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
L297D	SO-20	5	PWM current controller, stepper motor sequence generator, enable input, reset and home input	Full step, half step, wave mode	Stepper
L297	DIP-20	5			
L6506D	SO-20	5	PWM current controller, enable pin, sync pin	-	Stepper motor / DC motor
L6506	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 $R_{DS(on)}$ (Ω)	Typ $V_{CE(sat)}$ (V)	Features	Application
L6201	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
L6201PS	PowerSO-20		12 to 48	4	0.3	-		
L6202	PowerDIP-18		12 to 48	1.5	0.3	-		
L6203	MULTIWATT11		12 to 48	4	0.3	-		
L293B	DIP-16	Dual bipolar full bridge	4.5 to 36	1 each channel	-	1.2	Over-temperature protection, chip enable	
L293E	DIP-20		4.5 to 36	1 each channel	-	1.2	Over-temperature protection, chip enable, sense inputs	
L293D	DIP-16		4.5 to 36	0.6 each channel	-	1.2	Over-temperature protection, enable facility	
L293DD	SO-20		4.5 to 36	0.6 each channel	-	1.2		
L2293Q	QFN32L (5x5)		2.8 to 36	0.6 each channel	-	1.2		
L298N	MULTIWATT15 vert.		4.8 to 46	2 each channel	-	2		
L298HN	MULTIWATT15 horiz.		4.8 to 46	2 each channel	-	2		
L298P	PowerSO-20		4.8 to 46	2 each channel	-	2		

Part number	Package	Description	Vcc (V)	Max RMS current capability (A)	Typ $R_{DS(on)}$ (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		
L6227D	SO-24	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)	
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		
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	Over-temperature protection, adjustable overcurrent protection, UVLO, enhanced power package (PD)	
L6205PD	PowerSO-20	Dual DMOS full bridge	8 to 52	2.8 each channel	0.3		
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	Over-temperature protection, adjustable overcurrent protection, UVLO, enhanced power package (PD)	
L6206PD	PowerSO-36	Dual DMOS full bridge	8 to 52	2.8 each channel	0.3		
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	Over-temperature protection, overcurrent protection, UVLO dual independent PWM current controller, enhanced power package (PD)	
L6207PD	PowerSO-36	Dual DMOS full bridge	8 to 52	2.8 each channel	0.3		
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)	Three-phase motor driver
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 $R_{DS(on)}$ (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 $R_{DS(on)}$ (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, tacho 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_{CC} (V)	Output source / sink current (A)	Features
TD310ID	SO-16	18	0.6 each channel	Sense comparator, uncommitted op-amp, adjustable UVLO, standby mode, channel paralleling capability
TD310IN	DIP-16	18		

MOSFET/ IGBT drivers - single

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

MOSFET/ IGBT drivers - dual

Part number	Package	Output	Configuration	Peak (A)	Vcc (V)	Rise time (ns)	Fall time (ns)	Low-high (ns)	High-low (ns)
PM8834	SO-8 DFN8	2	Non inverting	4	4.5 to 18	10	10	35	45

MOST/IGBT half-bridge drivers

Part number	Package	Output voltage V_{out} (V)	Output source / sink current (mA)	V_{CC} (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_{CC} 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
L6390	DIP-16	600	290 /-430	20	Adjustable (0.5 to 5 µs)	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}
L6390D	SO-16	600	290 /-430	20		
L6392	DIP-14	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}
L6392D	SO-14	600	290 /-430	20		
L6393	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}
L6393D	SO-14	600	290 /-430	20		

Intelligent power switches for industrial

Part number	Package	V_{CC} (V)	V_{DSS} (V)	$R_{DS(on)}$ (Ω)	I_{out} (A)	P_{tot}	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
L6375S	SO-8	8 to 35	40	0.400	0.5	internal limitation	1
L6376D	PowerSO-20	9.5 to 35	40	4 x 0.640	0.5	internal limitation	4
L6377D	SO-14	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

Part number	Package	V_{CC} (V)	V_{DSS} (V)	$R_{DS(on)}$ (Ω)	I_{out} (A)	P_{tot}	Channels
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
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_{CC} (V)	I_{CC} supply (A)	I_{out} (A)
TDA0161DP	DIP-8	4 to 35	0.012	0.01
TDA0161FP	SO-8	4 to 35	0.012	0.01
TDE0160FP	SO-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	Intergrated 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_{rms}	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_{rms}	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	
L6569	SO-8, Minidip	High voltage half bridge driver with oscillator and internal bootstrap diode structure	600	200	0.5	8.3	9	9.7	7.3	8	8.7	14.6	15.6	16.6	275/175
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
L6585DE	SO-20	Enhanced high-voltage combo IC for PFC and half-bridge ballast control with EOL	600	250	-	13.6	14.3	15	9.6	10.3	11	16.7	17.1	17.5	480/290 (HB)

