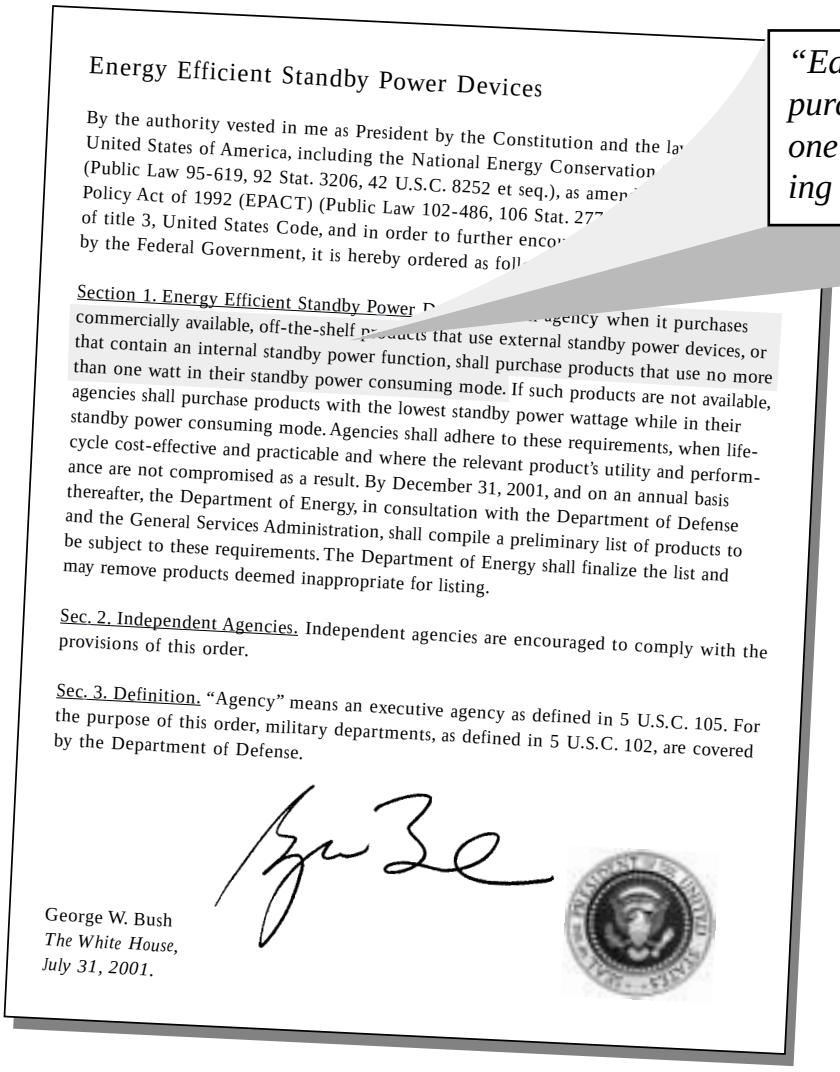
EcoSmart® ENABLED
ENERGY EFFICIENT SOLUTIONS

POWER INTEGRATIONS, INC.®

INNOVATION IN POWER CONVERSION

May 2002

CAN YOUR PRODUCT MEET THE 1 WATT STANDBY EXECUTIVE ORDER?



Energy Efficient Standby Power Devices

By the authority vested in me as President by the Constitution and the la
United States of America, including the National Energy Conservation
(Public Law 95-619, 92 Stat. 3206, 42 U.S.C. 8252 et seq.), as amen
Policy Act of 1992 (EPACT) (Public Law 102-486, 106 Stat. 27
of title 3, United States Code, and in order to further enco
by the Federal Government, it is hereby ordered as foll

Section 1. Energy Efficient Standby Power D
agency when it purchases commercially available, off-the-shelf p
ducts that use external standby power devices, or that contain an internal standby power function, shall purchase products that use no more than one watt in their standby power consuming mode. If such products are not available, agencies shall purchase products with the lowest standby power wattage while in their standby power consuming mode. Agencies shall adhere to these requirements, when life-cycle cost-effective and practicable and where the relevant product's utility and performance are not compromised as a result. By December 31, 2001, and on an annual basis thereafter, the Department of Energy, in consultation with the Department of Defense and the General Services Administration, shall compile a preliminary list of products to be subject to these requirements. The Department of Energy shall finalize the list and may remove products deemed inappropriate for listing.

Sec. 2. Independent Agencies. Independent agencies are encouraged to comply with the provisions of this order.

Sec. 3. Definition. "Agency" means an executive agency as defined in 5 U.S.C. 105. For the purpose of this order, military departments, as defined in 5 U.S.C. 102, are covered by the Department of Defense.

George W. Bush
The White House,
July 31, 2001.

"Each agency, when it purchases...shall purchase products that use no more than one watt in their standby power consuming mode."

CAN YOUR POWER SUPPLY MEET THE EUROPEAN NO-LOAD POWER TARGETS?

	NO-LOAD POWER CONSUMPTION		
RATED INPUT POWER	**PHASE 1 January 1, 2001**	**PHASE 2 January 1, 2003**	**PHASE 3 January 1, 2005**
≥0.3 W and <15 W	1.0 W	0.75 W	0.30 W
≥15 W and <50 W	1.0 W	0.75 W	0.50 W
≥50 W and <75 W	1.0 W	0.75 W	0.75 W

Source: European Commission Code of Conduct on Efficiency of External Power Supplies - June 15, 2000

POWER INTEGRATIONS CAN SHOW YOU HOW!

