Industrial and power conversion ICs

Selection guide

October 2007

ASSP for motor control

Controllers

Part number	Package	Supply voltage [V]	Features	Stepping mode	Application
L297D	SO-20	5	PWM current controller, Stepper motor sequence generator, Enable input, Reset & home input	Full step, Half step, Wave mode	Stepper
L297	DIP-20	5			
L6506D	SO-20	5	PWM current controller, Enable pin, Sync pin	-	DC motor / stepper
L6506	DIP-18	5	PWM current controller, Enable pin, Sync pin	-	

Integrated power stages

Part number	Package	Description	Supply voltage range [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	DC and stepper 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	Stepper motor / DC motor
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	Supply voltage range [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, over current 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 over current protection, UVLO, Enanched 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, Over current protection, UVLO, Dual indipendent 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 over current protection, UVLO, Enanched 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 over current protection, UVLO, Enanched 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, Over current protection, UVLO Dual indipendent 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	Three 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 channels, Enhanced power package (PD)	Three phase motor driver
L6234PD	PowerSO-20	Three DMOS half bridge	7 to 52	2.8 each channel	0.3		

ASSP for motor control cont'd.

Drivers

Part number	Package	Description	Supply voltage range [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 over current protection, UVLO, Dual indipendent PWM current controller, Fast/slow decay mode selection, Decoding logic for stepper motor, Integrated fast freeweling diods	Full step, half step, Wave mode, Microstepping capability with two 90 ° sine wawe voltage input
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		

Part number	Package	Description	Supply voltage range [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 over current 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 freeweling diods
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	

MOSFET/ IGBT drivers

Triple low side drivers

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, Stand by mode, Channel paralleling capability
TD310IN	DIP-16	18		

Single drivers

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 optocouple, 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 optocouple
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		

High voltage 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 - 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		
L6386ED	SO-14	600	400 /-650	18	Internal 100 ns	Dual inputs, Integrated bootstrap diode, High side and Low side 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		

MOSFET/ IGBT drivers cont'd.

High voltage half bridge drivers

Part number	Package	Output voltage V_{out} [V]	Output source / sink current [mA]	V_{CC} [V]	Deadtime	Features
L6390	DIP-16	600	270 /-430	20	Adjustable (0.5 to 5 µSec)	Dual inputs out of phase, Integrated bootstrap diode, 3.3 V, 5 V, 15 V logic compatible, Interlocking logic for cross conduction prevention, Comparator for protections, OPAMP for advanced current sensing, Smart / Fast Shut Down internal block, Dedicated pin for external SD, Under voltage lock out on V_{Boot} and V_{CC}
L6390D	SO-16	600	270 /-430	20		
L6392	DIP-14	600	270 /-430	20		Dual inputs out of phase, Integrated bootstrap diode, 3.3 V, 5 V, 15 V logic compatible, Interlocking logic for cross conduction prevention, OPAMP for advanced current sensing, Dedicated pin for external SD, Under voltage lock out on V_{Boot} and V_{CC}
L6392D	SO-14	600	270 /-430	20		
L6393	DIP-14	600	270 /-430	20		Single input, Integrated bootstrap diode, 3.3 V, 5 V, 15 V logic compatible, Interlocking logic for cross conduction prevention, Comparator for protections, Dedicated pin for external SD, Under voltage lock out on V_{Boot} and V_{CC}
L6393D	SO-14	600	270 /-430	20		

Intelligent power switches

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	int. limit.	1
L6374FP	SO-20	10.8 to 35	40	4 x 4.000	0.1	int. limit.	4
L6375D	SO-20	8 to 35	40	0.400	0.5	int. limit.	1

