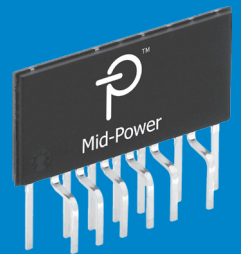


Innovation in power conversion

Product Selector Guide Mid-Power AC-DC Products

March 2017



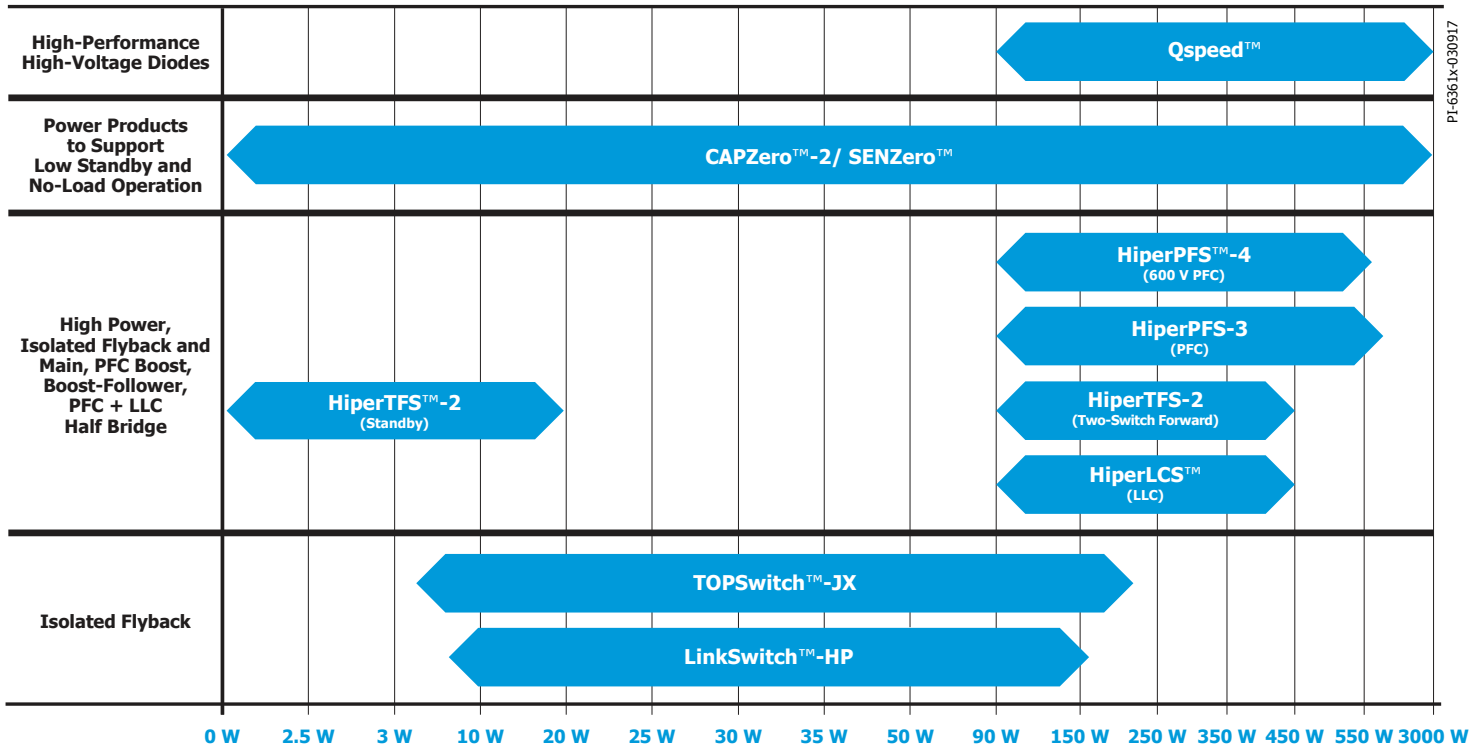
About Power Integrations

Power Integrations is the leading supplier of high-voltage analog integrated circuits used in energy-efficient power supplies. The company's innovative technology enables compact, energy-efficient power converters for a wide range of electronic products, AC-DC, DC-DC and LED lighting applications. With industry-leading product quality and delivery, the company has shipped billions of devices to customers around the world.

Mid-Power Product Portfolio

- **Qspeed** 600 V, 300 V, 200 V, and 150 V high performance diodes
- **CAPZero**/**SENZero** energy saving devices for reducing no-load or standby input power
- **HiperPFS-4** and **HiperPFS-3** integrated CCM PFC solution
- **HiperTFS-2** integrated two-switch forward converter solution
- **HiperLCS** integrated LLC resonant converter solution
- **TOPSwitch-JX** integrated secondary-side regulated flyback solution
- **LinkSwitch-HP** integrated primary-side regulated flyback solution

For more information, please visit www.power.com



Resonant Converter Power MOSFET LLC Solution

HiperLCS – Resonant Converter Power MOSFET LLC Solution

Product	Maximum Practical Power ¹ (W)
LCS700HG/LG	110
LCS701HG/LG	170
LCS702HG/LG	220
LCS703HG/LG	275
LCS705HG	350
LCS708HG	440

Table 1. Output Power Table.

Notes:

1. Maximum practical power is the power the part can deliver when properly mounted to a heat sink and a maximum heat sink temperature of 90 °C.

Additional Features:

- LLC half-bridge power stage incorporating controller, high and low-side gate drives, and high-voltage power MOSFETs
- High maximum operating frequency of 1 MHz
- Precise duty symmetry balances output rectifier current, improving efficiency
- Comprehensive fault handling and current limiting
 - Programmable brown-in/out thresholds and hysteresis
 - Undervoltage (UV) and overvoltage (OV) protection
 - Programmable over-current protection (OCP)
 - Short-circuit protection (SCP)
 - Over-temperature protection (OTP)
- Programmable dead-time for optimized design
- Programmable burst mode maintains regulation at no-load and improves light load efficiency
- Programmable soft-start time and delay before soft-start
- Accurate programmable minimum and maximum frequency limits

HiperTFS-2 – Two-Switch Forward and Flyback Solution

Product ³	Two-Switch Forward 380 V		Flyback 100 V - 400 V
	Continuous ¹ (50 °C)	Peak ²	Continuous (50 °C)
TFS7701H	148 W	187 W	20 W
TFS7702H	190 W	297 W	20 W
TFS7703H	229 W	375 W	20 W
TFS7704H	251 W	419 W	20 W
TFS7705H	269 W	466 W	20 W
TFS7706H	298 W	513 W	20 W
TFS7707H	322 W	553 W	20 W
TFS7708H	343 W	586 W	20 W

Table 1. Output Power Table.