Power Integrations' ICs incorporate our *EcoSmart*® technology which dramatically reduces standby & no-load energy waste. Our ICs can cost effectively enable conformance to other worldwide efficiency programs & guidelines:

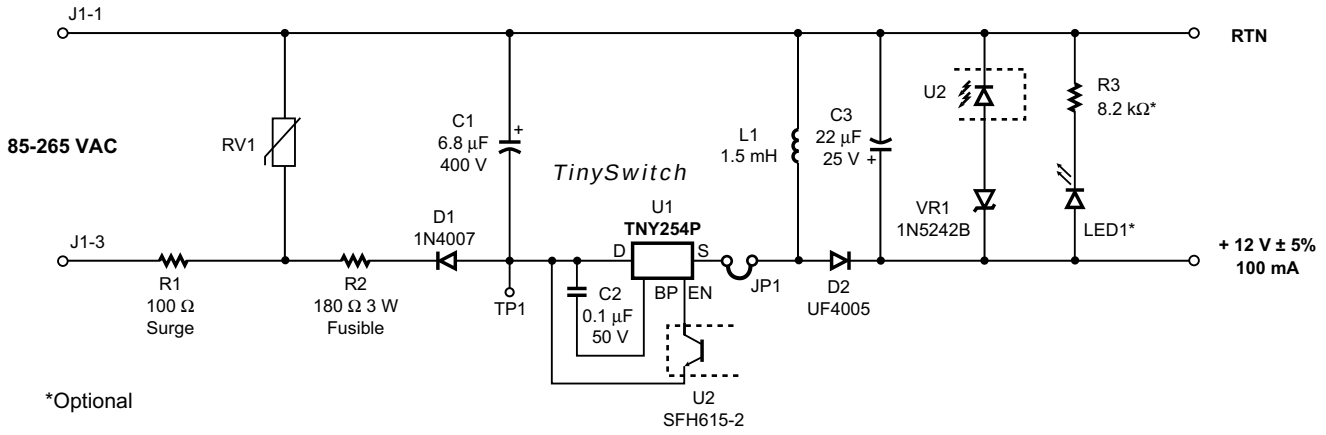
- **Energy Star**
- **Top Runner Program**
- **Blue Angel**
- **Energy 2000**

APPLICATION EXAMPLES

The following application examples are a small sample of the products and configurations available to meet current energy efficiency guidelines. Complete Engineering Prototype Reports (EPR) for each of these circuits can be viewed at ***www.powerint.com***. Many circuits are also available as complete working boards in one of our **D**esign **A**ccelerator **K**its (DAK). These kits contain a fully tested board, extra sample devices and supporting literature. Please see the list of DAKs at the end of this document.

APPLICATION	CIRCUIT	OUTPUT	P_{OUT} @ 1 W INPUT (W)	P_{IN} @ NO-LOAD (W)	MEETS 1 WATT	MEETS E.C.
Home Appliance	EP-8	1.2 W 12 V	0.70	0.05	✓	N/A
AC Adapter	EP-14	3 W 9 V	0.70	0.09	✓	✓
Digital Modem	EP-18	10 W 3.3 V, 5 V, 30 V	0.39	0.34	✓	N/A
PC Standby	EP-23	10 W 5 V	0.77	0.06	✓	N/A
Set Top Box	EP-13	43 W 3.3 V, 5 V, 12 V, 18 V, 30 V	0.13	0.70	✓	N/A
AC Adapter	EP-11	70 W 19 V	0.50	0.35	✓	✓

