

# Industrial and power conversion ICs

Selection guide



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## Application specific for motor control

### Controllers

Part number	Package	Vcc (V)	Features	Stepping mode	Application
<b>L297D</b>	SO-20	5	PWM current controller, stepper motor sequence generator, enable input, reset and home input	Full step, half step, wave mode	Stepper
<b>L297</b>	DIP-20	5			
<b>L6506D</b>	SO-20	5	PWM current controller, enable pin, sync pin	-	Stepper motor / DC motor
<b>L6506</b>	DIP-18	5	PWM current controller, enable pin, sync pin	-	

### Integrated power stages

Part number	Package	Description	Vcc (V)	Max RMS current capability (A)	Typ $R_{DS(on)}$ ( $\Omega$ )	Typ $V_{CE(sat)}$ (V)	Features	Application
<b>L6201</b>	SO-20	DMOS full bridge driver	12 to 48	1	0.3	-	Cross conduction protection, thermal shut down, enable pin, sense pin	Stepper motor / DC motor
<b>L6201PS</b>	PowerSO-20		12 to 48	4	0.3	-		
<b>L6202</b>	PowerDIP-18		12 to 48	1.5	0.3	-		
<b>L6203</b>	MULTIWATT11		12 to 48	4	0.3	-		
<b>L293B</b>	DIP-16	Dual bipolar full bridge	4.5 to 36	1 each channel	-	1.2	Over-temperature protection, chip enable	
<b>L293E</b>	DIP-20		4.5 to 36	1 each channel	-	1.2	Over-temperature protection, chip enable, sense inputs	
<b>L293D</b>	DIP-16		4.5 to 36	0.6 each channel	-	1.2	Over-temperature protection, enable facility	
<b>L293DD</b>	SO-20		4.5 to 36	0.6 each channel	-	1.2		
<b>L2293Q</b>	QFN32L (5x5)		2.8 to 36	0.6 each channel	-	1.2		
<b>L298N</b>	MULTIWATT15 vert.		4.8 to 46	2 each channel	-	2		
<b>L298HN</b>	MULTIWATT15 horiz.		4.8 to 46	2 each channel	-	2		
<b>L298P</b>	PowerSO-20		4.8 to 46	2 each channel	-	2		

Part number	Package	Description	Vcc (V)	Max RMS current capability (A)	Typ R <sub>DS(on)</sub> (Ω)	Features	Application
L6225D	SO-20	Dual DMOS full bridge	8 to 52	1.4 each channel	0.7	Over-temperature, overcurrent protection, UVLO, enhanced power package (PD)	Stepper motor / DC motor
L6225PD	PowerSO-20	Dual DMOS full bridge	8 to 52	1.4 each channel	0.7		
L6225N	DIP-20	Dual DMOS full bridge	8 to 52	1.4 each channel	0.7		
L6226D	SO-24	Dual DMOS full bridge	8 to 52	1.4 each channel	0.7	Over-temperature protection, adjustable overcurrent protection, UVLO, enhanced power package (PD)	
L6226PD	PowerSO-36	Dual DMOS full bridge	8 to 52	1.4 each channel	0.7		
L6226N	DIP-24	Dual DMOS full bridge	8 to 52	1.4 each channel	0.7		
L6226Q	QFN32L (5x5)	Dual DMOS full bridge	8 to 52	1.4 each channel	0.7	Over-temperature protection, overcurrent protection, UVLO, dual independent PWM current controller, enhanced power package (PD)	
L6227D	SO-24	Dual DMOS full bridge	8 to 52	1.4 each channel	0.7		
L6227PD	PowerSO-36	Dual DMOS full bridge	8 to 52	1.4 each channel	0.7		
L6227N	DIP-24	Dual DMOS full bridge	8 to 52	1.4 each channel	0.7	Over-temperature protection, adjustable overcurrent protection, UVLO, enhanced power package (PD)	
L6227Q	QFN32L (5x5)	Dual DMOS full bridge	8 to 52	1.4 each channel	0.7		
L6205D	SO-20	Dual DMOS full bridge	8 to 52	2.8 each channel	0.3		
L6205PD	PowerSO-20	Dual DMOS full bridge	8 to 52	2.8 each channel	0.3	Over-temperature protection, adjustable overcurrent protection, UVLO, enhanced power package (PD)	
L6205N	DIP-20	Dual DMOS full bridge	8 to 52	2.8 each channel	0.3		
L6206D	SO-24	Dual DMOS full bridge	8 to 52	2.8 each channel	0.3		
L6206PD	PowerSO-36	Dual DMOS full bridge	8 to 52	2.8 each channel	0.3	Over-temperature protection, adjustable overcurrent protection, UVLO, enhanced power package (PD)	
L6206N	DIP-24	Dual DMOS full bridge	8 to 52	2.8 each channel	0.3		
L6207D	SO-24	Dual DMOS full bridge	8 to 52	2.8 each channel	0.3		
L6207PD	PowerSO-36	Dual DMOS full bridge	8 to 52	2.8 each channel	0.3	Over-temperature protection, overcurrent protection, UVLO dual independent PWM current controller, enhanced power package (PD)	
L6207N	DIP-24	Dual DMOS full bridge	8 to 52	2.8 each channel	0.3		
L6234	DIP-20	Triple DMOS half bridge	7 to 52	2.8 each channel	0.3		Over-temperature protection, cross conduction protection, input and enable pin available for each channel, enhanced power package (PD)
L6234PD	PowerSO-20	Triple DMOS half bridge	7 to 52	2.8 each channel	0.3		

## Application specific for motor control (cont'd)

### Drivers - stepper

Part number	Package	Description	Vcc (V)	Max RMS current capability (A)	Typ R <sub>DS(on)</sub> (Ω)	Features	Stepping mode
L6228D	SO-24	Fully integrated stepper motor driver	8 to 52	1.4 each channel	0.7	Over-temperature protection, non-dissipative overcurrent protection, UVLO, dual independent PWM current controller, fast/slow decay mode selection, decoding logic for stepper motor, integrated fast freewheeling diodes	Full step, half step, wave mode, microstepping capability with two 90° sine wave voltage inputs
L6228PD	PowerSO-36		8 to 52	1.4 each channel	0.7		
L6228N	DIP-24		8 to 52	1.4 each channel	0.7		
L6228Q	QFN32L (5x5)		8 to 52	1.4 each channel	0.7		
L6208D	SO-2 4		8 to 52	2.8 each channel	0.3		
L6208PD	PowerSO-36		8 to 52	2.8 each channel	0.3		
L6208N	DIP-24		8 to 52	2.8 each channel	0.3		

