

# CERTIFICATE OF COMPLIANCE

**Certificate Number** 20190114-E317867  
**Report Reference** E317867-A25-UL  
**Issue Date** 2019-JANUARY-14

**Issued to:** XP POWER L L C  
15641 RED HILL AVE, SUITE 100  
TUSTIN CA 92780

**This certificate confirms that  
representative samples of**

COMPONENT - POWER SUPPLIES, INFORMATION TECHNOLOGY EQUIPMENT INCLUDING ELECTRICAL BUSINESS EQUIPMENT; COMPONENT - POWER SUPPLIES FOR USE WITH AUDIO/VIDEO, INFORMATION AND COMMUNICATION TECHNOLOGY EQUIPMENT

Switching Power Supply, Model VFT80USXX, where XX is 05, 12, 15, 16, 18, 19, 20, 24, 30.

Have been investigated by UL in accordance with the component requirements in the Standard(s) indicated on this Certificate. UL Recognized components are incomplete in certain constructional features or restricted in performance capabilities and are intended for installation in complete equipment submitted for investigation to UL LLC.

**Standard(s) for Safety:** UL 60950-1 and CAN/CSA C22.2 No. 60950-1-07, Information Technology Equipment - Safety - Part 1: General Requirements.

**Additional Information:** See the UL Online Certifications Directory at <https://iq.ulprospector.com> for additional information.

This *Certificate of Compliance* does not provide authorization to apply the UL Recognized Component Mark. Only the UL Follow-Up Services Procedure provides authorization to apply the UL Mark.

Only those products bearing the UL Recognized Component Mark should be considered as being UL Certified and covered under UL's Follow-Up Services.

Look for the UL Recognized Component Mark on the product.



Bruce Mahrenholz, Director North American Certification Program  
UL LLC

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## UL TEST REPORT AND PROCEDURE

<b>Standard:</b>	UL 60950-1, 2nd Edition, 2007-03-27 (Information Technology Equipment - Safety - Part 1: General Requirements) CAN/CSA C22.2 No. 60950-1-07, 2nd Edition, 2007-03 (Information Technology Equipment - Safety - Part 1: General Requirements)
<b>Certification Type:</b>	Component Recognition
<b>CCN:</b>	QQGQ2, QQGQ8 (Power Supplies for Information Technology Equipment Including Electrical Business Equipment)
<b>Complementary CCN:</b>	QQJQ2, QQJQ8 (Power Supplies for Use in Audio/Video, Information and Communication Technology Equipment)
<b>Product:</b>	Switching Power Supply
<b>Model:</b>	VFT80USXX
<b>Rating:</b>	Where XX is 05, 12, 15, 16, 18, 19, 20, 24, 30. For Model VFT80US05 INPUT ~ 100-240 VAC, 1.7A, 50-60Hz OUTPUT : 5V dc 12A 60W max  For Model VFT80US12 INPUT ~ 100-240 VAC, 2.0A, 50-60Hz OUTPUT : 12V dc 6.66A 80W max  For Model VFT80US15 INPUT ~ 100-240 VAC, 2.0A, 50-60Hz OUTPUT : 15V dc 5.33A 80W max  For Model VFT80US16 INPUT ~ 100-240 VAC, 2.0A, 50-60Hz OUTPUT : 16V dc 5A 80W max  For Model VFT80US18 INPUT ~ 100-240 VAC, 2.0A, 50-60Hz OUTPUT : 18V dc 4.44A 80W max  For Model VFT80US19 INPUT ~ 100-240 VAC, 2.0A, 50-60Hz OUTPUT : 19V dc 4.21A 80W max  For Model VFT80US20 INPUT ~ 100-240 VAC, 2.0A, 50-60Hz OUTPUT : 20V dc 4A 80W max  For Model VFT80US24 INPUT ~ 100-240 VAC, 2.0A, 50-60Hz OUTPUT : 24V dc 3.33A 80W max  For Model VFT80US30 INPUT ~ 100-240 VAC, 2.0A, 50-60Hz OUTPUT : 30V dc 2.66A 80W max
<b>Applicant Name and Address:</b>	XP POWER L L C

Issue Date: 2009-12-18  
2019-01-02

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E317867-A25-UL

15641 RED HILL AVE, SUITE 100  
TUSTIN CA 92780  
UNITED STATES

This is to certify that representative samples of the products covered by this Test Report have been investigated in accordance with the above referenced Standards. The products have been found to comply with the requirements covering the category and the products are judged to be eligible for Follow-Up Service under the indicated Test Procedure. The manufacturer is authorized to use the UL Mark on such products which comply with this Test Report and any other applicable requirements of UL LLC ('UL') in accordance with the Follow-Up Service Agreement. Only those products which properly bear the UL Mark are considered as being covered by UL's Follow-Up Service under the indicated Test Procedure.

The applicant is authorized to reproduce the referenced Test Report provided it is reproduced in its entirety.

UL authorizes the applicant to reproduce the latest pages of the referenced Test Report consisting of the first page of the Specific Technical Criteria through to the end of the Conditions of Acceptability.

Any information and documentation involving UL Mark services are provided on behalf of UL LLC (UL) or any authorized licensee of UL.