Notes:

1. Maximum practical continuous power in an open frame design with adequate heat sinking to maintain a heat sink temperature ≤ 95 °C (see Key Applications Considerations for more information) measured at specified ambient temperature.
2. Peak load less than 10 seconds and average power less than maximum continuous load.
3. Package: eSIP-16F. (Note: Direct attach to heat sink, does not require insulation SIL pad).

Additional Features:

- Single IC solution for two-switch forward main (66 kHz/132 kHz) and flyback (132 kHz) standby
- High integration allows smaller form factor and higher power density designs, with reduced component count
- Incorporates control, gate drivers, and three power MOSFETs
- Level shift technology eliminates need for pulse transformer
- Protection features include: UV, OV, OTP, OVP, standby OPC, SCP, and I_{LIMIT}
- Transformer reset control, prevents saturation under all conditions
- Up to 586 W peak output power in a highly compact package
- >90% efficiency at full load

CCM Boost Power Factor Correction Solution

HiperPFS-3 – PFC Controller with Integrated High-Voltage MOSFET and Qspeed Diode Optimized for High PF and Efficiency Across Load Range

Universal Input Devices		
Product	Maximum Continuous Output Power Rating at 90 VAC ¹ (Full Power Mode) (W)	Peak Output Power ² (Full Power Mode) (W)
PFS7523L/H	110	120
PFS7524L/H	130	150
PFS7525L/H	185	205
PFS7526H	230	260
PFS7527H	290	320
PFS7528H	350	385
PFS7529H	405	450

High-Line Only Input Devices		
Product	Maximum Continuous Output Power Rating at 180 VAC ¹ (Full Power Mode) (W)	Peak Output Power ² (Full Power Mode) (W)
PFS7533H	255	280
PFS7534H	315	350
PFS7535H	435	480
PFS7536H	550	610
PFS7537H	675	750
PFS7538H	810	900
PFS7539H	900	1000

Notes:

1. Maximum practical continuous power at 90 VAC in an open-frame design with adequate heat sinking, measured at 50 °C ambient.
2. Internal output power limit.
3. Packages: H: eSIP-16D, L: eSIP-16G.

Additional Features:

- Incorporates high-voltage power MOSFET, ultra-low reverse recovery loss Qspeed diode, controller and gate driver
 - EN61000-3-2 Class C and Class D compliance
 - Integrated protection features reduce external component count
 - Accurate built-in brown-in/out protection
 - Accurate built-in undervoltage (UV) protection
 - Accurate built-in overvoltage (OV) protection
 - Hysteretic thermal shutdown (OTP)
 - Internal power limiting function for overload protection
 - Cycle-by-cycle power switch current limit
 - Internal non-linear error amplifier for enhanced load transient response
 - No external current sense resistor required
 - Provides 'lossless' internal sensing via sense-FET
 - Reduces component count and system losses
 - Minimizes high current gate drive loop area
 - Minimizes output overshoot and stresses during start-up
 - Integrated power limit
 - Improved dynamic response
 - Digitally controlled input line feed-forward gain adjustment for flattened loop gain across entire input voltage range
 - Eliminates up to 40 discrete components for higher reliability and lower cost
 - Continuous conduction mode PFC uses novel constant amp-second [on-time] volt-second [off-time] control engine
 - High efficiency across load
 - High power factor across load
 - Low cost EMI filter
 - Frequency sliding technique for light load efficiency improvements
 - >95% efficiency from 10% load to full load achievable at nominal input voltages
 - Variable switching frequency to simplify EMI filter design
 - Varies over line input voltage to maximize efficiency and minimize EMI filter requirements
 - Varies with input line cycle voltage by >60 kHz to maximize spread spectrum effect
- ### Advanced Package for High Power Applications
- Up to 450 W [universal], 1 kW [high-line only] peak output power capability in a highly compact package
 - Simple adhesive or clip mounting to heat sink
 - No insulation pad required and can be directly connected to heat sink
 - Staggered pin arrangement for simple routing of board traces and high-voltage creepage requirements
 - Single package solution for PFC converter reduces assembly costs and layout size

600 V CCM Boost Power Factor Correction Solution

HiperPFS-4 – PFC Controller with Integrated 600 V MOSFET Optimized for High PF and Efficiency Across Load Range

Universal Input Devices

Product	Continuous Output Power at 90 VAC ¹ (W)	Peak Output Power ² (W)
PFS7623H/L	110	120
PFS7624H/L	130	150
PFS7625H/L	185	205
PFS7626H	230	260
PFS7627H	290	320
PFS7628H	350	385
PFS7629H	405	450

High-Line Input Only Devices

Product	Continuous Output Power at 180 VAC ¹ (W)	Peak Output Power ² (W)
PFS7633H	255	280
PFS7634H	315	350
PFS7635H	435	480
PFS7636H	550	610

Notes:

1. Maximum practical continuous power in an open-frame design with adequate heat sinking, measured at 50 °C ambient.
2. Internal output power limit.