### Drivers - three phase brushless

Part number	Package	Description	Vcc (V)	Max RMS current capability (A)	Typ R <sub>DS(on)</sub> (Ω)	Features
L6229D	SO-24	Fully integrated 3 phase BLDC motor driver	8 to 52	1.4 each channel	0.7	Over-temperature protection, non dissipative overcurrent protection, UVLO, PWM current controller, tachometer output for speed loop, diagnostic output, brake function, 60 °C and 120 °C Hall effect decoding logic, integrated fast freewheeling diodes
L6229PD	PowerSO-36		8 to 52	1.4 each channel	0.7	
L6229N	DIP-24		8 to 52	1.4 each channel	0.7	
L6235D	SO-24		8 to 52	2.8 each channel	0.3	
L6235PD	PowerSO-36		8 to 52	2.8 each channel	0.3	
L6235N	DIP-24		8 to 52	2.8 each channel	0.3	

## Analog and mixed signal ICs

### MOSFET/ IGBT drivers - multiple

Part number	Package	V <sub>CC</sub> (V)	Output source / sink current (A)	Features
<b>TD310ID</b>	SO-16	18	0.6 each channel	Sense comparator, uncommitted op-amp, adjustable UVLO, standby mode, channel paralleling capability
<b>TD310IN</b>	DIP-16	18		

### MOSFET/ IGBT drivers - single

Part number	Package	V <sub>CC</sub> (V)	Output source / sink current (A)	Features
<b>TD220ID</b>	SO-8	18	-1/1 peak, -0.2 /0.2 continuous	3.3 V voltage regulator, UVLO protection, low start-up current
<b>TD220IDT</b>	DIP-8	18		
<b>TD221ID</b>	SO-8	18	-1/1 peak, -0.2/0.2 continuous	5 V voltage regulator, UVLO protection, low start-up current
<b>TD221IDT</b>	DIP-8	18		
<b>TD350ID</b>	SO-14	28	0.75 to 1.2	UVLO protection, active Miller clamp feature, desaturation detection, fault status output, input compatible with pulse transformer or optocoupler, separate sink and source output
<b>TD351ID</b>	SO-8	28	0.75 to 1.0	UVLO protection, active Miller clamp feature, Input compatible with pulse transformer or optocoupler
<b>TD351IN</b>	DIP-8	28		
<b>TD352ID</b>	SO-8	28		UVLO protection, active Miller clamp feature, adjustable and accurate turn-on delay, desaturation detection
<b>TD352IN</b>	DIP-8	28		

## MOSFET/ IGBT drivers - dual

Part number	Package	Output	Configuration	Output source / sink current (A)	V <sub>CC</sub> (V)	Rise time (ns)	Fall time (ns)	Low-high (ns)	High-low (ns)
PM8834	SO-8 DFN8	2	Non inverting	400/500	4.5 to 18	10	10	35	45

## MOST/IGBT half-bridge drivers

Part number	Package	Output voltage V <sub>out</sub> (V)	Output source / sink current (mA)	V <sub>CC</sub> (V)	Deadtime	Features
L6384ED	SO-8	600	400 /-650	18	Set by external R 0.5 to 5 ms	Single input plus SD, dual function DT/SD, integrated bootstrap diode, V <sub>CC</sub> clamp, low-side UVLO
L6384E	DIP-8	600	400 /-650	18		
L6385ED	SO-8	600	400 /-650	18	No	Dual inputs, integrated bootstrap diode, high-side and low-side UVLO
L6385E	DIP-8	600	400 /-650	18		
L6386AD	SO-14	600	400 /-650	18	Internal 100 ns	Dual inputs, integrated bootstrap diode, high-side (9.5 V) and low-side (9.6 V) UVLO, sense comparator, dedicated SD pin, two NC pins between OUT and LVG
L6386ED	SO-14	600	400 /-650	18	Internal 100 ns	Dual inputs, integrated bootstrap diode, high-side (11.9 V) and low-side (12 V) UVLO, sense comparator, dedicated SD pin, two NC pins between OUT and LVG
L6386E	DIP-14	600	400 /-650	18		
L6387ED	SO-8	600	400 /-650	18	Internal 100 ns	Dual inputs, integrated bootstrap diode, low-side UVLO, interlocking logic for cross conduction prevention
L6387E	DIP-8	600	400 /-650	18		
L6388ED	SO-8	600	400 /-650	18	Fixed 320 ns	Dual inputs, integrated bootstrap diode, high-side and low-side UVLO, 3.3 V, 5 V, 15 V logic compatible, interlocking logic for cross conduction prevention
L6388E	DIP-8	600	400 /-650	18		

## MOST/IGBT half-bridge drivers (cont'd)

Part number	Package	Output voltage $V_{out}$ (V)	Output source / sink current (mA)	$V_{CC}$ (V)	Deadtime	Features
<b>L6390</b>	DIP-16	600	290 /-430	20	Adjustable (0.5 to 5 $\mu$ s)	Dual out-of-phase inputs, integrated bootstrap diode, 3.3 V, 5 V, 15 V logic compatible, interlocking logic for cross conduction prevention, comparator for protections, op-amp for advanced current sensing, smart / fast shut down internal block, dedicated pin for external SD, undervoltage lock out on $V_{Boot}$ and $V_{CC}$
<b>L6390D</b>	SO-16	600	290 /-430	20		Dual out-of-phase inputs, Integrated bootstrap diode, 3.3 V, 5 V, 15 V logic compatible, interlocking logic for cross conduction prevention, op-amp for advanced current sensing, dedicated pin for external SD, undervoltage lock out on $V_{Boot}$ and $V_{CC}$
<b>L6392</b>	DIP-14	600	290 /-430	20		Single input, integrated bootstrap diode, 3.3 V, 5 V, 15 V logic compatible, interlocking logic for cross conduction prevention, comparator for protection, dedicated pin for external SD, undervoltage lock out on $V_{Boot}$ and $V_{CC}$
<b>L6392D</b>	SO-14	600	290 /-430	20		
<b>L6393</b>	DIP-14	600	290 /-430	20		
<b>L6393D</b>	SO-14	600	290 /-430	20		

