File E170507
Project 04ME07065

August 23, 2004

REPORT

on

POWER SUPPLIES - INFORMATION TECHNOLOGY EQUIPMENT,
INCLUDING ELECTRICAL BUSINESS EQUIPMENT

GlobTek Inc.
Northvale, NJ

DESCRIPTION

PRODUCT COVERED:

USR/CNR

Product Type: High Voltage DC-DC Converter

Model: GS-400

ELECTRICAL RATING:

Input			Output, dc	
V	A	Hz	V	A
12 Vdc	1 A	-	312 V	50 mA
			6500 V	50 µA

TECHNICAL CONSIDERATIONS (NOT FOR FIELD REPRESENTATIVE'S USE):

Use - For use only in (or with) Applicant's Information Technology Equipment, where the acceptability of the combination is determined by Underwriters Laboratories Inc.

Special Considerations - The following items are considerations that were used when evaluating this product.

USR/CNR indicates investigation to the U.S. and Canadian (Bi-National) Standard for Safety of Information Technology Equipment, Including Electrical Business Equipment, CAN/CSA C22.2 No. 60950-1-03 * UL 60950-1, First Edition,

The component equipment was submitted and tested for a maximum manufacturer’s recommended ambient (T_{mra})of 25 °C.

The equipment is:

for building in, Class I (earthed), pluggable Type A.

Conditions of Acceptability - When installed in the end-product, consideration shall be given to the following:

1. This component has been judged on the basis of the required spacings in the Standard for Safety of Information Technology Equipment, Including Electrical Business Equipment, CAN/CSA C22.2 No. 60950-1-03 * UL 60950, which would cover the component itself if submitted for Listing.

2. The products were tested on a 20 A branch circuit. If used on a branch circuit greater than this, additional testing may be necessary.

3. There is no isolation from input to output or output to ground. The 312 V output exceeds the limited current values of Clause 2.4.2. The power supply shall be properly bonded to the main protective earthing termination in the end product.

4. The terminals and connectors have not been evaluated for field wiring.

5. The maximum working voltage present is 419 V rms; 1.3 kV pk. The electric strength tests in the end-product shall be based on this value.

6. The equipment has been evaluated for use in a Pollution Degree 2 environment.

7. A suitable Electrical enclosure shall be provided.

8. The HV output is controlled by an external DC signal, VPROG. The relationship between the two is approximately HV/1000 = VPROG. Single fault of the signal shall be considered.

9. The leakage current test shall be performed in the end product installation.

CONSTRUCTION DETAILS:

See Section General for additional details.

Electrical Ratings - Not required.

Internal Wiring - See Section General.

Printed Wiring Board -See Section General for details.

User Serviceable Fuse Replacement Markings - "Caution: For Continued Protection Against Risk of Fire, Replace Only With Same Type and Ratings Of Fuses." or an equivalent statement. Fuse voltage, current ratings and marking are located on label inside the chassis.

MODEL GS-400 FIG. 1
FIG. 2

1. Chassis – Aluminum, consists of two pieces held together by four screws. Measures 17 x 10.5 x 5 cm, 1 mm thick.

2. HV Connector (J3) – Rated 20 kVdc, 7.5 A, V-0. Manufactured by Tyco Electronics/AMP, P/N 862197-5.

3. 312 V Output Connector (J30) – R/C ECBT2 connectors, rated min. 600 V, 19 A. (Manufactured by Tyco Electronics/AMP, Mate-N-Lok P/N 1-480699).

4. Input Connector (J29) – R/C ECBT2 connectors, rated min. 250 V, 9 A. (Manufactured by Tyco Electronics/AMP, P/N 640501).

5. Marking – Silk screened, includes Listee’s name or file number, model number, and input/output ratings.

MODEL GS-400

FIG. 3
FIG. 4
FIG. 5

1. PWB (PCB1, PCB2) – R/C ZPMV2 pwb, rated V-1, 105 °C. HV section coated with R/C OBOR2 varnish, rated min. 155 TP. PCB is mounted on four metal standoffs, 7 mm high. See Ill. 1 for trace artwork of PCB2.

2. Tape – Covers bottom chassis. Mylar, 1 mil. thick, 57 x 105 mm, 28 mm high on two sides.

3. Fuse – R/C JDYX2 miscellaneous fuses, manufactured by Sun Electric Co., Cat. No. 6GP, rated 250 V, 2 A, non-time delay. Held in place by clips soldered to pwb.

4. HV Transformer – Manufactured by GlobTek, P/N 104B2420B01. See Ill. 2 for construction details.

   Alternate – Manufactured by GlobTek, P/N 104B2420B03. See Ill. 3.

5. 312 V Transformer – Manufactured by GlobTek, P/N 104B2410B01. See Ill. 4 for construction details.

   Alternate – Manufactured by GlobTek, P/N 104B2410B03. See Ill. 5.

6. FET (Q3) – Rated 100 V, 14 A.

7. FET (Q9) – Rated 200 V, 18 A.

8. Resistor (R52) – Rated 500 MΩ, 10000 V.

9. Capacitors (C25, C26, C27, C28, C29) – Ceramic, rated 1000 pF, 3000 V.

10. Diodes (D9, D10, D11, D12, D13) – Rated 5000 V, 25 mA.

11. HV Wire – R/C AVLV2 AWM, style 3239.

12. Capacitors (C10, C16) – Electrolytic, rated 10 µF, 250 V, 85 °C.