Additional Features:

- Incorporates 600 V power MOSFET, controller and gate driver.
- EN61000-3-2 Class C and Class D compliance.
- Integrated protection features reduce external component count
 - Accurate built-in brown-in/out protection.
 - Accurate built-in undervoltage (UV) protection.
 - Accurate built-in overvoltage (OV) protection.
 - Hysteretic thermal shutdown (OTP).
 - Internal power limiting function for overload protection.
 - Cycle-by-cycle power-switch current limit.
 - Internal non-linear error amplifier for enhanced load transient response
- No external current sense resistor required.
 - Provides 'lossless' internal sensing via sense-FET.
 - Reduces component count and system losses.
 - Minimizes high current gate drive loop area.
- Minimizes output overshoot and stresses during start-up
 - Integrated power limit.
- Improved dynamic response.
 - Digitally controlled input line feed-forward gain adjustment for flattened loop gain across entire input voltage range.
- Eliminates up to 39 discrete components for higher reliability and lower cost.
- Continuous conduction mode PFC uses novel constant amp-second [on-time] volt-second [off-time] control.
 - High efficiency across load.
 - High power factor across load.
- Frequency sliding technique for light load efficiency improvements.
 - >95% efficiency from 10% load to full load achievable at nominal input voltages.
- Variable switching frequency to simplify EMI filter design.
 - Varies over line input voltage to maximize efficiency and minimize EMI filter requirements.
 - Varies with input line cycle voltage by >60 kHz to maximize spread spectrum effect.
- Up to 450 W [universal], 610 W [high-line only] peak output power capability in a highly compact package.
 - Simple adhesive or clip mounting to heat sink
 - No insulation pad required and can be directly connected to heat sink.
- Staggered pin arrangement allows simple routing of board traces and to meet high-voltage creepage requirements.
- Single package solution for PFC converter reduces assembly costs and layout size.

High-Efficiency, Flyback Solution

TOPSwitch-JX – Integrated Off-Line Switcher with EcoSmart Technology for Highly Efficient Power Supplies Auto-Restart Protection Option

Product ⁴	PCB Copper Area ¹	
	Open Frame ² (W)	Open Frame ² (W)
	230 VAC ± 15% ³	85-265 VAC
TOP264V	34	22.5
TOP264K	49	30
TOP265V	36	25
TOP265K	53	34
TOP266V	39	28.5
TOP266K	58	39
TOP267V	44	32
TOP267K	65	45
TOP268V	48	36
TOP268K	73	50
TOP269V	51	37.5
TOP269K	81	55
TOP270V	55	41
TOP270K	91	60
TOP271V	59	43
TOP271K	102	66

Product ⁴	Metal Heat Sink ¹	
	Open Frame ² (W)	Open Frame ² (W)
	230 VAC ± 15% ³	85-265 VAC
TOP264E/V	62	43
TOP265E/V	81	57
TOP266E/V	119	86
TOP267E/V	137	103
TOP268E/V	148	112
TOP269E/V	162	120
TOP270E/V	190	140
TOP271E/V	244	177

Additional Features:

- Multi-mode operation maximizes efficiency at all loads
- eDIP™-12 package
 - Low profile horizontal orientation for ultra-slim designs
 - Heat transfer to both PCB and heat sink
 - Optional external heat sink provides thermal impedance equivalent to a TO-220
- eSIP™-12 package
 - Vertical orientation for minimum PCB footprint
 - Simple heat sink mounting using clip provides thermal impedance equivalent to a TO-220
- eSOP™-12 package
 - 66 W universal input output power capability
 - Low profile surface mounted for ultra-slim designs
 - Heat transfer to PCB via exposed pad and SOURCE pins
 - Supports wave or reflow soldering
- Output overvoltage protection is user programmable for latching/non-latching shutdown with fast AC reset
 - Allows both primary and secondary sensing
- Line undervoltage detection prevents turn-off glitches
- Line overvoltage shutdown extends line surge limit
- Accurate programmable current limit
- Optimized line feed-forward for line ripple rejection
- 132 kHz frequency reduces transformer and power supply size
 - Half frequency option for video applications
- Frequency jittering reduces EMI filter cost
- Improved auto-restart delivers <3% of maximum power in short-circuit and open loop fault conditions
- Accurate hysteretic thermal shutdown function automatically recovers
- Fully integrated soft-start for minimum start-up stress

Notes:

1. See Key Application Considerations in the data sheet section for more details.
2. Maximum continuous power in an open frame design at +50 °C ambient temperature.
3. 230 VAC or 110/115 VAC with doubler.
4. Packages: E: eSIP-7C, V: eDIP-12, K: eSOP-12.

High-Efficiency, PSR Flyback Solution

LinkSwitch-HP – Energy Efficient, High-Power Off-Line Switcher with Accurate Primary-Side Regulation (PSR)

Product ⁴	Heat Sink	230 VAC ±15%	85-265 VAC
		Open Frame (W)	Open Frame (W)
LNK6xx3K/V	PCB-W ¹	25	15
LNK6xx3E	Metal	35	27
LNK6xx4K/V	PCB-W ¹	28	20
LNK6xx4E	Metal	47	36
LNK6xx5K/V	PCB-W ¹	30	22
LNK6xx5E	Metal	59 ²	45
LNK6xx6K/V	PCB-W ¹	34	26
LNK6xx6E	Metal	88 ²	68 ²
LNK6xx7K/V	PCB-W ¹	41	30
LNK6xx7E	Metal	117 ²	90 ²
LNK6xx8K/V	PCB-W ¹	47	34
LNK6xx8E	Metal	135 ²	104 ²
LNK6xx9K/V	PCB-W ¹	54	39
LNK6xx9E	Metal	153 ²	118 ²

Additional Features:

- EcoSmart – energy efficient
 - Multi-mode control maximizes efficiency
 - No-load consumption below 30 mW at 230 VAC (LNK67xx)
 - >75% efficiency with 1 W input at 230 VAC
 - >50% efficiency with 0.1 W input at 230 VAC
- High design flexibility for low system cost
 - Dramatically simplifies power supply designs
 - Eliminates optocoupler and all secondary control circuitry
 - ±5% or better output voltage tolerance
 - 132 kHz operation reduces transformer and power supply size
- Accurate programmable current limit
 - Compensation over line limits overload power
- Frequency jittering reduces EMI filter cost

Notes:

- PCB heat sink with wave soldering.
- Maximum power specified based on proper thermal dissipation.
- Packages: E: eSIP-7C, K: eSOP-12B, V: eDIP-12B.

CAPZero-2 – Zero¹ Loss Automatic X Capacitor Discharge IC

Product ²	BV _{DSS}	Total X Capacitance	Total Series Resistance (R1 + R2)
CAP200DG	1000 V	100 nF to 6 µF	7.5 MΩ to 142 kΩ

Notes:

- IEC 62301 clause 4.5 rounds standby power use below 5 mW to zero.
- Package: D: SO-8.