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 ballast	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		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)	I_{peak} (A)
VK05	SO-8	Electronic driver for CFL applications	520	0.25	1.5

Power management

DC-DC conversion

Part number	Package	Topology	V_{in} (V)	V_{out} (V)	Iout (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
L4971	DIP-8, SO-16W	Step-down	8 to 55	3.3 to 50	1.5	up to 300	Yes
L4972A	DIP-20, SO-20	Step-down	12 to 50	5.1 to 40	2	up to 200	No
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
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
L4976	DIP-8, SO-16W	Step-down	8 to 55	0.5 to 50	1	up to 300	Yes
L4977A	MULTIWATT15	Step-down	12 to 50	5.1 to 40	7	up to 500	No
L4978	DIP-8, SO-16W	Step-down	8 to 55	3.3 to 50	2	up to 300	Yes
L5970AD	SO-8	Step-down	4.4 to 36	0.5 to 35	1	500	Yes
L5970D	SO-8	Step-down	4.4 to 36	0.5 to 35	1	250	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_{in}	0.7	250 adjustable up to 1 MHz	Yes
L5981	QFN8L (3x3)	Step-down	2.9 to 18	0.6 to V_{in}	1	250 adjustable up to 1 MHz	Yes
L5983	QFN8L (3x3)	Step-down	2.9 to 18	0.6 to V_{in}	2	250 adjustable up to 1 MHz	Yes
L5985	QFN8L (3x3)	Step-down	2.9 to 18	0.6 to V_{in}	2.5	250 adjustable up to 1 MHz	Yes
L5986	QFN8L (3x3)	Step-down	2.9 to 18	0.6 to V_{in}	2.5	250 adjustable up to 1 MHz	Yes
L5986A	HSOP8	Step-down	2.9 to 18	0.6 to V_{in}	2.5	250 adjustable up to 1 MHz	Yes
L5987	QFN8L (3x3)	Step-down	2.9 to 18	0.6 to V_{in}	3	250 adjustable up to 1 MHz	Yes
L5987A	HSOP8	Step-down	2.9 to 18	0.6 to V_{in}	3	250 adjustable up to 1 MHz	Yes
L6902D	SO-8	Step-down	8 to 36	0.5 to 34	Adjustable up to 1	250	No
L6920D	TSSOP8	Step-up	0.6 to 5.5	2 to 5.2	1 (input current limit)	up to 1000	Yes

