

**SPECIFICATION FOR REFERENCE**

<b>REFERENCE SIGNATURE</b>
<b>DATE :</b>

**CUSTOMER :** DIGI **PART NO :** \_\_\_\_\_

**DESCRIPTION :** DC to DC 12Watt Converter

**PLEASE SIGN AND RETURN ONE COPY.**

**ALL PRODUCTION UNITS WILL BE BUILT ACCORDING  
TO THIS SPECIFICATIONS.**

**MODEL NO:** EDD0121-12 **Rev. A**

**AGENCY APPROVAL:** UL/cUL

**PRESENTED BY:** JACKY CHANG

**CHECKED BY:** JOHNSON LIN

**APPROVED BY:** MICHAEL CHEN

**DATE : 1/27/2006**

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**BOBBINTRON ELECTRICAL CORPORATION  
SWITCHING POWER SUPPLY  
SPECIFICATION**

**MODEL: EDD0121-12 Rev. A****ISSUED : 1/27/2006****1. Input**

- 1.1 DC input voltage range : -36V ~ -72V**
- 1.2 DC input voltage rating : -48V**
- 1.3 DC input current : 0.5A max at -48VDC**

**2. Output characteristics:**

- 2.1 Output voltage : +12V**
- 2.2 Max. load current : 1A; 2A peak for 200mS**
- 2.3 Min load current : 0A**
- 2.4 Tolerance : ± 5 %**
- 2.5 Output Ripple & Noise : Output Voltage 1%**

**\* Ripple & Noise test conditions :**

- (1) Measured by-pass capacitors 0.1uF / 10uF at output connector terminal  
And oscilloscope set at 20 MHz. ( tested by oscilloscope )**

**3. General characteristics :**

- 3.1 Max. output power : 12 watts continuous.**
- 3.2 Efficiency : 70% ( Minimum ) at Maximum load at -48VDC.**
- 3.3 Turn no delay : 2 second max. at -48VDC**

**3.4 Transient response :** output return within  $\pm 10\%$  tolerance of nominal voltage within 1m sec.  
for 50% load change, 120Hz 50% duty cycle.