Additional Features:

- Automatically discharges X capacitors through discharge resistors when AC is disconnected
- Simplifies EMI filter design – larger X capacitor allows smaller inductive components with no change in consumption

SENZero – Zero¹ Loss High Voltage Sense Signal Disconnect IC

Product ²	Integrated Disconnect MOSFETs	230 VAC Power Consumption in Standby
SEN012D	2	<1 mW
SEN013D	3	<1.5 mW

Notes:

- IEC 16301 clause 4.5 rounds standby power use below 5 mW to zero.
- Package: D: SO-8.

Additional Features:

- Eliminates significant standby losses
 - Disconnects unnecessary circuit blocks during standby, remote-off, or light-load conditions
- Ultra-low leakage (maximum 1 mA) 650 V MOSFETs <0.5 mW per channel during standby

High-Performance Diodes

Qspeed Diodes

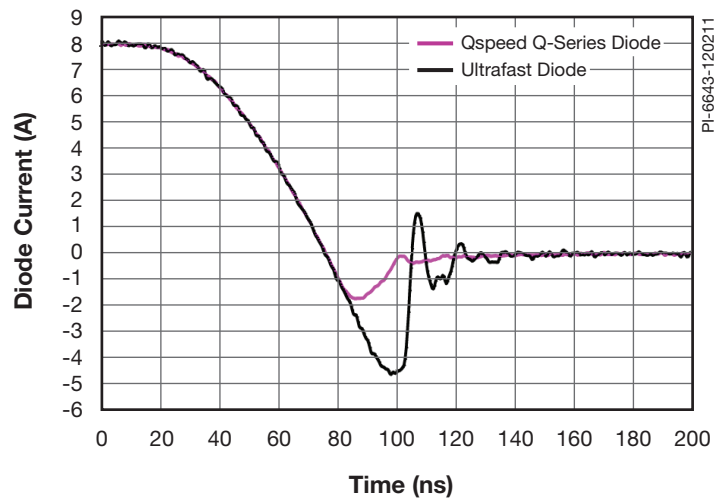
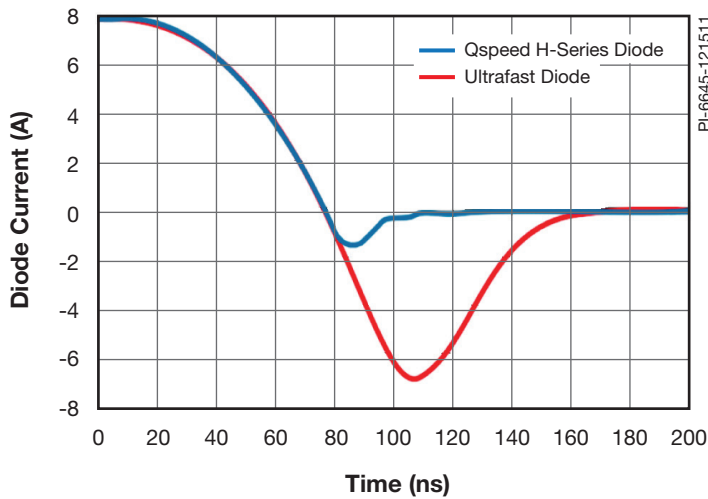
Qspeed™ diodes combine an extremely low reverse recovery charge (Q_{RR}) with very soft recovery. Together, these features help designers improve the performance of their power conversion circuits.

Product Highlights

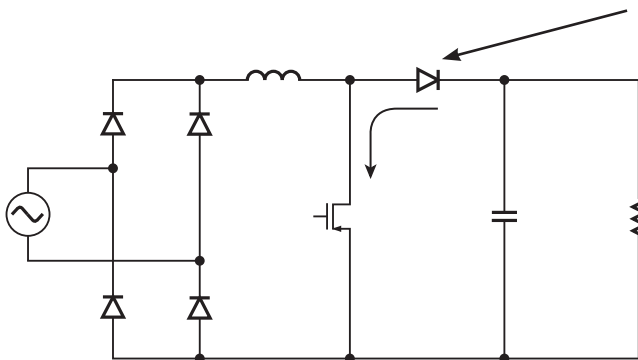
- Ideal for continuous conduction mode (CCM) PFC circuits
 - Very low reverse recovery (Q_{RR}) greatly reduces power loss in PFC diode and switching MOSFET
 - Flat Q_{RR} temperature characteristic reduces overdesign compared to ultrafast diodes
 - Ultra-soft recovery characteristic reduces EMI
 - Reduced switching losses and EMI allows higher switching frequency for smaller PFC inductors
 - Common cathode TO-220 package option is ideal for interleaved designs
- Reduced peak inverse voltage and soft recovery characteristic eliminate snubber circuits
 - Ideal for output rectifier diodes for electric vehicle chargers
- Product families optimized for different performance characteristics – lowest EMI and highest efficiency against different operating frequencies

Application Guide

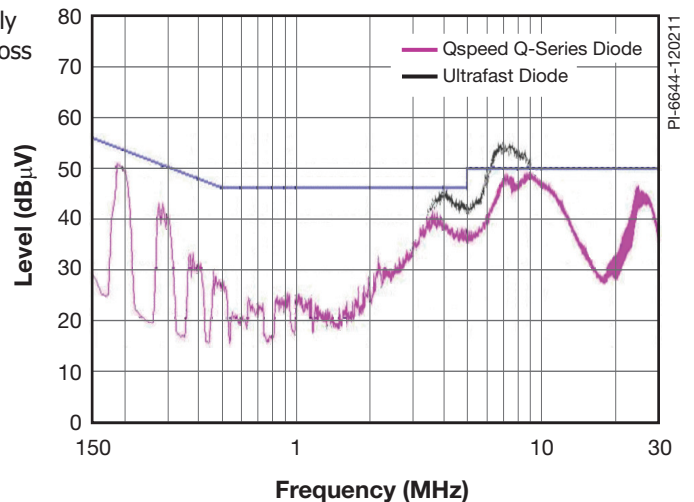
$f < 80$ kHz	X-Series	Lowest V_F
$f > 80$ kHz	Q-Series	Lowest EMI
	H-Series	Highest Efficiency



Qspeed diodes significantly reduce reverse recovery loss that improves efficiency.