DC-DC conversion

Part number	Package	Topology	V_{in} (V)	V_{out} (V)	Iout (A)	Switching frequency (kHz)	Disable pin
L6920DB	miniSO-8	Step-up	0.6 to 5.5	1.8 to 5.2	0.8 (input current limit)	up to 1000	Yes
L6925D	miniSO-8	Step-down	2.7 to 5.5	0.6 to 5.5	0.8	600	No
L6926	miniSO-8	Step-down	2 to 5.5	0.6 to 5.5	0.8	600	Yes
L6926Q1	QFN8L (3x3)	Step-down	2 to 5.5	0.6 to 5.5	0.8	600	Yes
L6928D	miniSO-8	Step-down	2 to 5.5	0.6 to 5.5	0.8	1400	Yes
L6928Q1	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_{in} (V)	V_{out} (V)	Iout (A)	Switching frequency (kHz)	Disable pin	Temperature range with guaranteed parameters (°C)	Operating junction temperature range (°C)
A5970D	SO-8	Step-down	4 to 36	0.5 to 35	1	250	Yes	-40 to +125	-40 to +150
A6902D	SO-8	Step-down	8 to 36	0.5 to 34	Adjustable up to 1	250	No	-40 to +125	-40 to +150
A5970AD	SO-8	Step-down	4 to 36	0.5 to 35	1	500	Yes	-40 to +125	-40 to +150
A5972D	SO-8	Step-down	4 to 36	1.23 to 35	1.5	250	No	-40 to +125	-40 to +150
A5973AD	HSOP8	Step-down	4 to 36	0.5 to 35	1.5	500	Yes	-40 to +125	-40 to +150
A5973D	HSOP8	Step-down	4 to 36	0.5 to 35	2	250	Yes	-40 to +125	-40 to +150
B5973D*	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_{in} (V)	V_{out} (V)	I_{out} (A)	Switching frequency (kHz)	Features
L6902D	SO-8	Switching	8 to 36	0.5 to 34	1	250	Adjustable current limit
L6924D	QFN16L (3x3)	Linear	2.5 to 12	4.1 or 4.2	up to 1	-	Disable pin
L6924U	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)
L6740L	HTQFP48	Hybrid AMD AM2, AM2+	4 + 1	12	12	130 + 30	-
L6756D	VFQFPN40	Intel VR10.x, VR11.1	4	12	12	130	-
L6750	VFQFPN48	Intel VR10.x, VR11.1	5	12	12	160	-
L6706	VFQFPN40	Intel VR10.x, VR11.1	1	12	12	30	-
L6716	VFQFPN48	Intel VR10.x, VR11.1	4	12	12	130	-
L6741	SO-8	Dual MOSFET driver for synchronous rectified converters	-	19	5 to 12	-	2
L6743D	SO-8		-	19	5 to 12	-	2
L6743Q	VFDFPN10		-	19	5 to 12	-	2
L6743B	VFDFPN8		-	19	5 to 12	-	2
L6747B	VFDFPN8	High-efficiency dual MOSFET driver for synchronous rectified converters	-	19	5 to 12	-	2
L6713A	HTQFP64	Intel VR11, AMD K8-6 bit	2. 3	5, 12	12	95	-
L6714	HTQFP64	Intel VR11, AMD K8-6 bit	4	5, 12	12	130	-
L6788A	QFN40L 6x6	AIB graphic processors	3	12	12	100	-

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

Part number	Package	Application	Phase number	Max input voltage bus (V)	Min output voltage (V)	Vcc (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 $R_{DS(on)}$ (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_{in} (V)	V_{out} PWM1 (V)	V_{out} PWM2 (V)	V_{out} PWM3 (V)	V_{out} LDO1 (V)	V_{out} LDO2 (V)	Fsw (kHz)	I_{out} PWM (A)	I_{out} LDO1 (mA)	I_{out} 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_{out} 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_{in} 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_{out} 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 28	0.7 to 5.5	0.7 to 2.5	-	5/3.3/0.7 to 4.5	-	200 to 500	up to 10	up to 200	-

DC-DC conversion - LED drivers

Part number	Package	Description	Application	Vin (V)	Vout (V)	Irows (mA)	Number of rows	Min dimming time	Max LEDs per row	Fsw (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
PM6602	QFN24(4x4)	Boost converter driving 8 Rows of LEDs with SMBUS interface and DPST		3.3 to 28	up to 36	30	8	500 ns	10 (white)	500 to 2000

Part number	Package	Description	Application	Vin (V)	Vout (V)	Irows (mA)	Number of rows	Min dimming time	Max LEDs per row	Fsw (kHz)
LED7706	QFN24 (4x4)	Boost converters driving 6 rows of LEDs	LCD panel backlight /lighting	4.5 to 36	up to 36	30	6	500 ns	10 (white)	200 to 1000
LED7707				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 $R_{DS(on)}$ (Ω)	I_{out} (mA)	DC-DC switch frequency (kHz)
PM8800A	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
TSM102	SO-16	2	2	2.5	0.4, 1	3 to 32	Yes	0.8	All independent inputs
TSM104W	DIP-18, SO-16	4	None	2.5	0.4, 1	3 to 32	Yes	1.4	All independent inputs
TSM106	SO-8	2	None	0.83	1	4 to 32	Yes	2.5	Non-inverting input of 1 op-amp @ V_{ref}
TSM107	SO-8	3	None	0.83	1, 60	3.8 to 32	Yes	2.5	Non-inverting input of the 3 op-amps @ V_{ref}
TSM109	DIP-8, SO-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
TSM111	SO-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) (µs)	V_{ref} (V)	V_{CC} (V)	Reset outputs	I_{CC} typ (mA)	Pulse width adjustable
TL7702A	SO-8, DIP-8	2.53	10	1	2.53	3.6 to 18	Reset and complementary	1.8	Yes
TL7705A	SO-8, DIP-8	4.55	15	1	2.53	3.6 to 18	reset	1.8	Yes