## Intelligent power switches for industrial

Part number	Package	V <sub>CC</sub> (V)	V <sub>DSS</sub> (V)	R <sub>DS(on)</sub> (Ω)	I <sub>out</sub> (A)	P <sub>tot</sub>	Channels
L6370D	PowerSO-20	9.5 to 35	50	0.100	2.5	internal limitation	1
L6374FP	SO-20	10.8 to 35	40	4 x 4.000	0.1	internal limitation	4
L6375D	SO-20	8 to 35	40	0.400	0.5	internal limitation	1
TDE1737FP	SO-14	8 to 45	50	-	0.5	internal limitation	1
TDE1747DP	DIP-8	10 to 45	50	-	0.5	internal limitation	1
TDE1747FP	SO-14	10 to 45	50	-	0.5	internal limitation	1
TDE1767ADP	DIP-8	6 to 55	60	-	0.5	internal limitation	1
TDE1767DP	DIP-8	6 to 45	50	-	0.5	internal limitation	1
TDE1787ADP	DIP-8	6 to 55	60	-	0.3	internal limitation	1
TDE1787DP	DIP-8	6 to 45	50	-	0.3	internal limitation	1
TDE1798DP	DIP-8	6 to 35	50	-	0.5	internal limitation	1
TDE1897CDP	DIP-8	18 to 35	50	0.400	0.5	internal limitation	1
TDE1897RDP	DIP-8	18 to 35	50	0.400	0.5	internal limitation	1
TDE1898CDP	DIP-8	18 to 35	50	0.400	0.5	internal limitation	1
TDE1898CFP	SO-20	18 to 35	50	0.400	0.5	internal limitation	1
TDE1898RDP	DIP-8	18 to 36	50	0.400	0.5	internal limitation	1
TDE3247FP	SO-14	8 to 30	36	-	0.25	internal limitation	1
VN330SP-32-E	PowerSO-10	10 to 36	45	4 x 0.200	1	internal limitation	4
VN330SP-E	PowerSO-10	10 to 36	45	4 x 0.200	0.7	internal limitation	4
VN340SP-33-E	PowerSO-10	10 to 36	45	4 x 0.200	1	internal limitation	4
VN340SP-E	PowerSO-10	10 to 36	45	4 x 0.200	0.7	internal limitation	4
VN540-12-E	PENTAWATT	10 to 36	45	0.050	2.8	internal limitation	1
VN540-E	PENTAWATT	10 to 36	45	0.050	2.8	internal limitation	1
VN540SP-E	PowerSO-10	10 to 36	45	0.050	2.8	internal limitation	1
VN751PT	PPAK	5.5 to 36	41	0.060	2.5	internal limitation	1
VN751S	SO-8	5.5 to 36	41	0.060	2.5	internal limitation	8
VN808CM-E	PowerSO-36	10.5 to 36	41	8 x 0.160	0.7	internal limitation	8
VN808CM-32-E	PowerSO-36	10.5 to 36	41	8 x 0.160	1	internal limitation	8
VN808-E	PowerSO-36	10.5 to 36	41	8 x 0.150	0.7	internal limitation	8
VN808-32-E	PowerSO-36	10.5 to 36	41	8 x 0.150	1	internal limitation	8
VN808SR	PowerSO-36	10.5 to 36	41	8 x 0.150	0.7	internal limitation	8
VNQ860-E	SO-20	5.5 to 36	41	4 x 0.270	0.35	internal limitation	4
VNQ860SP-E	PowerSO-10	5.5 to 36	41	4 x 0.270	0.35	internal limitation	4



Part number	Package	V <sub>CC</sub> (V)	V <sub>DSS</sub> (V)	R <sub>DS(on)</sub> (Ω)	I <sub>out</sub> (A)	P <sub>tot</sub>	Channels
VNI2140J	PowerSSO-12	9 to 36	45	2 x 0.08	1	internal limitation	2
VNI4140K	PowerSSO-24	10.5 to 36	41	4 x 0.08	0.7	internal limitation	4
VNI8200XP	PowerSSO-36	10.5 to 36	45	8 x 0.11	0.7	internal limitation	8

## Sensors

### Proximity sensors - inductive detectors

Part number	Package	V <sub>CC</sub> (V)	I <sub>CC</sub> supply (A)	I <sub>out</sub> (A)
TDA0161DP	DIP-8	4 to 35	0.012	0.01
TDA0161FP	S0-8	4 to 35	0.012	0.01
TDE0160FP	S0-14	4 to 36	0.0012	0.04

## Application specific for communication and connectivity

### Wireline communication ICs - power-line transceivers

Part number	Package	Description	Modulation	Programmable carrier frequencies (kHz)	Programmable baud rates (bps)	Integrated line driver	Integrated voltage regulator	Highest sensitivity	Zero crossing detection	Uncommitted op-amp	Single power supply (V)
ST7538Q	TQFP44 (10x10x1.4 mm)	Narrowband power line transceiver	B-FSK	60-66-72-76-82.05-85-110-132.5	600-1200-2400-4800	370 mA RMS differential PA	5 V and 3.3 V	0.25 mV <sub>rms</sub>	Yes	Yes	7.5 to 12.5
ST7540	HTSSOP28 (4.4x9.7x1 mm)	Stripped down narrowband power line transceiver	B-FSK	60-66-72-76-82.05-85-110-132.5	600-1200-2400-4800	500 mA RMS single-ended PA with tunable active filtering	5 V and 3.3 V	0.25 mV <sub>rms</sub>	No	No	7.5 to 13.5

## Application specific for lighting

### Ballast half-bridge drivers for analog platforms

Part number	Package	Description	High-side voltage (max) (V)	Oscillator switching frequency (max) (kHz)	Quiescent current (typ) (mA)	Turn-on threshold voltage (V)			Turn-off threshold voltage (V)			Clamping voltage (V)			Sink/source capability typ (mA)
						min	typ	max	min	typ	max	min	typ	max	
L6571	SO-8, Minidip	High-voltage half-bridge driver with oscillator	600	200	0.5	8.3	9	9.7	7.3	8	8.7	14.6	15.6	16.6	275/175
L6574	SO-16, DIP-16	CFL/TL high-voltage half-bridge ballast controller with preheating and dimming	600	-	2	9.5	10.2	10.9	7.3	8	8.7	14.6	15.6	16.6	450/250
L6585D	SO-20	High-voltage combo IC for PFC and half-bridge ballast control with EOL	600	250	-	13.3	14.3	15	9.6	10.3	11	16.2	17.2	17.7	480/290 (HB)
L6585DE*	SO-20	Enhanced high-voltage combo IC for PFC and half-bridge ballast control with EOL	600	250	-	13.3	14.3	15	9.6	10.3	11	16.2	17.2	17.7	480/290 (HB)