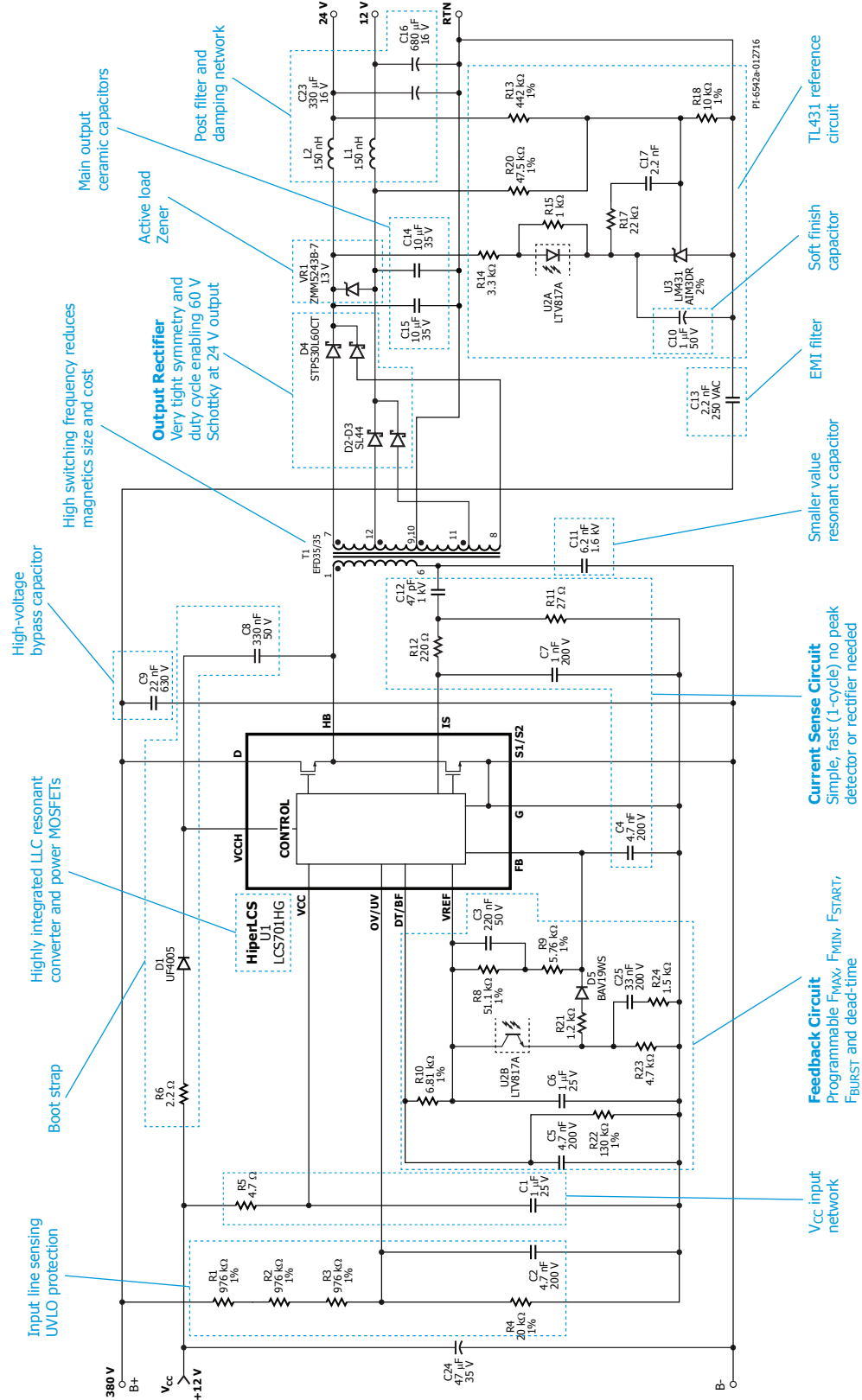


PI-6452-051011



HiperLCS – LLC High-Voltage DC-DC Resonant Converter (DER-270)

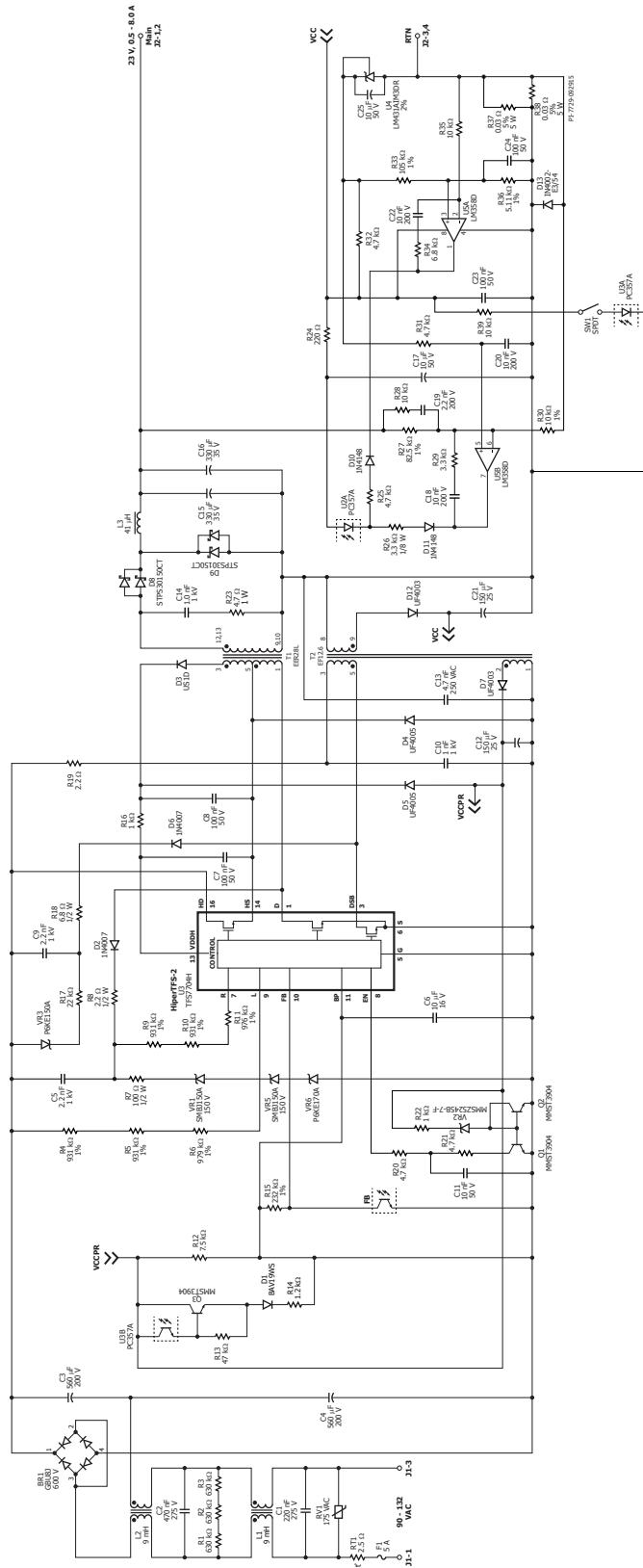
125 W, 24 V, 4 A, and 12 V, 2.4 A, 380 VDC INPUT LED TV POWER SUPPLY