Prepared by: Adam Tangocci

Reviewed by: Gregory Ray

### Supporting Documentation

The following documents located at the beginning of this Procedure supplement the requirements of this Test Report:

- A. Authorization - The Authorization page may include additional Factory Identification Code markings.
- B. Generic Inspection Instructions -
  - i. Part AC details important information which may be applicable to products covered by this Procedure. Products described in this Test Report must comply with any applicable items listed unless otherwise stated in the body of this Test Report.
  - ii. Part AE details any requirements which may be applicable to all products covered by this Procedure. Products described in this Test Report must comply with any applicable items listed unless otherwise stated in the body of each Test Report.
  - iii. Part AF details the requirements for the UL Certification Mark which is not controlled by the technical standard used to investigate these products. Products are permitted to bear only the Certification Mark(s) corresponding to the countries for which it is certified, as indicated in each Test Report.

### Product Description

The product is a AC/DC switching mode power supply with open-frame type, and it is intended for building-in from factory installation as a component of the end product Information Technology Equipment (ITE).

### Model Differences

Models VFT80USXX series are similar to each other except for model designations, output ratings and transformer secondary construction.

Models VFT80USXX, where XX is 05, 12, 15, 16, 18, 19, 20, 24, 30, which represents output voltage (ie. 05 = 5 Vdc, 12 = 12 Vdc, etc.)

R11, R03, R04, R18, R20, R20A, R21, R22, R25, R27, R29, ZD1, C4, C6, C8, C11, D3, D4: The parameters of these components depend on output power and output current.

### Technical Considerations

- Equipment mobility : for building-in
- Connection to the mains : N/A
- Operating condition : continuous
- Access location : operator accessible
- Over voltage category (OVC) : OVC II
- Mains supply tolerance (%) or absolute mains supply values : +10%, -10% (manufacturer declared)
- Tested for IT power systems : No
- IT testing, phase-phase voltage (V) : N/A
- Class of equipment : Class II
- Considered current rating (A) : 20
- Pollution degree (PD) : PD 2
- IP protection class : IP X0
- Altitude of operation (m) : Up to 2000m
- Altitude of test laboratory (m) : Not exceed 2000m
- Mass of equipment (kg) : 0.16 kg

- The product was submitted and evaluated for use at the maximum ambient temperature (Tma) permitted by the manufacturer's specification of: 50 degree C
- The product is intended for use on the following power systems: TN

**Engineering Conditions of Acceptability**

For use only in or with complete equipment where the acceptability of the combination is determined by UL LLC. When installed in an end-product, consideration must be given to the following:

- The end-product Electric Strength Test is to be based upon a maximum working voltage of: Primary-SELV: 275 Vrms, 552 Vpk
- The following secondary output circuits are SELV: All power outputs
- The following secondary output circuits are at non-hazardous energy levels: All power outputs
- The power supply terminals and/or connectors are: Suitable for factory wiring only
- The maximum investigated branch circuit rating is: 20 A
- The investigated Pollution Degree is: 2
- The following magnetic devices (e.g. transformers or inductor) are provided with an OBJ2 insulation system with the indicated rating greater than Class A (105°C): T3 (Class B)
- The following end-product enclosures are required: Mechanical , Fire , Electrical
- The equipment is suitable for direct connection to: AC mains supply
- End-product shall provide an external forced air cooling, R/C (GPWV2), 10.1 CFM minimum, located by HS2, distance from unit is 15 cm, the air-flow direction is from fan to HS2.

**Additional Information**

Technical Amendment:

- Models, ratings, and model differences sections were updated for clarity.
- Clause 1.7.1 comment updated for clarity.
- Clause G.5 verdicts added.
- Access location, considered current rating, altitude of operation, and altitude of test laboratory were added to Test Item Particulars section.
- Added VDE licenses to opto-couplers in critical components table.
- UL: The manufacturer submitted representative production samples of these models for construction review and testing. Evaluation and testing were performed for compliance to UL 62368-1 Edition 2 and CSA C22.2 NO. 62368-1-14 - Edition 2. Evaluation specifics can be found under CBTR E317867-A6032-CB-1.

**Markings and instructions**

Clause Title	Marking or Instruction Details
Power rating - Ratings	Ratings (voltage, frequency/dc, current)
Power rating - Company identification	Listee's or Recognized company's name, Trade Name, Trademark or File Number
Power rating - Model	Model Number
Fuses - Rating	Rated current and voltage and type located on or adjacent to fuse or

	fuseholder.
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**Special Instructions to UL Representative**

Inspect the transformer(s) listed in BD1.1 per AA1.1– (C). When the tests are conducted at other location, inspect test record and specification sheet provided by the component manufacturer. Verify the specification sheet indicates 100% routine test specified in BD1.1 be conducted at the component manufacturer.

**Production-Line Testing Requirements**

**Electric Strength Test Special Constructions - Refer to Generic Inspection Instructions, Part AC for further information.**

Model	Component	Removable Parts	Test probe location	V rms	V dc	Test Time, s
All models	Transformer T3	N/A	Primary to Secondary	300 0	4242	1

**Earthing Continuity Test Exemptions - This test is not required for the following models:**

**Electric Strength Test Exemptions - This test is not required for the following models:**

**Electric Strength Test Component Exemptions - The following solid-state components may be disconnected from the remainder of the circuitry during the performance of this test:**

**Sample and Test Specifics for Follow-Up Tests at UL**

Model	Component	Material	Test	Sample(s)	Test Specifics
N/A					