\* Coming soon

### Ballast half-bridge drivers for digital platforms

Part number	Package	Description	High-voltage start-up generator max voltage (V)	Operating frequency (kHz)		Quiescent current in operating mode (max) (mA)	Voltage reference for the microcontroller (V)			Turn-on threshold voltage (V)			Turn-off threshold voltage (V)		
				min	max		min	typ	max	min	typ	max	min	typ	max
L6382D	SO-20	PMU for microcontrolled	600	15	600 (PFC) 400 (HB)	2	3.267	3.3	3.366	13	14	15	7.5	8.25	9.2
L6382D5	SO-20	ballast	600	15	600 (PFC) 400 (HB)	2.1	4.9	5	5.1	13	14	15	8.5	9	9.5

### High-voltage drivers for lamps

Part number	Package	Description	Vcs (V)	Ics (rms) (A)	Ipeak (A)
VK05	SO-8	Electronic driver for CFL applications	520	0.25	1.5

## Power management

### DC-DC conversion

Part number	Package	Topology	V <sub>in</sub> (V)	V <sub>out</sub> (V)	I <sub>out</sub> (A)	Switching frequency (kHz)	Disable pin
L296	MULTIWATT15	Step-down	9 to 46	5.1 to 40	4	up to 200	Yes
L4960	HEPTAWATT7	Step-down	9 to 46	5.1 to 40	2.5	up to 200	No
L4962	HEPTAWATT8, DIP-16	Step-down	9 to 46	5.1 to 40	1.5	up to 200	Yes
L4963	DIP-18, SO-20	Step-down	9 to 46	5.1 to 40	1.5	free running	No
L4970A	MULTIWATT15	Step-down	12 to 50	5.1 to 50	10	up to 500	No
L4972A	DIP-20, SO-20	Step-down	12 to 50	5.1 to 40	2	up to 200	No
L4974A	MULTIWATT15	Step-down	12 to 50	5.1 to 40	3.5	up to 200	No
L4975A	MULTIWATT15	Step-down	12 to 50	5.1 to 40	5	up to 500	No
L4977A	MULTIWATT15	Step-down	12 to 50	5.1 to 40	7	up to 500	No
L4976	DIP-8, SO-16W	Step-down	8 to 55	0.5 to 50	1	up to 300	Yes
L4971	DIP-8, SO-16W	Step-down	8 to 55	3.3 to 50	1.5	up to 300	Yes
L4978	DIP-8, SO-16W	Step-down	8 to 55	3.3 to 50	2	up to 300	Yes
L4973D3.3	DIP-8, SO-16W	Step-down	8 to 55	0.5 to 50	3.5	up to 300	Yes
L4973D5.1	DIP-8, SO-16W	Step-down	8 to 55	5.1 to 50	3.5	up to 300	Yes
L5970D	SO-8	Step-down	4.4 to 36	0.5 to 35	1	250	Yes
L6902D	SO-8	Step-down	8 to 36	0.5 to 34	Adjustable up to 1	250	No
L5970AD	SO-8	Step-down	4.4 to 36	0.5 to 35	1	500	Yes
L5972D	SO-8	Step-down	4.4 to 36	1.23 to 35	1.5	250	No
L5973AD	HSOP8	Step-down	4.4 to 36	0.5 to 35	1.5	500	Yes
L5973D	HSOP8	Step-down	4.4 to 36	0.5 to 35	2	250	Yes
L5980	QFN8L (3x3)	Step-down	2.9 to 18	0.6 to V <sub>in</sub>	0.7	250 adjustable up to 1 MHz	Yes
L5981	QFN8L (3x3)	Step-down	2.9 to 18	0.6 to V <sub>in</sub>	1	250 adjustable up to 1 MHz	Yes
L5983	QFN8L (3x3)	Step-down	2.9 to 18	0.6 to V <sub>in</sub>	1.5	250 adjustable up to 1 MHz	Yes
L5985	QFN8L (3x3)	Step-down	2.9 to 18	0.6 to V <sub>in</sub>	2	250 adjustable up to 1 MHz	Yes
L5986	QFN8L (3x3)	I <sub>out</sub> = 2.5 A	2.9 to 18	0.6 to V <sub>in</sub>	2	250 adjustable up to 1 MHz	Yes
L5986A	HSOP8	I <sub>out</sub> = 2.5 A	2.9 to 18	0.6 to V <sub>in</sub>	2	250 adjustable up to 1 MHz	Yes
L5987	QFN8L (3x3)	I <sub>out</sub> = 3 A	2.9 to 18	0.6 to V <sub>in</sub>	2	250 adjustable up to 1 MHz	Yes
L5987A	HSOP8	I <sub>out</sub> = 3 A	2.9 to 18	0.6 to V <sub>in</sub>	2	250 adjustable up to 1 MHz	Yes
L6920D	TSSOP8	Step-up	0.6 to 5.5	2 to 5.2	1 (input current limit)	up to 1000	Yes

Part number	Package	Topology	V <sub>in</sub> (V)	V <sub>out</sub> (V)	I <sub>out</sub> (A)	Switching frequency (kHz)	Disable pin
<b>L6920DB</b>	miniSO-8	Step-up	0.6 to 5.5	1.8 to 5.2	0.8 (input current limit)	up to 1000	Yes
<b>L6925D</b>	miniSO-8	Step-down	2.7 to 5.5	0.6 to 5.5	0.8	600	No
<b>L6926</b>	miniSO-8	Step-down	2 to 5.5	0.6 to 5.5	0.8	600	Yes
<b>L6926D1</b>	VFSON8	Step-down	2 to 5.5	0.6 to 5.5	0.8	600	Yes
<b>L6926Q1</b>	QFN8L (3x3)	Step-down	2 to 5.5	0.6 to 5.5	0.8	600	Yes
<b>L6928D</b>	miniSO-8	Step-down	2 to 5.5	0.6 to 5.5	0.8	1400	Yes
<b>L6928Q1</b>	QFN8L (3x3)	Step-down	2 to 5.5	0.6 to 5.5	0.8	1400	Yes