Design Examples

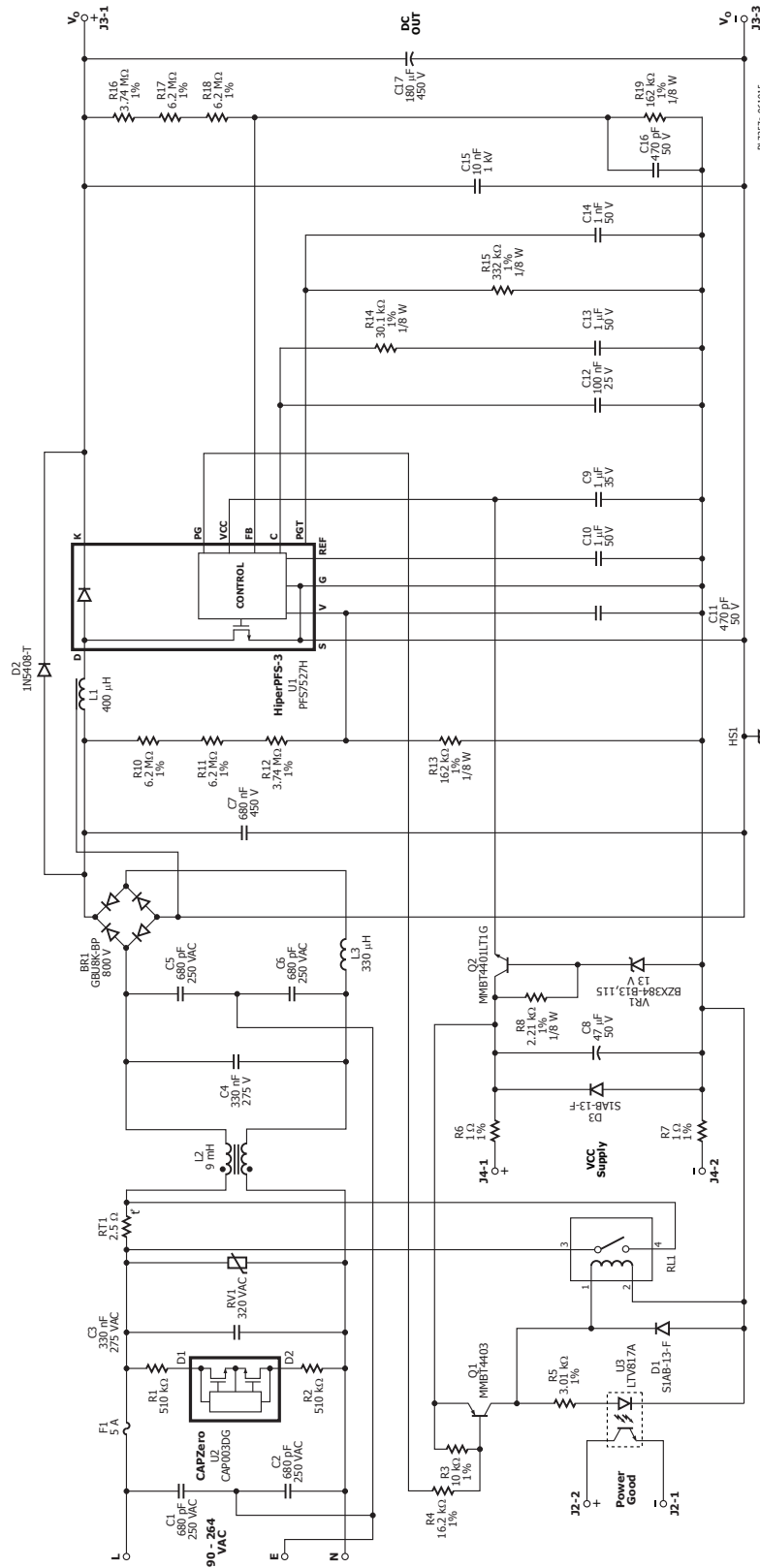
HiperTFS-2 – High-Efficiency, Non-PFC Stage Forward Power Supply (DER-483)

