

File E170507
Project 01ME11924

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REPORT

ON

POWER SUPPLIES, INFORMATION TECHNOLOGY EQUIPMENT,
INCLUDING ELECTRICAL BUSINESS EQUIPMENT

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Northvale, NJ

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DESCRIPTION

PRODUCT COVERED:

USL, CNL: Power Supply Adapter, Models GT-42X-Y (X = 03D, 02D; Y = 1, 1A, 2, 2A).

ELECTRICAL RATING:

Input: 100-240 V ac, 50-60 Hz, 0.6 A

Models	V		A		dc Output Rating	
	V	A	V	A	V	A
GT-4203D-1	5	2	12	1	-12	0.2
GT-4203D-1	5	2	12	0.2	-12	0.2
GT-4202D-1	5	2	12	1	-	-
GT-4202D-1	5	1.5	12	1.5	-	-
GT-4202D-2	5	2.5	12	0.8	-	-
GT-4202D-2	5	2.5	12	0.5	-	-

ENGINEERING CONSIDERATIONS (NOT FOR UL REPRESENTATIVE'S USE):

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

USL, CNL indicates the equipment has been investigated to the U.S. and Canadian (Bi-National) Standard for Information Technology Equipment including Electrical Business Equipment CSA C22.2 No. 60950/UL60950, Third Edition.

The equipment is considered: Movable, Class I (earthed) pluggable, Type A, used detachable power cord, intended for use on a TN power system.

Maximum operation ambient: 40°C.

Limited Power Source: The following circuits have been evaluated as a limited power source:

<u>Location</u>	<u>Circuit (Schematic) Designation</u>
Output Circuit	Output connector

CONSTRUCTION DETAILS:

See Section General for details.

Nameplate Marking - Listee's name or File No. E170507, model number, and input and output electrical ratings provided on each unit. May be provided on more than one label. Located where tools not necessary for gaining access. Located on parts not likely to be discarded or lost. May be directly molded on to the enclosure.

Marking - The following marking is provided on the outside of the enclosure. It states "CAUTION - For Indoor Use Only."

CN Product Marking - Month and year of manufacturing or traceable date code and output classification "LEVEL 3" marked on the unit.

Instruction Manual - Provided with each unit.

Power Supply Cord - Optional. Not shown. For units intended for 120 V ac: Detachable, Listed Cord Set rated 125 V, 10 A, consisting of a minimum No. 18 AWG, Type SVT or SJT, three conductor cord a maximum of 4.57 m (14.76 ft) in length and a parallel blade, grounding-type attachment plug at one end and a cord connector body at the other end.

For units intended for 240 V ac (domestic use): Detachable, Listed Cord Set rated 250 V, 6 A, consisting of a minimum No. 18 AWG, Type SVT or SJT, three-conductor cord a maximum of 4.57 m (14.76 ft) in length and a parallel blade, grounding-type attachment plug at one end a cord connector body at the other end.

For units intended for 240 V ac (outside of U.S.): Detachable, Cord Set consisting of a minimum No. 18 AWG cord and grounding-type attachment plug rated minimum 6 A, 250 V. The cord Set should have the appropriate safety approvals for country in which the equipment will be installed and marked <HAR>.

Model Difference - All models are identical, except for output rating, model designation and described in the Report.

MODEL GT-42X-Y

FIG. 1 (S99-07279)

General - Shows overall external view of unit. Also represents all models.

1. Enclosure - R/C (QMFZ2), GE Plastics, Type SE1, rated 94V-1. Overall measures 108 by 33 by 60 mm, minimum 2.7 mm thick. Constructed of two parts secured together by screws.

Alternate - Same as above, except GE Plastics, Type SE100, rated 94V-1.

2. Appliance Inlet - Listed or R/C (AXUT2), rated minimum 250 V, 5 A. Secured to PWB by soldering.
3. Output Cable - (LPS) AWM, Style No. 2464, VW-1, 80°C, 300 V, five conductors. Provided with a polarized molded on connector at one end, mechanically secured and soldering to PWB.
4. Strain Relief of Output Cable - Molded with Output Cable, Fig. 1, Item 3. Strain relief provided by a molded-on bushing, held in place by integral slots of top and bottom. Enclosure in an opening of 10 by 4.6 mm.

MODEL GT-42X-Y

FIG. 2 (S99-07280)

General - Figure shows internal view of unit. Also represents all models.

1. Fuse (F1) - R/C (JDYX2), Walter Electronics Co., Ltd., Type TSD series, rated 250 V, 2 A. Wired on hot side of line. Secured in metal alloy fuseholder clips with integral end stops, voltage/current marked on the PWB adjacent to the fuse.

Alternate - Same as above, except Listed (JDYX).