L6375S	SO-8	8 to 35	40	0.400	0.5	int. limit.	1
L6376D	PowerSO-20	9.5 to 35	40	4 x 0.640	0.5	int. limit.	4
L6377D	SO-14	8 to 35	40	0.400	0.5	int. limit.	1
TDE1707BFP	SO-8	6 to 48	50	-	0.5	int. limit.	1
TDE1708DFT	DFN8L (4x4)	6 to 48	50	-	0.3	int. limit.	1
TDE1737DP	DIP-8	8 to 45	50	-	0.5	int. limit.	1
TDE1737FP	SO-14	8 to 45	50	-	0.5	int. limit.	1
TDE1747DP	DIP-8	10 to 45	50	-	0.5	int. limit.	1
TDE1747FP	SO-14	10 to 45	50	-	0.5	int. limit.	1
TDE1767ADP	DIP-8	6 to 55	60	-	0.5	int. limit.	1
TDE1767DP	DIP-8	6 to 45	50	-	0.5	int. limit.	1
TDE1787ADP	DIP-8	6 to 55	60	-	0.3	int. limit.	1
TDE1787DP	DIP-8	6 to 45	50	-	0.3	int. limit.	1
TDE1798DP	DIP-8	6 to 35	50	-	0.5	int. limit.	1
TDE1897CDP	DIP-8	18 to 35	50	0.400	0.5	int. limit.	1
TDE1897RDP	DIP-8	18 to 35	50	0.400	0.5	int. limit.	1
TDE1898CDP	DIP-8	18 to 35	50	0.400	0.5	int. limit.	1
TDE1898CFP	SO-20	18 to 35	50	0.400	0.5	int. limit.	1
TDE1898RDP	DIP-8	18 to 36	50	0.400	0.5	int. limit.	1
TDE3247FP	SO-14	8 to 30	36	-	0.25	int. limit.	1
VN330SP-32-E	PowerSO-10	10 to 36	45	4 x 0.200	1	int. limit.	4
VN330SP-E	PowerSO-10	10 to 36	45	4 x 0.200	0.7	int. limit.	4
VN340SP-33-E	PowerSO-10	10 to 36	45	4 x 0.200	1	int. limit.	4
VN340SP-E	PowerSO-10	10 to 36	45	4 x 0.200	0.7	int. limit.	4
VN540-12-E	PENTAWATT	10 to 36	45	0.050	2.8	int. limit.	1
VN540-E	PENTAWATT	10 to 36	45	0.050	2.8	int. limit.	1
VN540SP-E	PowerSO-10	10 to 36	45	0.050	2.8	int. limit.	1
VN751PT	PPAK	5.5 to 36	41	0.060	2.5	int. limit.	1
VN751S	SO-8	5.5 to 36	41	0.060	2.5	int. limit.	8
VN808CM-E	PowerSO-36	10.5 to 36	41	8 x 0.160	0.7	int. limit.	8
VN808-E	PowerSO-36	10.5 to 36	41	8 x 0.150	0.7	int. limit.	8
VN808SR	PowerSO-36	10.5 to 36	41	8 x 0.150	0.7	int. limit.	8
VNQ860-E	SO-20	5.5 to 36	41	4 x 0.270	0.25	int. limit.	4
VNQ860SP-E	PowerSO-10	5.5 to 36	41	4 x 0.270	0.25	int. limit.	4
VNI2140J	PowerSSO-12	9 to 36	45	2 x 0.08	0.7	int. limit.	2
VNI4140K	PowerSSO-24	10.5 to 36	41	4 x 0.08	0.7	int. limit.	4
VNI8200XP	PowerSSO-36	10.5 to 36	45	8 x 0.11	0.7	int. limit.	8

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 mVrms	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 mVrms	No	No	7.5 to 13.5

Proximity 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

Switching regulators

Part number	Package	Topology	V_{in} [V]	V_{out} [V]	I_{pk} [A]	Switching frequency [kHz]	Disable pin
L296	MULTIWATT15	Step-down	9 to 46	5.1 to 40	4.5	up to 200	Y
L4960	HEPTAWATT7	Step-down	9 to 46	5.1 to 40	3	up to 200	N
L4962	HEPTAWATT8, DIP-16	Step-down	9 to 46	5.1 to 40	2	up to 200	Y
L4963	DIP-18, SO-20	Step-down	9 to 46	5.1 to 40	3.5	free running	N
L4970A	MULTIWATT15	Step-down	12 to 50	5.1 to 50	13	up to 500	N
L4972A	DIP-20, SO-20	Step-down	12 to 50	5.1 to 50	2.8	up to 200	N
L4974A	MULTIWATT15	Step-down	12 to 50	5.1 to 40	4.75	up to 200	N
L4975A	MULTIWATT15	Step-down	12 to 50	5.1 to 40	6.5	up to 500	N
L4977A	MULTIWATT15	Step-down	12 to 50	5.1 to 40	9.5	up to 500	N
L4976	DIP-8, SO-16W	Step-down	8 to 55	0.5 to 50	2	up to 300	Y
L4971	DIP-8, SO-16W	Step-down	8 to 55	3.3 to 50	2.5	up to 300	Y