## DC-DC conversion for automotive applications

Part number	Package	Topology	V <sub>in</sub> (V)	V <sub>out</sub> (V)	I <sub>out</sub> (A)	Switching frequency (kHz)	Disable pin	Temperature range with guaranteed parameters (°C)	Operating junction temperature range (°C)
<b>A5970D</b>	SO-8	Step-down	4 to 36	0.5 to 35	1	250	Yes	-40 to +125	-40 to +150
<b>A6902D</b>	SO-8	Step-down	8 to 36	0.5 to 34	Adjustable up to 1	250	No	-40 to +125	-40 to +150
<b>A5970AD</b>	SO-8	Step-down	4 to 36	0.5 to 35	1	500	Yes	-40 to +125	-40 to +150
<b>A5972D</b>	SO-8	Step-down	4 to 36	1.23 to 35	1.5	250	No	-40 to +125	-40 to +150
<b>A5973AD</b>	HSOP8	Step-down	4 to 36	0.5 to 35	1.5	500	Yes	-40 to +125	-40 to +150
<b>A5973D</b>	HSOP8	Step-down	4 to 36	0.5 to 35	2	250	Yes	-40 to +125	-40 to +150
<b>B5973D*</b>	HSOP8	Step-down	4 to 35	0.5 to 35	2	250	Yes	-40 to +125	-40 to +150

\* On B5973D the burn-in test is implemented

## Battery management ICs - voltage and current controllers

Part number	Package	Category	V <sub>in</sub> (V)	V <sub>out</sub> (V)	I <sub>out</sub> (A)	Switching frequency (kHz)	Features
<b>L6902D</b>	SO-8	Switching	8 to 36	0.5 to 34	1	250	Adjustable current limit
<b>L6924D</b>	QFN16L (3x3)	Linear	2.5 to 12	4.1 or 4.2	up to 1	-	Disable pin
<b>L6924U</b>	QFN16L (3x3)	Linear	2.5 to 12	4.1 or 4.2	up to 1	-	Disable pin, USB compatible

## DC-DC conversion - multi-phase switching DC-DC controllers

Part number	Package	Application	Phase number	Max input voltage bus (V)	Vcc (V)	Max output current (A)	Ipeak (A)
<b>L6740L</b>	HTQFP48	Hybrid AMD AM2, AM2+	4 + 1	12	12	130 + 30	-
<b>L6756D</b>	VFQFPN40	Intel VR10.x, VR11.1	4	12	12	130	-
<b>L6750</b>	VFQFPN48	Intel VR10.x, VR11.1	5	12	12	160	-
<b>L6706</b>	VFQFPN40	Intel VR10.x, VR11.1	1	12	12	30	-
<b>L6716</b>	VFQFPN48	Intel VR10.x, VR11.1	4	12	12	130	-
<b>L6741</b>	SO-8	Dual MOSFET driver for synchronous rectified converters	-	19	5 to 12	-	2
<b>L6743D</b>	SO-8		-	19	5 to 12	-	2
<b>L6743Q</b>	VFDFPN10		-	19	5 to 12	-	2
<b>L6743B</b>	VFDFPN8		-	19	5 to 12	-	2
<b>L6747B</b>	VFDFPN8	High-efficiency dual MOSFET driver for synchronous rectified converters	-	19	5 to 12	-	2
<b>L6713A</b>	HTQFP64	Intel VR11, AMD K8-6 bit	2, 3	5, 12	12	95	-
<b>L6714</b>	HTQFP64	Intel VR11, AMD K8-6 bit	4	5, 12	12	130	-
<b>L6788A</b>	QFN40L 6x6	AIB graphic processors	(up to 3)	12	12	-	-

## DC-DC conversion - single-phase switching DC-DC controllers

Part number	Package	Application	Phase number	Max input voltage bus (V)	Min output voltage (V)	V <sub>CC</sub> (V)	Max output current (A)
L6725/A	SO-16N	Power modules, servers, networking equipment	1	18	0.6	4.5 to 18	30
L6726A	SO-8		1	19	0.8	4.1 to 13.2	30
L6727	SO-8		1	19	0.8	4.1 to 13.2	30
L6728/A	DFN10		1	15	0.8	4.1 to 15	30
L6730/B	HTSSOP20		1	18	0.6	4.5 to 18	30
L6730CQ	VFQFPN24		1	18	0.6	4.5 to 18	30
L6731D	HTSSOP16		1	18	0.6	4.5 to 18	30
L6732	HTSSOP16		1	18	0.6	4.5 to 18	30
L6910/A	SO-16N, HTSSOP16		1	12	0.9	4.5 to 13.2	30
L6733	VFQFPN32		1	12	16	16	30
L6997S	TSSOP20		1	35	0.6	3 to 5.5	30
L6712	VFQFPN36		2	12	0.9	12	60

## DC-DC conversion - smart regulators

Part number	Package	Application	Input voltage (V)	Output voltage (V)	Max output current (V)	Max R <sub>PS(on)</sub> (mΩ)
L6935	VFQFPN20	Power modules, servers, networking equipment	0.5 to 3.3	0.5 to 3.3	3	60
L6933H	HSOP8		2 to 14	1.2 to 5	2	200
L6932D	SO-8		2 to 14	1.2 to 5	2	200
L6932H	HSOP8		2 to 14	1.2 to 5	2	200