184 W, 23 V, 0.5 A – 8 A, 90 – 132 VAC INPUT BATTERY CHARGER POWER SUPPLY



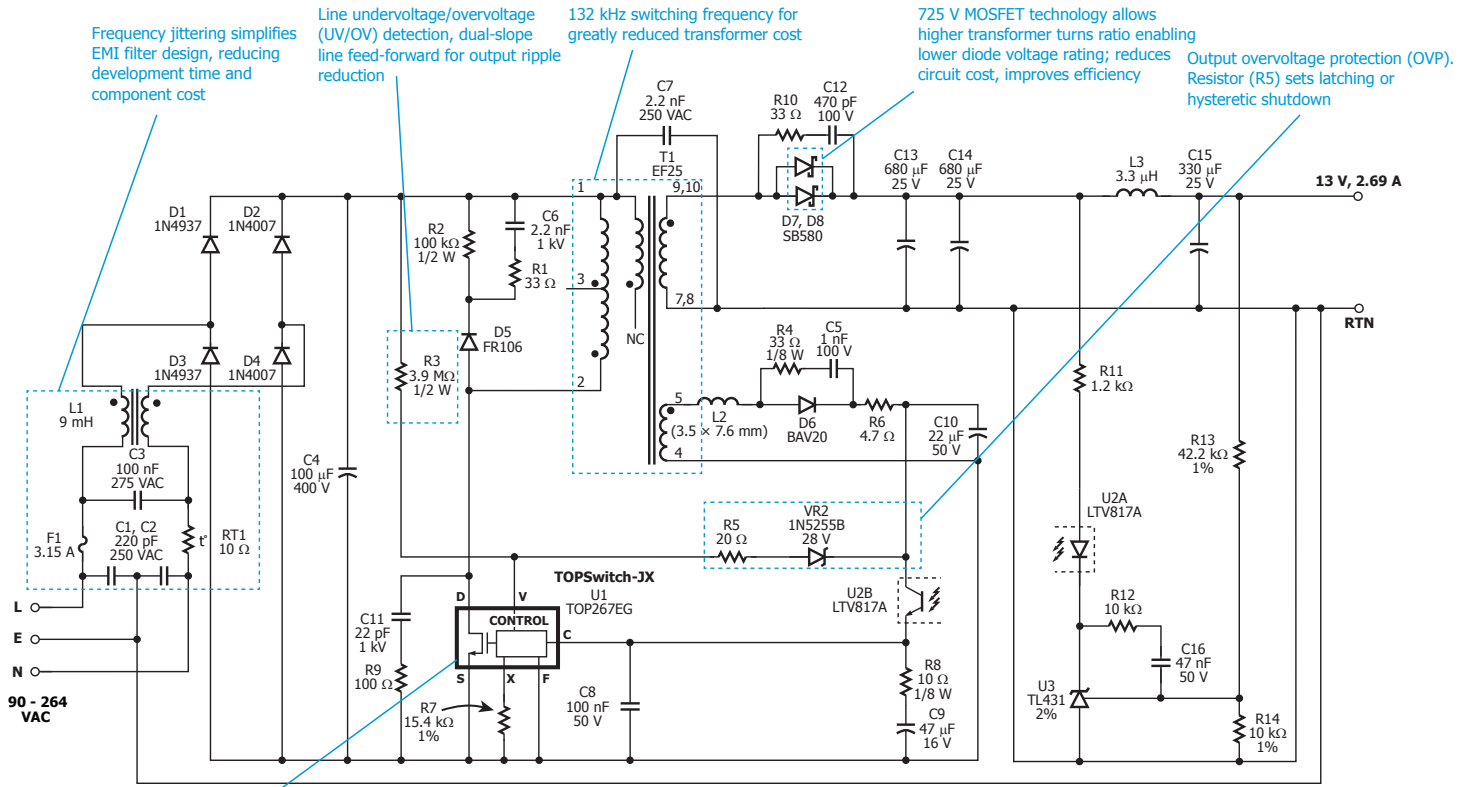
HiperPFS-3 – Boost PFC Front-End Power Supply (DER-394)

275 W, 385 V, 0.71 A, 90 – 264 VAC INPUT PFC FRONT-END POWER SUPPLY



TOPSwitch-JX – LCD Monitor (DER-187)

35 W, 13 V, 2.69 A, 90 – 264 VAC INPUT FLYBACK LCD MONITOR POWER SUPPLY



PI-6233-030916

TOPSwitch-JX

- Accurate thermal shutdown with large hysteresis provides complete system-level protection
- Tight I²t tolerance minimizes the size of the transformer and output diodes and reduces overload to rated power ratio
- Internal high-voltage current source eliminates start-up circuitry
- Internal current sense circuit eliminates sense resistor
- DIP-8 package with 2 Ω MOSFET and optimized pinout eliminates heat sink
- Auto-restart limits available power to <3% of maximum power in short-circuit and open-loop fault conditions

Frequency jittering simplifies EMI filter design, reducing development time and component cost

Line undervoltage/overvoltage (UV/OV) detection, dual-slope line feed-forward for output ripple reduction

132 kHz switching frequency for greatly reduced transformer cost

725 V MOSFET technology allows higher transformer turns ratio enabling lower diode voltage rating; reduces circuit cost, improves efficiency

Output overvoltage protection (OVP). Resistor (R5) sets latching or hysteretic shutdown

Design Example Report (DER)

Design Example Reports contain a power supply design specification, schematic, bill of materials, transformer documentation, and PCB layout. This design has been built and bench-tested to provide performance data and typical operation characteristics.

DER

Reference Design Report (RDR)

Reference Design Reports contain a power supply reference design specification, schematic, bill of materials, transformer documentation, and PCB layout. Performance data and typical operating characteristics are included. The design has been put into production for use in our Reference Design Kits (RDks).