1.2 W UNIVERSAL INPUT HOME APPLIANCE POWER SUPPLY (EP-8)



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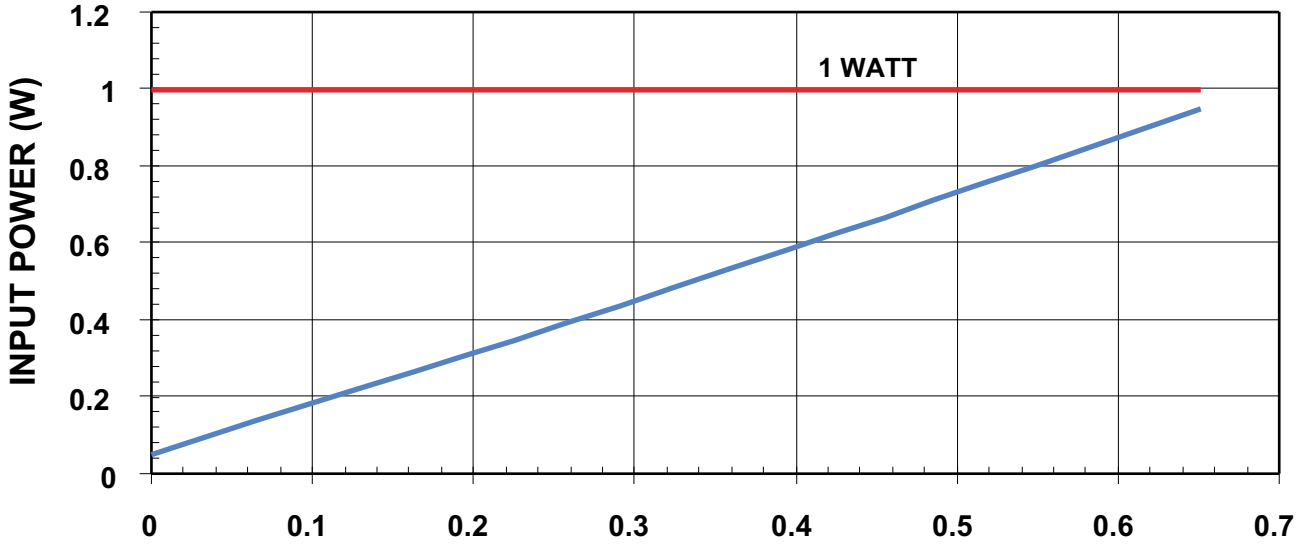
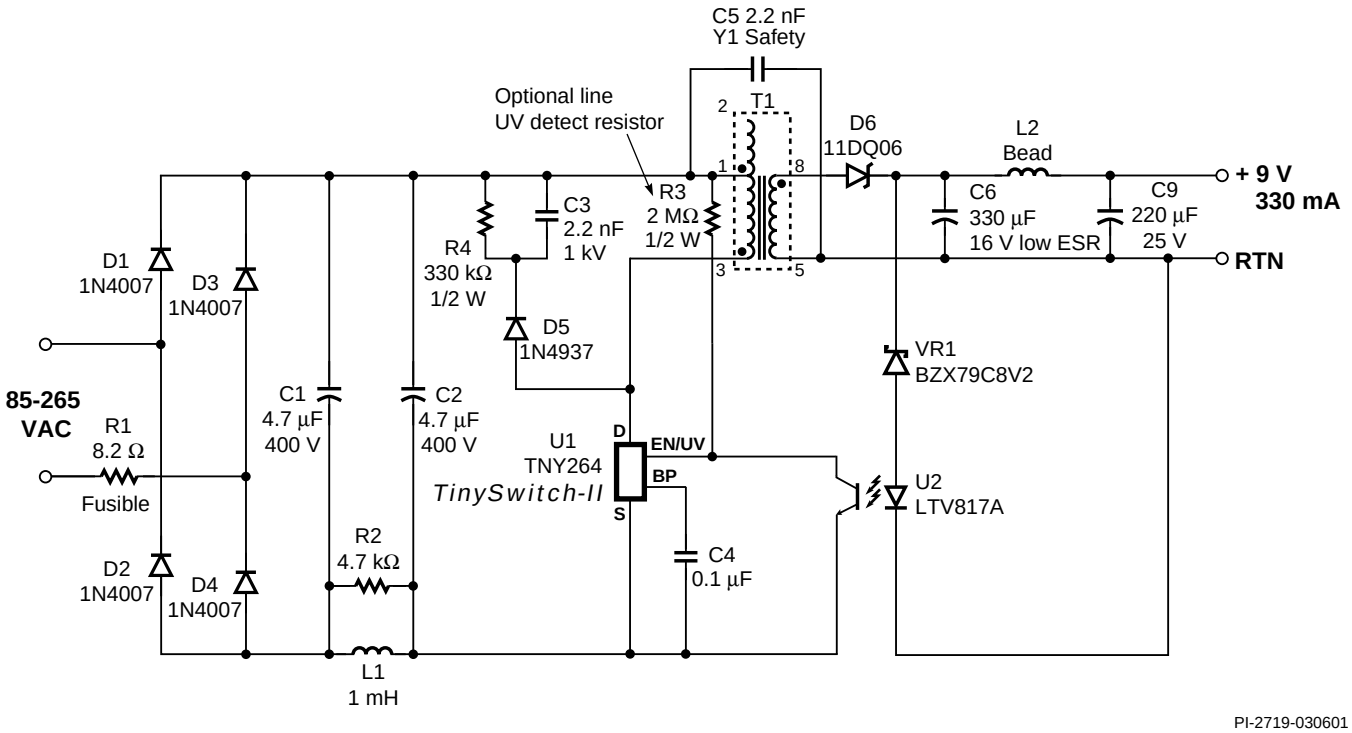
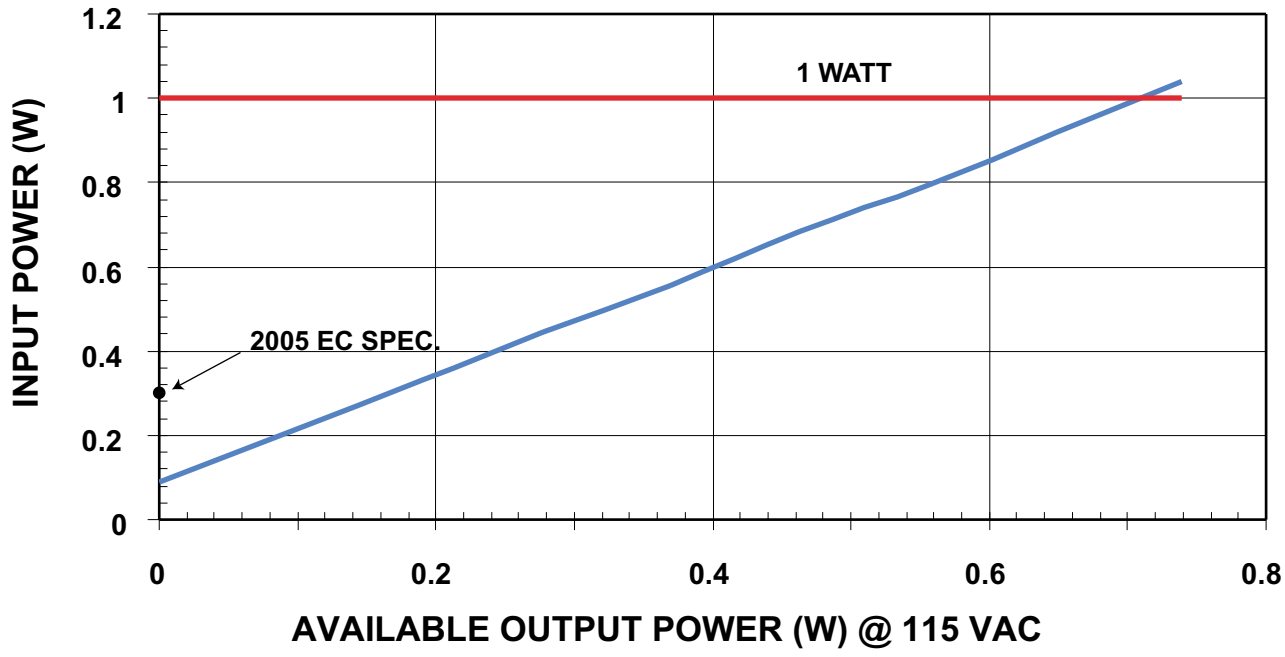
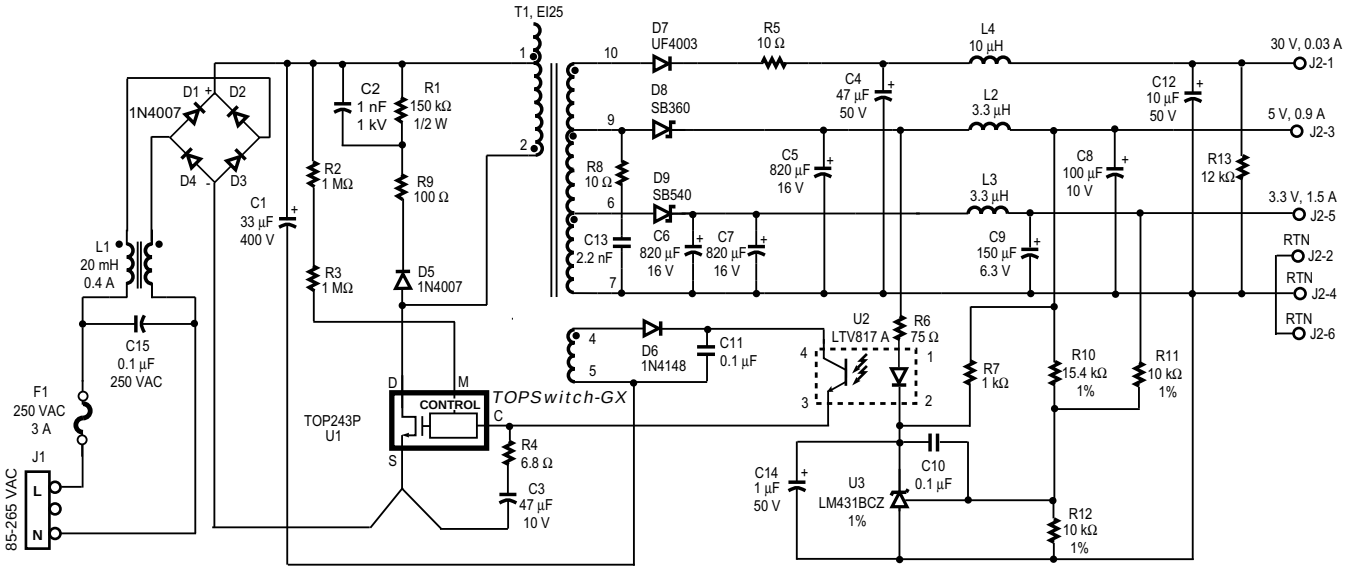