## DC-DC conversion - multi-output regulators step-down controllers

Part number	Package	Description	Application	V <sub>in</sub> (V)	V <sub>out</sub> PWM1 (V)	V <sub>out</sub> PWM2 (V)	V <sub>out</sub> PWM3 (V)	V <sub>out</sub> LDO1 (V)	V <sub>out</sub> LDO2 (V)	F <sub>sw</sub> (kHz)	I <sub>out</sub> PWM (A)	I <sub>out</sub> LDO1 (mA)	I <sub>out</sub> LDO2 (mA)
PM6685	QFN32 (5x5)	4-output controller for notebook system power supplies	Mobile PC power management	5.5 to 28	5	3.3	-	5	3.3	200 to 500	up to 10	up to 200	up to 100
PM6680	QFN32 (5x5)	2 adjustable output controller for notebook chipset power supplies with auxiliary voltage		5.5 to 28	0.9 to 5	0.9 to 3.3	-	5	-	200 to 500	up to 10	up to 200	-
PM6670S	QFN24 (4x4)	Complete DDR 2/3 memory power supply controller		4.5 to 28	0.9 to 2.6	-	-	0.5 * V <sub>out</sub> PWM1	-	200 to 500	up to 10	up to ±2000	-
PM6675S	QFN24 (4x4)	High-efficiency step-down controller with embedded 2 A LDO regulator		4.5 to 28	0.6 to 3.3	-	-	0.6-2	-	200 to 500	up to 10	up to ±2000	-
PM6681A	QFN32 (5x5)	Dual synchronous step-down controller with adjustable LDO		5.5 to 28	0.9 to 5	0.9 to 3.3	-	5	0.9 to 3.3	200 to 500	up to 10	up to 200	up to 120
PM6641	QFN48 (7x7)	Monolithic VR for chipset and DDR2/3 supply for ultra-mobile PC (UMPC) applications	Ultra-mobile PC (UMPC) and multimedia	2.7 to 5.5	0.8 to 4.7	0.8 to 4.7	0.8 to 4.7	0.5 * V <sub>in</sub> LDO	-	500 to 1000	up to 2.5	up to ±2000	-
PM6680A	QFN32 (5x5)	Dual synchronous step-down controller with adjustable output voltages plus LDO	Industrial and telecom	5.5 to 36	0.9 to 5	0.9 to 3.3	-	5	-	200 to 500	up to 10	up to 200	-
PM6670AS	QFN24 (4x4)	Complete DDR 2/3 memory power supply controller		4.5 to 36	0.9 to 2.6	-	-	0.5 * V <sub>out</sub> PWM1	-	200 to 500	up to 10	up to ±2000	-
PM6675AS	QFN24 (4x4)	High-efficiency step-down controller with embedded 2 A LDO regulator		4.5 to 36	0.6 to 3.3	-	-	0.6-2	-	200 to 500	up to 10	up to ±2000	-
PM6686	QFN32 (5x5)	2 adjustable output control for notebook system and chipset power		Mobile PC power management	5.5 to 36	0.7 to 5.5	0.7 to 3.3	-	200 to 500	up to 10	up to 200	-	-

## DC-DC conversion - LED drivers

Part number	Package	Description	Application	V <sub>in</sub> (V)	V <sub>out</sub> (V)	I <sub>rows</sub> (mA)	Number of rows	Min dimming time	Max LEDs per row	F <sub>sw</sub> (kHz)
PM6600	QFN24 (4x4)	Boost converters driving 6 rows of LEDs	Notebook LCD panel backlight	4.5 to 28	up to 36	30	6	500 ns	10 (white)	200 to 1000
LED7706	QFN24 (4x4)		Notebook LCD panel backlight	4.5 to 36	up to 36	30	6	500 ns	10	200 to 1000
LED7707			/lighting	4.5 to 36	up to 36	85	6	10 us	10 (white)	200 to 1000

## Power over Ethernet - integrated powered device

Part number	Package	Description	Topology	Max abs rating (V)	Hot-swap $R_{DS(on)}$ ( $\Omega$ )	$I_{out}$ (mA)	DC-DC switch frequency (kHz)
<b>PM8800A</b>	HTSSOP16	Integrated PD for standard and high-power PoE applications	Flyback, forward, buck	100	0.5	800	100 to 700

## AC-DC conversion - housekeeping and supervisor ICs

Part number	Package	Number of op-amp	Number of comparators	$V_{ref}$ (V)	$V_{ref}$ precision (%)	$V_{CC}$ (V)	Op-amp output wired	$I_{CC}$ typ (mA)	Op-amp input
<b>TSM102</b>	S0-16	2	2	2.5	0.4, 1	3 to 32	Yes	0.8	All independent inputs
<b>TSM104W</b>	DIP-18, S0-16	4	None	2.5	0.4, 1	3 to 32	Yes	1.4	All independent inputs
<b>TSM106</b>	S0-8	2	None	0.83	1	4 to 32	Yes	2.5	Non-inverting input of 1 op-amp @ $V_{ref}$
<b>TSM107</b>	S0-8	3	None	0.83	1, 60	3.8 to 32	Yes	2.5	Non-inverting input of the 3 op-amps @ $V_{ref}$
<b>TSM109</b>	DIP-8, S0-8	None	2	2.5	0.4, 1	2 to 36	Yes	0.4	Non-inverting input of 1 op-amp @ $V_{ref}$

Part number	Package	Overvoltage monitored lines (V)	Undervoltage monitored lines (V)	Overcurrent monitored lines (V)	$V_{ref}$ (V)	$V_{CC}$ (V)	Opto drive	$I_{CC}$ typ (mA)	Adjustable timing
<b>TSM111</b>	S0-20, DIP-20	3.3, 5, 12	5	3.3, 5, 12	1.25	16 to 44	Aux + main	10	Tpg Trem Tsur

Part number	Package	Threshold voltage at sense input (typ) (V)	Hysteresis at sense input (mV)	Propagation delay time (max) ( $\mu$ s)	$V_{ref}$ (V)	$V_{CC}$ (V)	Reset outputs	$I_{CC}$ typ (mA)	Pulse width adjustable
<b>TL7702A</b>	S0-8, DIP-8	2.53	10	1	2.53	3.6 to 18	Reset and complementary reset	1.8	Yes
<b>TL7705A</b>	S0-8, DIP-8	4.55	15	1	2.53	3.6 to 18		1.8	Yes



## AC-DC conversion - synchronous rectification controllers

Part number	Package	Topology	Typical peak output current (A)	Operating frequency (kHz)	Inhibit blanking time (ns)	V <sub>CC</sub> (V)	Disable	I <sub>CC</sub> typ (mA)	Discontinuous mode
<b>STSR3</b>	S0-8	Flyback	Source 2, sink 3.5	30 to 750	250	4 to 5.5	No	15	Yes
<b>STSR30</b>	S0-8	Flyback	Source-sink 1.5	20 to 500	700	4 to 5.5	Yes (I <sub>CC</sub> = 15 µA)	3.2	Yes
<b>STSR2</b>	S0-8	Forward	Source 2, sink 3.5	20 to 750	Na	4.5 to 5.5	No	3	Yes