AC-DC conversion - synchronous rectification controllers

Part number	Package	Topology	Typical peak output current (A)	Operating frquency (kHz)	Inhibit blanking time (ns)	V_{CC} (V)	Disable	I_{CC} typ (mA)	Discontinous mode
STSR3	SO-8	Flyback	Source 2, sink 3.5	30 to 750	250	4 to 5.5	No	15	Yes
STSR30	SO-8	Flyback	Source-sink 1.5	20 to 500	700	4 to 5.5	Yes (I_{CC} = 15 µA)	3.2	Yes
STSR2	SO-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 (k)	Current sense	High-side mirror accuracy (typ) (%)	Low-side mirror accuracy (typ) (%)	V_{CC} (V)	Hysteresis on UVLO (mV)	I_{CC} typ (mA)	Adjustable max current (typ) (mA)
L6615	SO-8, DIP-8	32	High and low side	±1	±1	2.7 to 22	100	5	10

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

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

AC-DC conversion - PWM controllers

Part number	Package	Description	Topology	RoHS compliant	V_{CC} (V)	Quiescent current (mA)	Max duty cycle (%)	Oscillator frequency (kHz)
UC2842B	DIP-8, SO-8	Standard PWM controller	Buck, boost, buck-boost, flyback, forward (including 2-switch forward)	Yes	11 to 30	12	100	250
UC3842B	DIP-8, SO-8	Standard PWM controller			11 to 30	12	100	250
UC2843B	DIP-8, SO-8	Standard PWM controller			8.2 to 30	12	100	250
UC3843B	DIP-8, SO-8	Standard PWM controller			8.2 to 30	12	100	250
UC2844B	DIP-8, SO-8	Standard PWM controller			11 to 30	12	50	250
UC3844B	DIP-8, SO-8	Standard PWM controller			11 to 30	12	50	250
UC2845B	DIP-8, SO-8	Standard PWM controller			8.2 to 30	12	50	250
UC3845B	DIP-8, SO-8	Standard PWM controller			8.2 to 30	12	50	250
L5991	DIP-16, SO-16N	Advanced primary controller with standby			12 to 20	7	93	100
L5991A	DIP-16, SO-16N				12 to 20	7	93	100
L6668	SO-16N	Smart primary controller			9.4 to 22	2	75	100
L6566A/B	SO-16N	Multimode primary controller			8 to 23	2.5	70	300 max
L6591	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_{CC} (V)	Quiescent current (mA)	Max duty cycle (%)	Oscillator frequency (kHz)
SG2525	DIP-16, SO-16N	Standard PWM controller	2-switch forward, half-bridge	Yes	8 to 35	14	50	500
SG3525	DIP-16, SO-16N	Standard PWM controller		Yes	8 to 35	14	50	500
SG3524	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_{CC} (V)	Gate drive capability (mA)	Max duty cycle (mA)	Oscillator frequency
L6565	DIP-8, SO-8	Quasi-resonant SMPS controller	Buck, boost, buck-boost, flyback, forward (including 2-switch forward)	Yes	10.3 to 18	400	2.3	Frequency foldback
L6566A/B	SO-16N	Multimode primary controller		Yes	8 to 23	800	2.5	300 kHz

AC-DC conversion - resonant controllers

Part number	Package	Description	Topology	RoHS compliant	V_{CC} (V)	Gate drive capability (mA)	Quiescent current (mA)	Oscillator frequency (kHz)
L6598	DIP-16, SO-16N	High-voltage resonant controller	Resonant half-bridge	Yes	10.3 to 18	450	2	350
L6599A	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_{CC} (V)	Supply current (mA)	Gate drive capability (source/sink) (A)	Delay to output (ns)
L6561	DIP-8, SO-8	TM power factor corrector	Boost, flyback	Yes	11 to 18	4	0.7 / 0.7	450
L6562	DIP-8, SO-8	Improved TM power factor corrector	Boost, flyback	Yes	10.3 to 22	3.5	0.6 / 0.8	200
L6562A	DIP-8, SO-8	Enhanced TM power factor corrector	Boost, flyback	Yes	10.5 to 22.5	3.5	0.6 / 0.8	175
L6563, L6563A	SO-14N	Advanced TM power factor corrector	Boost, flyback	Yes	10.3 to 22	5.5	0.6 / 0.8	200
L4981A, L4981B	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 step-down PWM controllers