**3.5 Over voltage protection :** 15V reference with output Zener Diode.

**3.6 Short circuit protection :** protection against short circuit for output

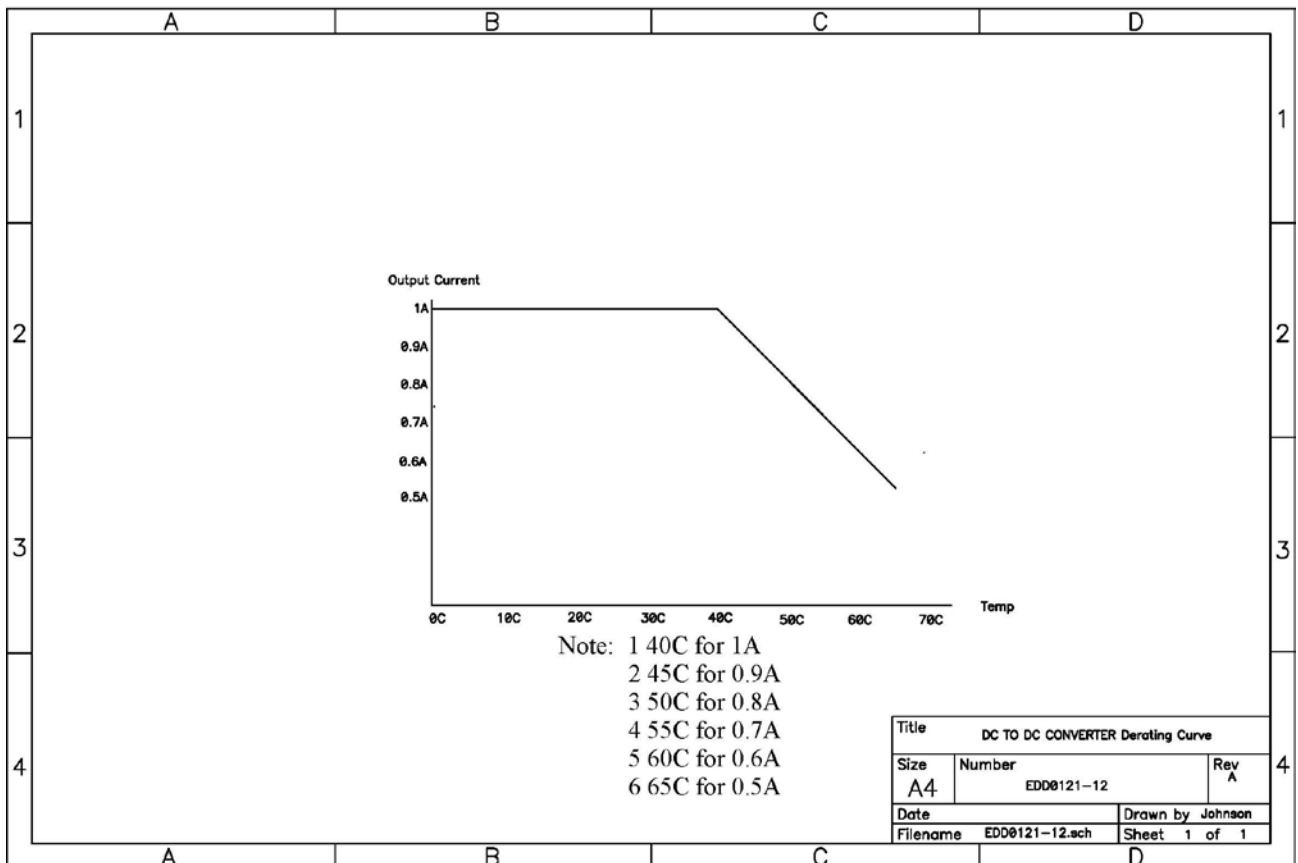
**3.6.1 (1) Any protect condition shall cause no damage and no component fail.  
(2) Automatic recovery when removal of protect condition.**

**3.7 Temperature coefficient :** 0.2% per  $^{\circ}\text{C}$  maximum over entire operating temperature range

**4. Environmental :**

**4.1 Operating temperature :**  $0^{\circ}\text{C}$  to  $40^{\circ}\text{C}$

**4.1.1 Derating Curve**



**4.2 Storage temperature :** -20°C to 80°C

**4.3 Operating relative humidity :** 10% to 85%

**4.4 Storage relative humidity :** 5% to 95%

**5. Safety requirement :(Meet)** (1) UL 60950  
(2) cUL / CSA 22.2, NO. 60950

**6. EMI requirement :** CISPR EN55022 class B rules.

**7. Hi-pot test :**

**7.1 Primary to secondary :** 2121VDC or 1500VAC for 1 sec. 10mA

**9. Reliability**

**9.1 MTBF :** 100K hours min.  
@ full load at 25°C ambient temperature.

**9.2 Vibration :** Frequency range : 5-200Hz.

**Vibration amplitude 0.5g ±10% over entire frequency range.**

**A complete sweep of the frequencies from 5-200Hz at 0.4 decades per mins. duration, if insufficient resonant point are established to provide for 30 minutes input per axis, then a constant acceleration continuous sweep at one octave per minute ( 0.3 decade / min. ) shall be applied for the duration.**

**9.3 Altitude :** will operate properly at any altitude between 0 to 10000ft.

**10. Mechanical :**

**10.1 Dimensions(Ref.) :**            **74 mm long**  
   **49 mm width**  
   **40.5 mm height**

**10.2 Weight (Ref.) :**                **TBA**

**10.3 Input connector :**              **Molex 39-01-3028 5557 series or equivalent**

**10.3.1 Pin Out configuration :**    **Location : 1. RTN**  
   **2. -48V**

**10.5 Output connector :**            **Shogyo MP-121AR or equivalent**

**10.5.1 Pin Out configuration :**    **Center positive**