## AC-DC conversion - load sharing controllers

Part number	Package	Sense amplifier input resistance (kΩ)	Current sense	High-side mirror accuracy (typ) (%)	Low-side mirror accuracy (typ) (%)	V <sub>CC</sub> (V)	Hysteresis on UVLO (mV)	I <sub>CC</sub> typ (mA)	Adjustable max current (typ) (mA)
<b>L6615</b>	S0-8, DIP-8	32	High and low side	±1	±1	2.7 to 22	100	5	10

## AC-DC conversion - PWM controllers

Part number	Package	Description	Topology	RoHS compliant	V <sub>CC</sub> (V)	Quiescent current (mA)	Max duty cycle (%)	Oscillator frequency (kHz)
<b>UC2842B</b>	DIP-8, SO-8	Standard PWM controller	Buck, boost, buck-boost, flyback, forward (including 2-switch forward)	Yes	11 to 30	12	100	250
<b>UC3842B</b>	DIP-8, SO-8	Standard PWM controller			11 to 30	12	100	250
<b>UC2843B</b>	DIP-8, SO-8	Standard PWM controller			8.2 to 30	12	100	250
<b>UC3843B</b>	DIP-8, SO-8	Standard PWM controller			8.2 to 30	12	100	250
<b>UC2844B</b>	DIP-8, SO-8	Standard PWM controller			11 to 30	12	50	250
<b>UC3844B</b>	DIP-8, SO-8	Standard PWM controller			11 to 30	12	50	250
<b>UC2845B</b>	DIP-8, SO-8	Standard PWM controller			8.2 to 30	12	50	250
<b>UC3845B</b>	DIP-8, SO-8	Standard PWM controller			8.2 to 30	12	50	250
<b>L5991</b>	DIP-16, SO-16N	Advanced primary controller			12 to 20	7	93	100
<b>L5991A</b>	DIP-16, SO-16N	with standby			12 to 20	7	93	100
<b>L6668</b>	SO-16N	Smart primary controller			9.4 to 22	2	75	100
<b>L6566A/B</b>	SO-16N	Multimode primary controller	8 to 23	2.5	70	300 max		
<b>L6591</b>	SO-16N	Advanced primary controller	Asymmetric half-bridge	Yes	9.2 to 22	2.8	50	500 max

## AC-DC conversion - voltage mode PWM controllers

Part number	Package	Description	Topology	RoHS compliant	V <sub>CC</sub> (V)	Quiescent current (mA)	Max duty cycle (%)	Oscillator frequency (kHz)
<b>SG2525</b>	DIP-16, SO-16N	Standard PWM controller	2-switch forward, half-bridge	Yes	8 to 35	14	50	500
<b>SG3525</b>	DIP-16, SO-16N	Standard PWM controller		Yes	8 to 35	14	50	500
<b>SG3524</b>	DIP-16, SO-16N	Standard PWM controller		Yes	8 to 40	0.08	45	300

## AC-DC conversion - quasi-resonant controllers

Part number	Package	Description	Topology	RoHS compliant	V <sub>CC</sub> (V)	Gate drive capability (mA)	Max duty cycle (mA)	Oscillator frequency
<b>L6565</b>	DIP-8, SO-8	Quasi-resonant SMPS controller	Buck, boost, buck-boost, flyback,	Yes	10.3 to 18	400	2.3	Frequency foldback
<b>L6566A/B</b>	SO-16N	Multimode primary controller	forward (including 2-switch forward)	Yes	8 to 23	800	2.5	300 kHz

## AC-DC conversion - resonant controllers

Part number	Package	Description	Topology	RoHS compliant	V <sub>CC</sub> (V)	Gate drive capability (mA)	Quiescent current (mA)	Oscillator frequency (kHz)
<b>L6598</b>	DIP-16, SO-16N	High-voltage resonant controller	Resonant half-bridge	Yes	10.3 to 18	450	2	350
<b>L6599A</b>	DIP-16, SO-16N	High-voltage improved resonant controller	Resonant half-bridge	Yes	8.85 to 16	800	1.5	500

## AC-DC conversion - power factor correctors

Part number	Package	Description	Topology	RoHS compliant	V <sub>CC</sub> (V)	Supply current (mA)	Gate drive capability (source/sink) (A)	Delay to output (ns)
<b>L6561</b>	DIP-8, SO-8	TM power factor corrector	Boost, flyback	Yes	11 to 18	4	0.7 / 0.7	450
<b>L6562</b>	DIP-8, SO-8	Improved TM power factor corrector	Boost, flyback	Yes	10.3 to 22	3.5	0.6 / 0.8	200
<b>L6562A</b>	DIP-8, SO-8	Enhanced TM power factor corrector	Boost, flyback	Yes	10.5 to 22.5	3.5	0.6 / 0.8	175
<b>L6563, L6563A</b>	SO-14N	Advanced TM power factor corrector	Boost, flyback	Yes	10.3 to 22	5.5	0.6 / 0.8	200
<b>L4981A, L4981B</b>	DIP-20, SO-20	CCM power factor corrector	Boost (including bridgeless PFC configuration), flyback	Yes	11 to 19.5	1.6	1.5 / 2	-

## AC-DC conversion - constant-current/constant-voltage controllers

Part Number	Package	V <sub>ref</sub> (V)	V <sub>ref</sub> precision (%)	V <sub>CC</sub> (V)	Op-amp output wired	I <sub>CC</sub> typ	op-amp input
<b>TSM101</b>	DIP-8, SO-8	1.24	1, 2	4.5 to 32	Yes	< 2 mA	Inverting input of 1 op-amp @ V <sub>ref</sub>
<b>TSM103W</b>	SO-8	2.5	0.4, 0.7	3 to 32	No	0.7 mA	Non-inverting input of 1 op-amp @ V <sub>ref</sub>
<b>TSM1011</b>	SO-8, TSSOP8	2.545	0.5, 1	4.5 to 28	Yes	< 1 mA	4 independent inputs
<b>TSM1012</b>	SO-8, TSSOP8	1.25	0.5, 1	4.5 to 28	Yes	100 µA	4 independent inputs
<b>TSM1013</b>	SO-8, TSSOP8	2.545	0.5, 1	4.5 to 28	No	< 1 mA	Non-inverting input of 1 op-amp @ V <sub>ref</sub>
<b>TSM1014</b>	SO-8, TSSOP8	1.25	0.5, 1	4.5 to 28	No	100 µA	Non-inverting input of 1 op-amp @ V <sub>ref</sub>
<b>TSM1051</b>	SOT23-6L, SO-8	1.21	1 % (including input offset of op-amp connected to V <sub>ref</sub> )	2.5 to 12	Yes	1.1 mA	Non-inverting input of first op-amp @ V <sub>ref</sub> and of second op-amp @ 200 mV (internal voltage divider of V <sub>ref</sub> )
<b>TSM1052</b>	SOT23-6L, SO-8	1.21		1.7 to 18	Yes	150 µA	