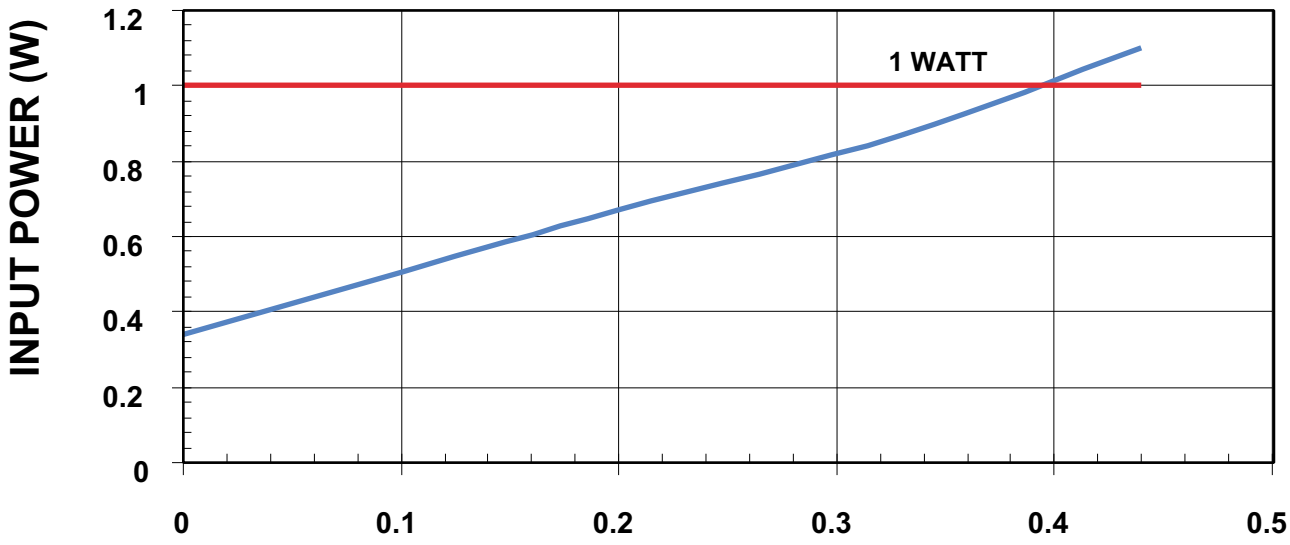
3 W UNIVERSAL INPUT AC ADAPTER (EP-14)