Part number	Package	V_{in} (V)	V_{CC} absolute (V)	V_{ref} (V)	I_{CC} 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_{DD} (V)		$R_{DS(on)}$ (Ω) max	I_{DLIM} (A) min	F_{SW} (KHz) typ	Switching frequency mode	Max duty cycle Typ	Topology	Current limiting mode	Stand-by mode
				min	max								
VIPER15HN	DIP-7	6	800	8.5	23.5	24	0.38	225 (upper limit)	Quasi-resonant (with upper limit)	-	Fly-back	Pulse	Burst mode
VIPER15LN	DIP-7	6	800	8.5	23.5	24	0.38	150 (upper limit)	Quasi-resonant (with upper limit)	-	Fly-back	Pulse	Burst mode
VIPER15HD	SO16N	6	800	8.5	23.5	24	0.38	225 (upper limit)	Quasi-resonant (with upper limit)	-	Fly-back	Pulse	Burst mode
VIPER15LD	SO16N	6	800	8.5	23.5	24	0.38	150 (upper limit)	Quasi-resonant (with upper limit)	-	Fly-back	Pulse	Burst mode
VIPER17LN	DIP-7	6	800	8.5	23.5	24	0.38	60	Fixed frequency (with Jittering)	70	Fly-back	Pulse	Burst mode
VIPER25HN	DIP-7	12	800	8.5	23.5	7	0.66	225 (upper limit)	Quasi-resonant (with upper limit)	-	Fly-back	Pulse	Burst mode
VIPER25LN	DIP-7	12	800	8.5	23.5	7	0.66	150 (upper limit)	Quasi-resonant (with upper limit)	-	Fly-back	Pulse	Burst mode
VIPER25HD	SO16N	12	800	8.5	23.5	7	0.66	225 (upper limit)	Quasi-resonant (with upper limit)	-	Fly-back	Pulse	Burst mode
VIPER25LD	SO16N	12	800	8.5	23.5	7	0.66	150 (upper limit)	Quasi-resonant (with upper limit)	-	Fly-back	Pulse	Burst mode
VIPER27HD	SO16N	12	800	8.5	23.5	7	0.66	115	Fixed frequency (with Jittering)	70	Fly-back	Pulse	Burst mode
VIPER27LD	SO16N	12	800	8.5	23.5	7	0.66	60	Fixed frequency (with Jittering)	70	Fly-back	Pulse	Burst mode

Part number	Package	Power capability (W) max	Drain source voltage (V) min	V_{DD} (V)		$R_{DS(on)}$ (Ω) max	I_{DLIM} (A) min	F_{SW} (KHz) typ	Switching frequency mode	Max duty cycle Typ	Topology	Current limiting mode	Stand-by mode
				min	max								
VIPER28LD	SO16N	18 (pk)	800	8.5	23.5	7	0.75	60	Fixed frequency (with Jittering)	70	Fly-back	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
VIPER16HN	DIP7	6	800	8.5	23.5	24	0.38	115	Fixed frequency (with jittering)	70	Buck, buck-boost, Flyback	Pulse	Burst mode
VIPER16HD	SO-16N	6	800	8.5	23.5	24	0.38	115	Fixed frequency	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
VIPER16LN	DIP7	6	800	8.5	23.5	24	0.38	60	Fixed frequency (with jittering)	70	Buck, buck-boost, Flyback	Pulse	Burst mode
VIPER17HN	DIP7	6	800	8.5	23.5	24	0.38	115	Fixed frequency (with jittering)	70	Flyback	Pulse	Burst mode
VIPER17HD	SO-16N	6	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
VIPER20A-E	PENTAWATT5	15	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
VIPER27HN	DIP7	12	800	8.5	23.5	7	0.66	115	Fixed frequency (with jittering)	70	Flyback	Pulse	Burst mode
VIPER27LN	DIP7	12	800	8.5	23.5	7	0.66	60	Fixed frequency (with jittering)	70	Flyback	Pulse	Burst mode

Part number	Package	Power capability (W) max	Drain source voltage (V) min	V_{DD} (V)		$R_{DS(on)}$ (Ω) max	I_{DLIM} (A) min	F_{SW} (KHz) typ	Switching frequency mode	Max duty cycle Typ	Topology	Current limiting mode	Stand-by mode
				min	max								
VIPER28LN	DIP7	18 (pk)	800	8.5	23.5	7	0.75	60	Fixed frequency (with jittering)	70	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
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
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
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
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
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
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

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