.2 Short Circuit Protection --- A Short Circuit Placed Between De Return And Output Shall Cause No Damage And The Power Supply Shall Shutdown.

3.3 Over Power Protection --- The Power Supply Can Use Electronic Circuit To Limit The Output. Power Against Excessing +160% Of Full Load, Or Protected against Excessive Power Delivery Due To Short Circuit Of Any Output Or Over Total Power.

3.4 No load Operation --- No Parts Damaged On Power Supply.

4. Environment

4.1 Operation Temperature ----- Air Temperature 0 °C To 40 °C.

4.2 Operation Relative Humidity ----- 20% To 90%.

4.3 Storage Temperature ----- Air Temperature -20 °C To 60 °C.

4.4 Storage Relative Humidity ----- 5% To 95%.

4.5 Altitude ----- Operate Properly At Any Altitude Between 0 To 100,000 Feet. Storage 40,000 Feet.

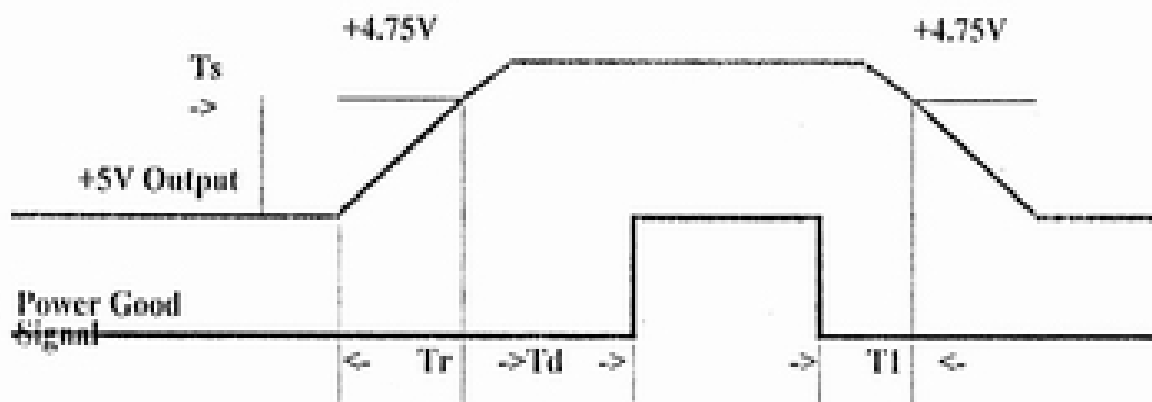
4.6 Vibration ----- 0.38mm, 5-55-5Hz, 1 Minutes Per Cycle;
30 Minutes For Each Axis (X,Y,Z).

5. Burn-In

5.1 Burn-In ----- At 40°C, Max. Load, 2 Hours.

6. Mean Time Between Failure ----- 100 Khrs Minimum At Full Load For
25 °C Ambient Temperature.

7. Power-Good Signal



Note: $T_r \leq 100$ ms, $T_f \geq 1$ ms, $T_d = 100 - 500$ ms.

8. Dimension

8.1 W x H x D ----- 160.0 x 45.0 x 15.0 (mm)

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