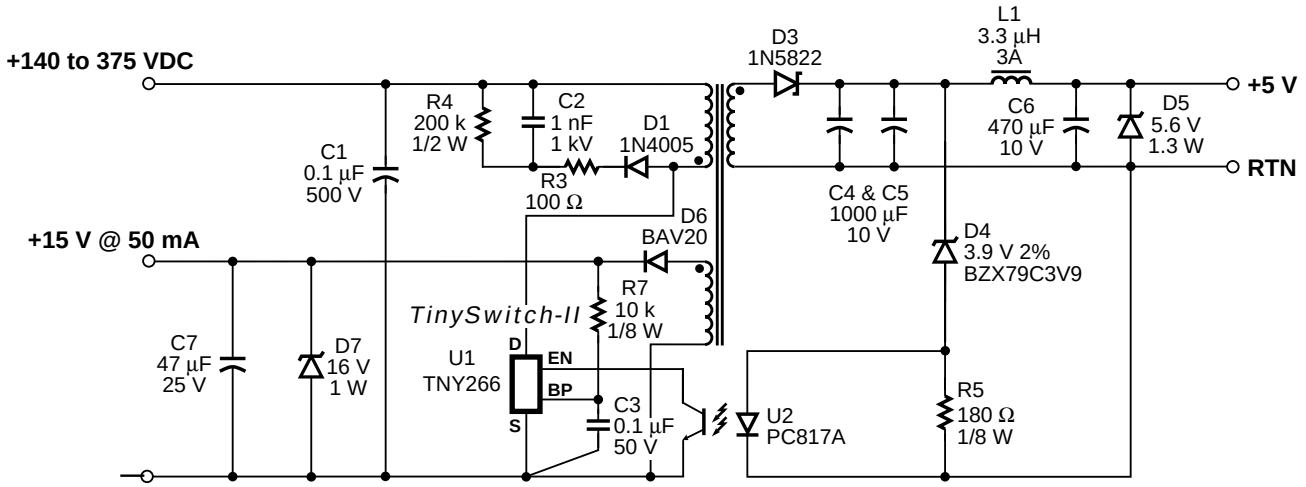


10 W UNIVERSAL INPUT HIGH SPEED DIGITAL MODEM POWER SUPPLY (EP-18)





10 W PC STANDBY POWER SUPPLY (EP-23)



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