## AC-DC conversion - constant-current/constant-voltage step-down PWM controllers

Part number	Package	V <sub>in</sub> (V)	V <sub>CC</sub> absolute (V)	V <sub>ref</sub> (V)	I <sub>CC</sub> typ (mA)	Disable
TSM108	SO-14	UVLO / OVLO adjustable	60 (@ 400 ms)	2.52	4	Yes

## AC-DC conversion - high-voltage converters

Part number	Package	Power capability (W) max	Drain source voltage (V) min	V <sub>CC</sub> (V)		R <sub>DS(on)</sub> (Ω) max	I <sub>out</sub> (A) min	F <sub>SW</sub> (KHz) typ	Switching frequency mode	Max duty cycle Typ	Topology	Current limiting mode	Stand-by mode
				min	max								
VIPer100A-E	PENTAWATT5	60	700	9	15	2.8	3	up to 200	Fixed frequency (settable)	90	Buck-boost, flyback	Pulse	Burst mode
VIPer100ASP-E	PowerSO-10	60	700	9	15	2.8	3	up to 200	Fixed frequency (settable)	90	Buck-boost, flyback	Pulse	Burst mode
VIPer50-E	PENTAWATT5	40	620	9	15	5	1.5	up to 200	Fixed frequency (settable)	90	Buck-boost, flyback	Pulse	Burst mode
VIPer50A-E	PENTAWATT5	40	700	9	15	5.7	1.5	up to 200	Fixed frequency (settable)	90	Buck-boost, flyback	Pulse	Burst mode
VIPer50ASP-E	PowerSO-10	40	700	9	15	5.7	1.5	up to 200	Fixed frequency (settable)	90	Buck-boost, flyback	Pulse	Burst mode
VIPer20A-E	PENTAWATT5	15	700	9	15	18	0.5	up to 200	Fixed frequency (settable)	90	Buck-boost, buck, flyback	Pulse	Burst mode
VIPer20ASP-E	PowerSO-10	18	700	9	15	18	0.5	up to 200	Fixed frequency (settable)	90	Buck-boost, buck, flyback	Pulse	Burst mode
VIPer20ADIP-E	DIP-8	12	700	9	15	18	0.5	up to 200	Fixed frequency (settable)	90	Buck-boost, buck, flyback	Pulse	Burst mode
VIPer53SP-E	PowerSO-10	40	620	9.3	17	1	1.6	up to 300	Fixed frequency (settable)	90	Buck-boost, flyback	Pulse	Burst mode
VIPer53DIP-E	DIP-8	30	620	9.3	17	1	1.6	up to 300	Fixed frequency (settable)	90	Buck-boost, flyback	Pulse	Burst mode
VIPer53ESP-E	PowerSO-10	40	620	9.3	17	1	1.6	up to 300	Fixed frequency (settable)	90	Buck-boost, flyback	Pulse	Burst mode
VIPer53EDIP-E	DIP-8	30	620	9.3	17	1	1.6	up to 300	Fixed frequency (settable)	90	Buck-boost, flyback	Pulse	Burst mode
VIPer22ADIP-E	DIP-8	12	730	9	38	17	0.56	60	Fixed frequency	90	Buck-boost, buck, flyback	Pulse	Burst mode
VIPer12AS-E	SO-8	5	730	9	38	30	0.32	60	Fixed frequency	90	Buck-boost, buck, flyback	Pulse	Burst mode
VIPer12ADIP-E	DIP-8	8	730	9	38	30	0.32	60	Fixed frequency	90	Buck-boost, buck, flyback	Pulse	Burst mode

Part number	Package	Power capability (W) max	Drain source voltage (V) min	V <sub>CC</sub> (V)		R <sub>DS(on)</sub> (Ω) max	I <sub>out</sub> (A) min	F <sub>sw</sub> (KHz) typ	Switching frequency mode	Max duty cycle Typ	Topology	Current limiting mode	Standby mode
				min	max								
VIPer17HD	DIP7	5	800	8.5	23.5	24	0.38	115	Fixed frequency (with jittering)	70	Flyback	pulse	Burst mode
VIPer17LD	SO-16N	6	800	8.5	23.5	24	0.38	60	Fixed frequency (with jittering)	70	Flyback	pulse	Burst mode
VIPer17HD	SO-16N	5	800	8.5	23.5	24	0.38	115	Fixed frequency (with jittering)	70	Flyback	pulse	Burst mode
VIPer27LN	DIP7	10	800	8.5	23.5	7	0.66	60	Fixed frequency (with jittering)	70	Flyback	pulse	Burst mode
VIPer27HN	DIP7	9	800	8.5	23.5	7	0.66	115	Fixed frequency (with jittering)	70	Flyback	pulse	Burst mode
VIPer28LN	DIP7	12	800	8.5	23.5	7	0.75	60	Fixed frequency (with jittering)	70	Flyback	pulse	Burst mode
VIPer28HN	DIP7	11	800	8.5	23.5	7	0.75	115	Fixed frequency (with jittering)	70	Flyback	pulse	Burst mode
VIPer16LN	DIP7	6	800	8.5	23.5	24	0.38	60	Fixed frequency (with jittering)	70	Buck, buck-boost, Flyback	pulse	Burst mode
VIPer16HD	DIP7	5	800	8.5	23.5	24	0.38	115	Fixed frequency (with jittering)	70	Buck, buck-boost, Flyback	pulse	Burst mode
VIPer16LD	SO-16N	6	800	8.5	23.5	24	0.38	60	Fixed frequency	70	Buck, buck-boost, Flyback	pulse	Burst mode
VIPer16HD	SO-16N	5	800	8.5	23.5	24	0.38	115	Fixed frequency	70	Buck, buck-boost, Flyback	pulse	Burst mode



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