RDR

Application	Product Family	AC Input Voltage (V)	Output Voltage (V)	Output Power (W)	Topology	Documents	DAK/RDK
All-In-One PC	HiperPFS-3 + LinkSwitch-HP	90-264	20	150	PFC + Flyback	DER-437	
	HiperPFS-4	100-300	440	275	PFC Boost	DER-547	
Appliance	LinkSwitch-HP + CAPZero-2	90-265	19	45	Flyback	DER-581	
Battery Charger	HiperTFS-2	90-132	23	184	Two-Switch Forward + Flyback	DER-483	
	HiperTFS-2	90-132	61, 5	300	Two-Switch Forward + Flyback	DER-472	
	HiperLCS + LinkSwitch-TN	90-132	23	184	LLC + Flyback	DER-447	
General Purpose	HiperLCS	300-420 (DC)	24	150	LLC	RDR-239	
	TOPSwitch-JX	85-264	12	30	Flyback	RDR-242	RDK-242
LCD Monitor	LinkSwitch-HP	90-265	12	30	Flyback	RDR-313	RDK-313
	LinkSwitch-HP	90-265	5 / 18	17	Flyback	RDR-321	RDK-321
	TOPSwitch-JX	90-264	5 / 16	36.3	Flyback	DER-259	
	TOPSwitch-JX	90-265	5 / 14.5	27	Flyback	DER-235	
LCD TV	HiperPFS-3	90-264	380	275	PFC Boost	DER-394	
	HiperPFS-4	100-305	440	275	PFC Boost	DER-547	
	TOPSwitch-JX	300-420 (DC)	12 / 24	100	Flyback	DER-299	
	HiperLCS	300-420 (DC)	12 / 24	125	LLC	DER-270	
	HiperLCS	300-420 (DC)	12 / 24	100	LLC	DER-282	
	LinkSwitch-HP	90-265	12	36	Flyback	DER-467	
	HiperPFS-3 + LinkSwitch-HP	90-264	12 / 24	100	PFC + Flyback	DER-393	
	HiperLCS	90-265	43	150	LLC	RDR-382	RDK-382
LED Driver	HiperLCS	90-265	48	150	PFC + LLC	RDR-292	
	HiperPFS-4	100-300	440	275	PFC Boost	DER-547	
	TOPSwitch-JX	90-265	19	65	Flyback	DER-243	
Notebook Adapter	LinkSwitch-HP	90-265	19	45	Flyback	DER-453	
	HiperTFS-2	300-420	12	190	Two-Switch Forward + Flyback	DER-368	
PC Main	HiperPFS-3	90-264	385	275	PFC Boost	DER-394	
	HiperPFS-4	100-300	440	275	PFC Boost	DER-547	
	HiperTFS	300-385	5 / 12	300	Two-Switch Forward + Flyback	RDR-249	
	HiperTFS-2 + HiperPFS-3	90-264	5 / 61	300	Two-Switch Forward + Flyback	DER-484	
	TOPSwitch-JX	110-400	12	30	Flyback	DER-275	
PC Standby	CAPZero	85-264	N/A	N/A	N/A	RDR-252	RDK-252
	TOPSwitch-JX	110-400	5	20	Flyback	DER-247	
	TOPSwitch-JX	110-400	12	30	Flyback	DER-246	
	HiperLCS	90-132	23	184	LLC	DER-447	
Power Tools and eBikes	HiperTFS-2	90-132	23	184	Two-Switch Forward	DER-483	
	HiperPFS-2 + HiperTFS-2	90-264	61	300	PFC + Two-Switch Forward	DER-484	
	HiperTFS-2	90-132	61	300	Two-Switch Forward	DER-472	
	TOPSwitch-JX	90-264	23	70	Flyback	DER-566	
	TOPSwitch-JX	165-264	59	106	Flyback	DER-583	
	TOPSwitch-JX	180-264	59	118	Flyback	DER-580	

Worldwide Sales Support Locations

World Headquarters

5245 Hellyer Avenue
San Jose, CA 95138, USA
Main: +1 408-414-9200
Customer Service:
Worldwide: +1-65-635-64480
Americas: +1-408-414-9621
Email: usasales@power.com
info@power.com

AMERICAS WEST

5245 Hellyer Avenue
San Jose, CA 95138 USA
Tel: +1-408-414-8778
Fax: +1-408-574-3760
Email: usasales@power.com

GERMANY (AC-DC/LED Sales)

Lindwurmstrasse 114
D-80337 München
Germany
Tel: +49-89-5527-39100
Fax: +49-89-1228-5374
Email: eurosales@power.com

INDIA (Mumbai)

Power Integrations India Private Limited
Unit: 106-107, Sagar Tech Plaza-B
Sakinaka, Andheri Kurla Road
Mumbai - 400072, Maharashtra, India
Tel 1: +91-22-40033700
Tel 2: +91-22-40033600
Email: indiasales@power.com

JAPAN

Kosei Dai-3 Bldg.
2-12-11, Shin-Yokohama, Kohoku-ku,
Yokohama-shi, Kanagawa
Japan 222-0033
Tel: +81-45-471-1021
Fax: +81-45-471-3717
Email: japansales@power.com

TAIWAN

5F, No. 318, Nei Hu. Rd., Sec. 1
Nei Hu Dist.
Taipei, Taiwan 114, R.O.C.
Tel: +886-2-2659-4570
Fax: +886-2-2659-4550
Email: taiwansales@power.com

On the Web

www.power.com

AMERICAS EAST

7360 McGinnis Ferry Road
Suite 225
Suwanee, GA 30024
Tel: +1-678-957-0724
Fax: +1-678-957-0784
Email: usasales@power.com

CHINA (Shanghai)

Room 1601-1603, Charity Plaza
No. 88 North Caoxi Road
Shanghai, PRC 200030
Tel: +86-021-6354 6323
Fax: +86-021-6354 6325
Email: chinasales@power.com

GERMANY (IGBT Driver Sales)

HellwegForum 1
59469 Ense
Germany
Tel: +49-2938-64-39990
Email: igbt-driver.sales@power.com

INDIA (New Delhi)

#45, Top Floor
Okhla Industrial Area, Phase – III
New Delhi, India
Pin – 110020
Tel: +91-11-4055-2351/53
Email: indiasales@power.com

KOREA

RM602, 6FL, 22
Teheran-ro 87-gil, Gangnam-gu
Seoul, 06164, Korea
Tel: + 82-2-2016-6610
Fax: + 82-2-2016-6630
Email: koreasales@power.com

UNITED KINGDOM

Building 5, Suite 21
The Westbrook Centre
Milton Road
Cambridge
CB4 1YG
Tel: +44 (0)7823 557484
Email: eurosales@power.com

AMERICAS CENTRAL

3100 Dundee Road, Suite 204
Northbrook, IL 60062
Tel: +1-847-721-6293
Email: usasales@power.com

CHINA (Shenzhen)

17/F, Hivac Building, No 2
Keji South 8th Road, Nanshan District
Shenzhen, China
Zip Code: 518057
Tel: +86-755-8672-8689
Fax: +86-755-8672-8690
Email: chinasales@power.com

ITALY

Via Milanese 20
20099 Sesto San Giovanni (MI)
Italy
Tel: +39 02 455 08708
Email: eurosales@power.com

INDIA (Bangalore)

1, 14th Main Road
Vasanthanagar
Bangalore 560052 India
Tel 1: +91-80-4113-8020
Tel 2: +91-80-4113-8028
Fax: +91-80-4113-8023
Email: indiasales@power.com

SINGAPORE

51 Newton Road
#20-01/03 Goldhill Plaza
Singapore, 308900
Tel: +65-6358-2160
Cust. Svc: +65-6356-4480
Fax: +65-6358-2015
Email: singaporesales@power.com