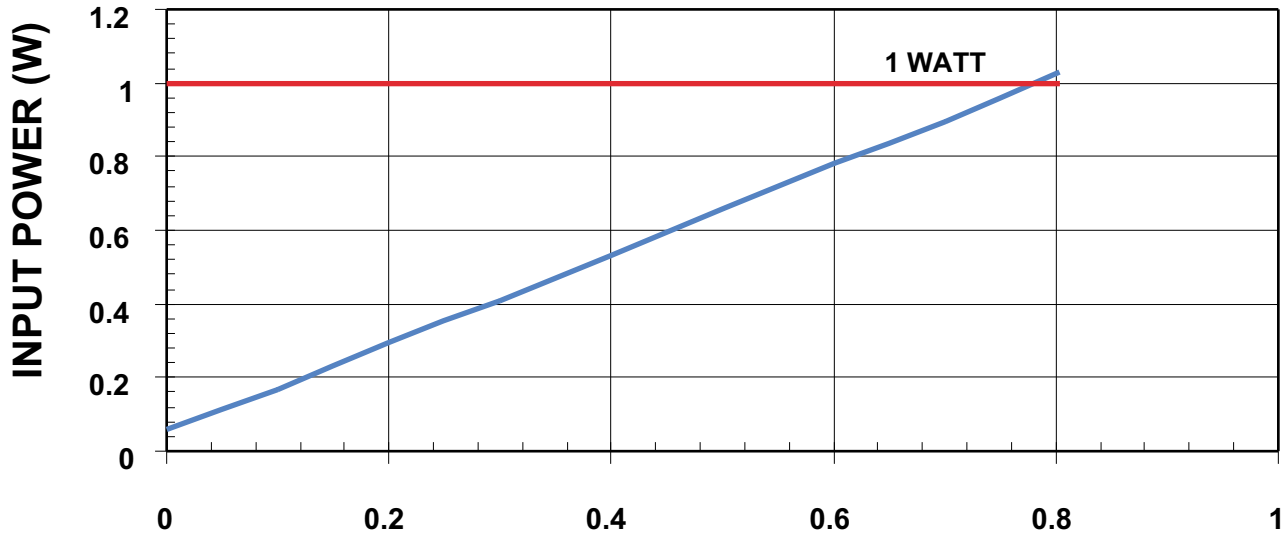
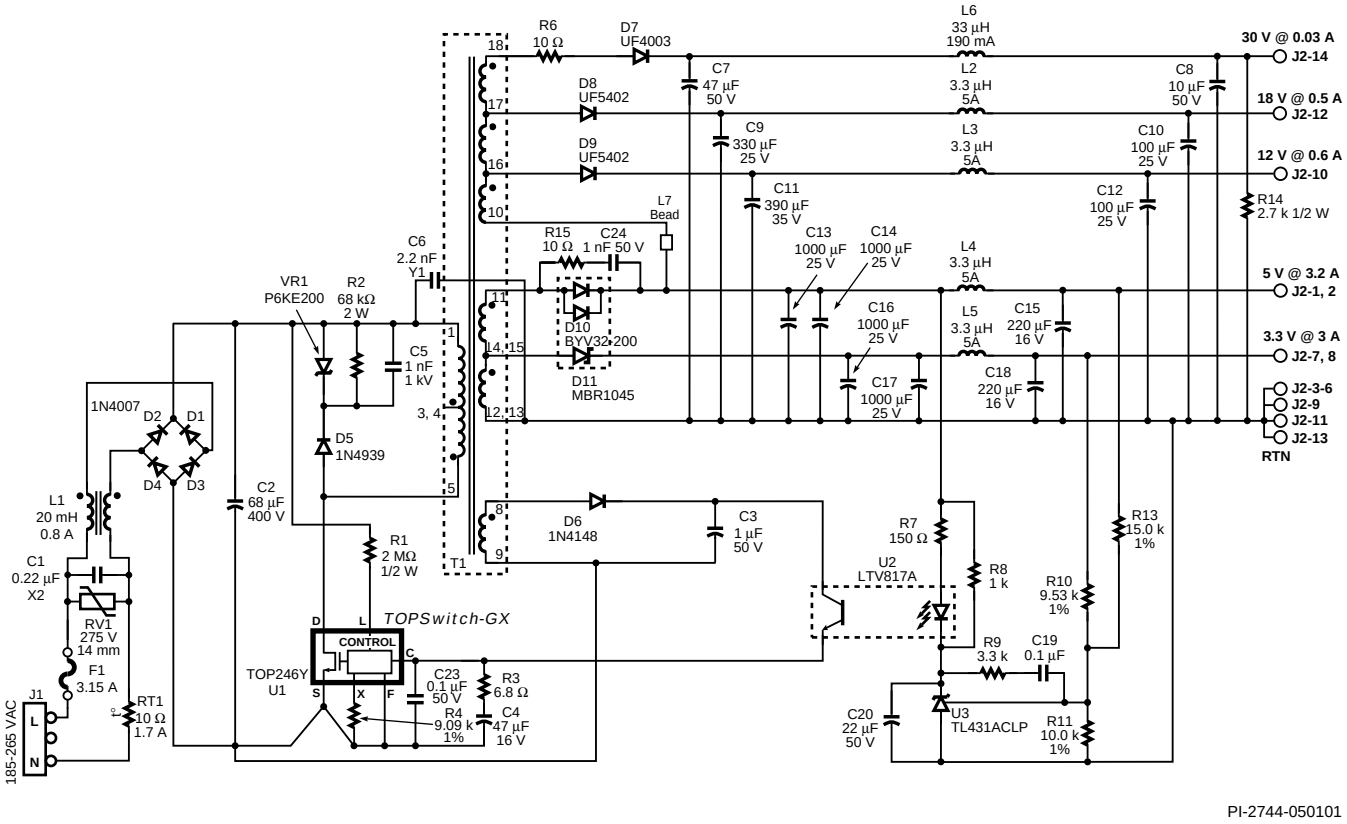
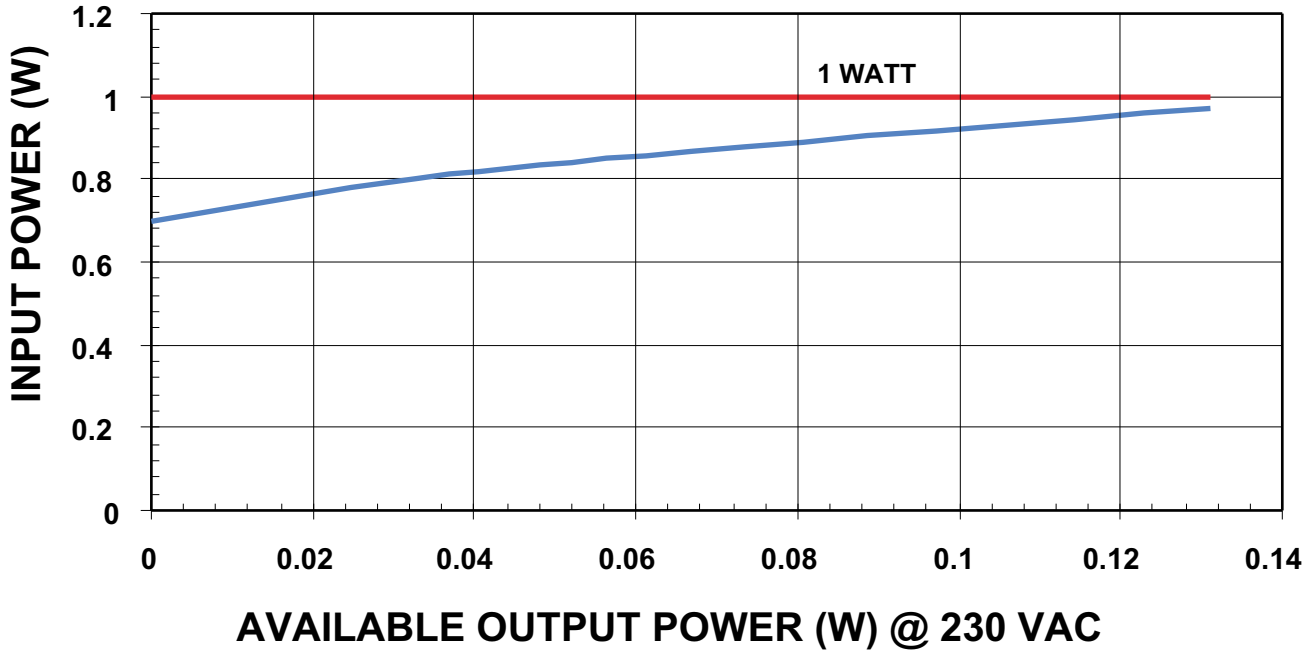
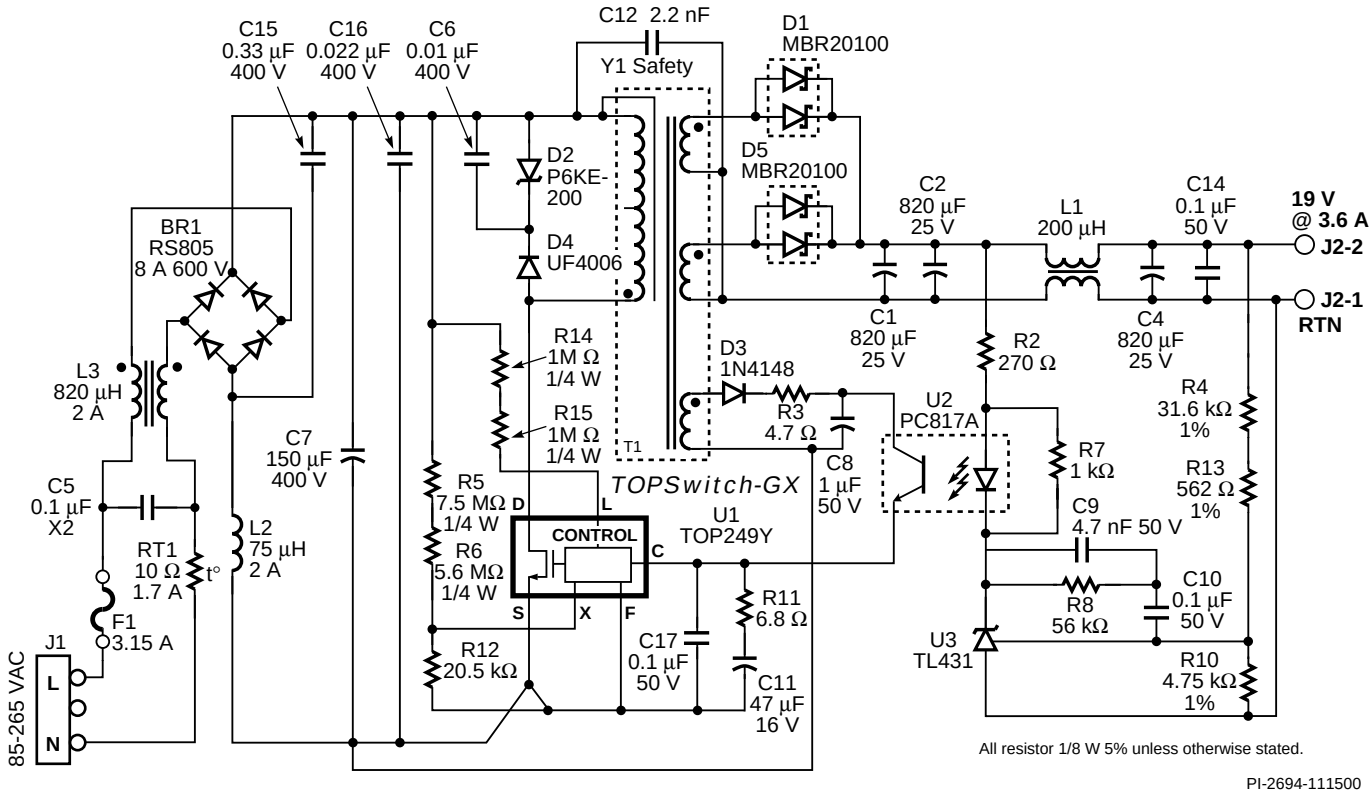