2. Line Choke (NF1) - Optional, open type, with ferrite core of 15.6 by 12 by 5 mm. Coil of Copper magnet wire wound on three-flanged bobbin of R/C (QMFZ2), PBT or phenolic minimum 0.71 mm thick, rated 94V-2 or better. Outer wrap is polyester tape.
3. X-Capacitor (XC1) - Optional. (Line-to-Line), R/C (FOWX2) or (FOKY2), marked X1 to indicate compliance with IEC 384-14, X1 Capacitor, rated maximum 0.22 μ F, minimum 250 V. Covered with tubing (To keep basic insulation with ground terminal of Appliance Inlet, Fig. 1, Item 2.) See Section General For Insulating Tubing.

Alternate - Same as above, except X2 Capacitor, marked X2 to indicate compliance to with IEC 384-14, X2 Capacitor as follows:.

<u>CCN</u>	<u>Certified</u>	<u>Manufacturer / Type</u>
FOWX2/FOKY2	VDE or SEV	Arcotronics / R46
FOWX2	VDE or SEV	Matsushita / ECQ series
FOWX2	VDE or SEV	Pilkor / PCX
FOKY2	VDE or SEV	Roederstein / F1772
FOWX2	VDE or SEV	Carli / MPX
FOWX2/FOKY2	VDE or SEV	Rifa / PHE series
FOWX2/FOKY2	VDE or SEV	Philips / MKP or PCX series
FOWX2/FOKY2	VDE or SEV	Okay / PA or RE series
FOWX2/FOKY2	VDE or SEV	Iskra / KNB series
FOWX2	VDE or SEV	Echhoff-Werk / MKT

<u>CCN</u>	<u>Certified</u>	<u>Manufacturer / Type</u>
FOWX2	VDE or SEV	Teapo / XG-V series
FOWX2	VDE or SEV	Taishing / MEX
FOWX2	VDE or SEV	Nitsuko / CFKC or CFJC.
FOWX2	VDE or SEV	TDK / CS
FOWX2	VDE or SEV	Shiny / SX1
FOWX2	VDE or SEV	Jenn Fu / MPX
FOWX2	VDE or SEV	LCC / DX series

4. Y-Capacitors (CY1, CY2) - Optional. (Line-to-Ground), R/C (FOWX2) or (FOKY2), marked Y2 to comply with IEC 384-14, rated maximum 4700 pF, minimum 250 V. Covered with tubing. See Section General For Insulating Tubing.
5. Bulk Capacitor (C3) - Rated 400 V, 47 μ F, minimum 85°C. Electrolytic type, provided with integral pressure relief.
6. Bridge Diodes (D3-D6) - Rated minimum 1000 V, 1 A.
7. Transformer (T3) - R/C (OBJY2), Yao Sheng, Designation YST-JC1, Class B insulation system. Open-type construction. Core: ferrite core. Overall 25.4 by 25.4 by 7.5 mm thick. Coil: Copper magnet wire wound concentrically on two-flanged bobbin. Bobbin: R/C (QMFZ2), Phenolic, minimum 0.71 mm thick. Leads exit directly through integral flanges in bobbin and are mechanically secured and soldered to pins which are molded into bobbin.

<u>Location</u>	<u># Layer / Total Thickness (mm) / Material</u>
Outer Wrap	3 layer / minimum 0.070 thick / polyester tape
Pri./Sec.	3 layer / minimum 0.075 thick / polyester tape.
Pri./Core	Bobbin, 0.71 mm thick.
Sec./Core	Bobbin, 0.71 mm thick.
Margin tape	3 mm wide at both sides, leadouts sleeved with PTFE tubing.

8. Transistor (Q1) - Rated minimum 600 V, minimum 7 A. Completely covered with tubing , see Section General For Insulating Tubing. Secured to Heat Sink (H2) with a by metal cramp and screw.
9. Heat Sink (H2) - Aluminum, size 94 by 22 mm, 2.0 mm thick. (Heat sink is ground).
10. Optical Isolator (PC1) - R/C (FPQU2), Taiwan Liteon, Type LTV817, LTV-827 or LTV-847. (Rated isolation 3000 V ac, internal creepage minimum 5 mm, and insulation thickness of 0.4 mm.)

Alternate - Same as above, except Toshiba, Type TLP621 or TLP721.

Alternate - Same as above, except Sharp, Type PC817.

Alternate - Same as above, except Quality Technology, Type MCT817.

Alternate - Same as above, except NEC, Type PS2501L.
11. Earthing - A green/yellow wire, minimum No. 18 AWG, is mechanically secured and soldered to the ground pin of Appliance Inlet, Fig. 1, Item 2 , the other end is directly soldered to trace of PWB (floating).
12. Bleeder Resistors (R18) - Optional. Rated 680 kilohms, 1/2 W.
13. Varistor (ZNR) - Optional. R/C (FOWX2) or (XUHT2), Centra Science, Type CNR-14D471K, rated 300 V, 0.6 WJ minimum.

Alternate - Same as above, except Joyin, Type JVR-7N471K.
14. Printed Wiring Board - See Section General, Printed Wiring Boards, and ILL. 1 for details.