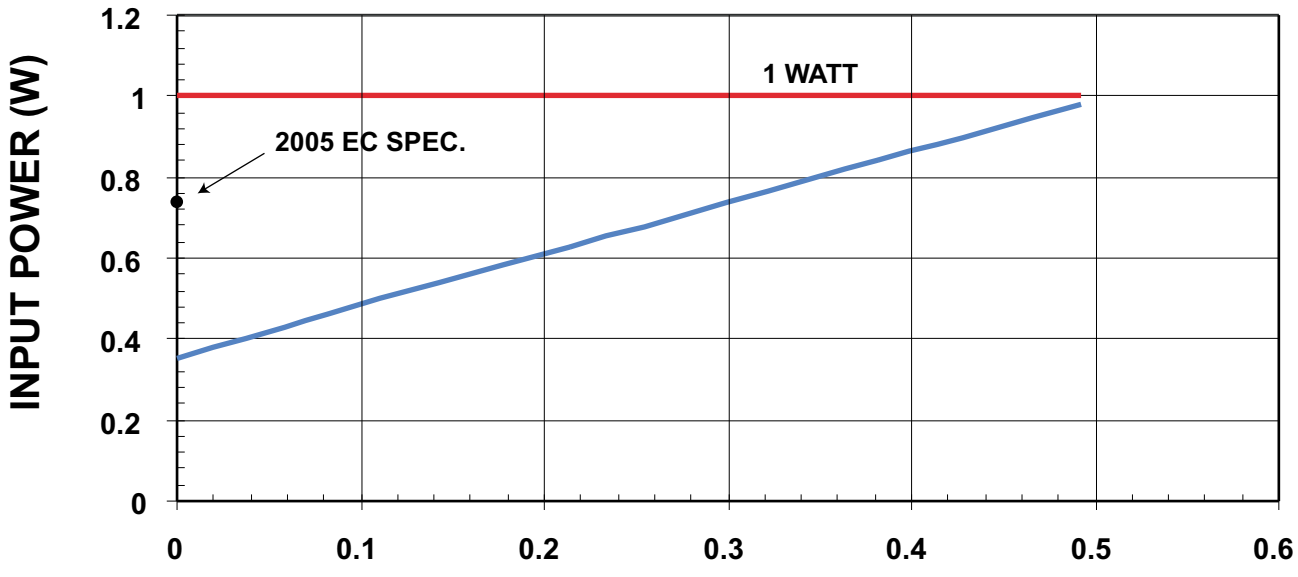
43 W SET TOP BOX POWER SUPPLY (EP-13)





70 W UNIVERSAL INPUT AC ADAPTER (EP-11)





DESIGN ACCELERATOR KITS

Design Accelerator Kits (DAK) provide all of the essential materials to get you started on your next switch mode power supply design. The kits include a fully assembled and tested prototype power supply board, comprehensive engineering report, product samples, unpopulated circuit board, data sheet and other related documentation. DAKs are available through your local sales representative, distributor or from the Power Integrations Web site.

HOME APPLIANCE POWER SUPPLIES (DAK-7)

DAK-7 CONTENTS

Board 1

Board 2

Board 1 (Buck Converter) Specifications (EP-8)
V_{IN} 85 – 265 V_{AC}
V_{OUT} 12 V @ 0.1 A
P_{OUT} 1.2 W

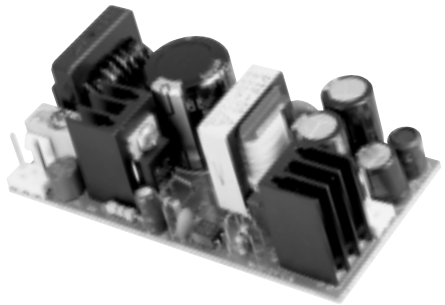
Board 2 (Non Isolated Flyback) Specifications (EP-9)
V_{IN} 85 – 265 V_{AC}
V_{OUT} 12 V @ 0.2 A & 5 V @ 0.5 A
P_{OUT} 5 W

Samples
TNY254P & TNY266P
Unpopulated PCB & Optional Parts

Documentation
Engineering Report, *TinySwitch*® &
TinySwitch-II Data Sheet

30 W, 12 V AC-DC POWER SUPPLY (DAK-8)

DAK-8 CONTENTS



Board Specifications (EP-7)
V_{IN} 85 – 265 V_{AC}
V_{OUT} 12 V @ 2.5 A
P_{OUT} 30 W
Samples
TOP232Y, 233Y, 234Y & Unpopulated PCB
Documentation
Engineering Report, AN-25, AN-26 &
TOPSwitch®*-FX* Data Sheet

DESIGN ACCELERATOR KITS

70 W, 19 V AC-DC ADAPTER (DAK-11)

DAK-11 CONTENTS

Board Specifications (EP-11)

V_{IN} 85 – 265 V_{AC}
V_{OUT} 19 V @ 3.66 A
P_{OUT} 70 W

Samples

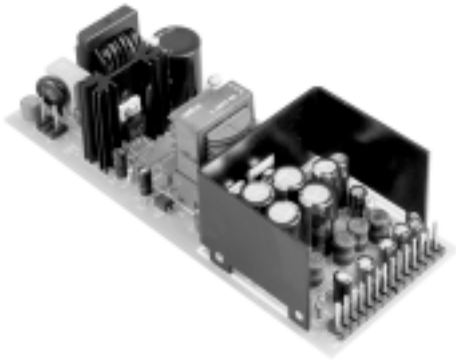
TOP245Y, 247Y, 249Y & Unpopulated PCB

Documentation

Engineering Report, AN-29, & *TOPSwitch-GX* Data Sheet

43 W, MULTI OUTPUT AC-DC POWER SUPPLY (DAK-13)

DAK-13 CONTENTS



Board Specifications (EP-13)

V_{IN} 185 – 265 V_{AC} (User Configurable 115 V_{AC})
V_{OUT} 3.3 V, 5 V, 12 V, 18 V & 30 V
P_{OUT} 43 W (Cont.), 57 W (Peak)

Samples

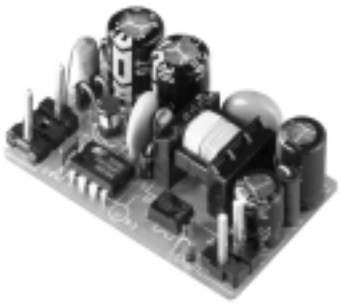
TOP247Y, Unpopulated PCB & Components for 115 V_{AC} Modification

Documentation

Engineering Report & *TOPSwitch-GX* Data Sheet

3 W, 9 V AC-DC POWER SUPPLY (DAK-14)

DAK-14 CONTENTS



Board Specifications (EP-14)

V_{IN} 85 – 265 V_{AC}
V_{OUT} 9 V
P_{OUT} 3 W

Samples

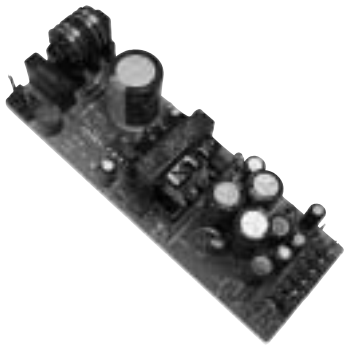
TNY264P, 266P, 267P, 268P & Unpopulated PCB

Documentation

Engineering Report & *TinySwitch-II* Data Sheet

10 W, MULTI OUTPUT AC-DC POWER SUPPLY (DAK-18)

DAK-18 CONTENTS



Board Specifications (EP-18)

V_{IN} 85 – 265 V_{AC}
V_{OUT} 3.3 V, 5 V & 30 V
P_{OUT} 10 W

Samples

TOP243P

Documentation

Engineering Report & *TOPSwitch-GX* Data Sheet

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About Power Integrations, Inc.

Founded in 1988, Power Integrations is a leading supplier of high-voltage analog integrated circuits used in power conversion. The company's ICs have enabled a new class of lightweight, compact, energy-efficient power supplies for a wide range of consumer and industrial electronics. The company's innovative *EcoSmart*® technology dramatically reduces energy waste.