L4978	DIP-8, SO-16W	Step-down	8 to 55	3.3 to 50	3	up to 300	Y
L4973D3.3	DIP-8, SO-16W	Step-down	8 to 55	0.5 to 50	4.5	up to 300	Y
L4973D5.1	DIP-8, SO-16W	Step-down	8 to 55	5.1 to 50	4.5	up to 300	Y
L5970D	SO-8	Step-down	4.4 to 36	0.5 to 35	1.5	250	Y
L6902D	SO-8	Step-down	8 to 36	0.5 to 34	Adjustable up to 1	250	N
L5970AD	SO-8	Step-down	4.4 to 36	0.5 to 35	1.5	500	Y
L5972D	SO-8	Step-down	4.4 to 36	1.23 to 35	2	250	N
L5973AD	HSOP8	Step-down	4 to 36	0.5 to 35	2	500	Y
L5973D	HSOP8	Step-down	4 to 36	0.5 to 35	2.5	250	Y
L5980	QFN8L (3x3)	Step-down	2.9 to 18	0.6 to V_{in}	1	250 adjustable up to 1 MHz	Y
L5981	QFN8L (3x3)	Step-down	2.9 to 18	0.6 to V_{in}	1.5	250 adjustable up to 1 MHz	Y
L5983	QFN8L (3x3)	Step-down	2.9 to 18	0.6 to V_{in}	2	250 adjustable up to 1 MHz	Y
L5985	QFN8L (3x3)	Step-down	2.9 to 18	0.6 to V_{in}	2.5	250 adjustable up to 1 MHz	Y
L6920D	TSSOP8	Step-up	0.6 to 5.5	2 to 5.2	1	up to 1000	Y
L6920DB	miniSO-8	Step-up	0.6 to 5.5	1.8 to 5.2	0.8	up to 1000	Y
L6925D	miniSO-8	Step-down	2.7 to 5.5	0.6 to 5.5	1.2	600	N
L6926	miniSO-8	Step-down	2 to 5.5	0.6 to 5.5	1.2	600	Y
L6926D1	VFSON8	Step-down	2 to 5.5	0.6 to 5.5	1.2	600	Y
L6926Q1	QFN8L (3x3)	Step-down	2 to 5.5	0.6 to 5.5	1.2	600	Y
L6928D	miniSO-8	Step-down	2 to 5.5	0.6 to 5.5	1.2	1400	Y
L6928Q1	QFN8L (3x3)	Step-down	2 to 5.5	0.6 to 5.5	1.2	1400	Y

Switching regulators for automotive

Part number	Package	Topology	V_{in} [V]	V_{out} [V]	I_{pk} [A]	Switching frequency [kHz]	Disable pin	Operating ambient temperature [°C]	Tj max [°C]
A5970D	SO-8	Step-down	4.4 to 36	0.5 to 35	1.5	250	Y	-40 to +85	150
A6902D	SO-8	Step-down	8 to 36	0.5 to 34	Adjustable up to 1	250	N	-40 to +85	150
A5970AD	SO-8	Step-down	4.4 to 36	0.5 to 35	1.5	500	Y	-40 to +85	150
A5972D	SO-8	Step-down	4.4 to 36	1.23 to 35	2	250	N	-40 to +85	150
A5973AD	HSOP8	Step-down	4 to 36	0.5 to 35	2	500	Y	-40 to +85	150
A5973D	HSOP8	Step-down	4 to 36	0.5 to 35	2.5	250	Y	-40 to +85	150
B5973D	HSOP8	Step-down	4 to 36	0.5 to 36	2.5	250	Y	-40 to +125	150

Battery management ICs

Part number	Package	Category	V$_{in}$ [V]	V$_{out}$ [V]	I$_{out}$ [A]	Switching frequency [kHz]	Disable pin
L6902D	SO-8	Switching	8 to 36	0.5 to 34	1	250	N
L6924D	QFN16L (3x3)	Linear	2.5 to 12	4.1 or 4.2	up to 1	-	Y

Multi-output regulators

Multi-output step-down controller

Part number	Package	Description	Application	V$_{in}$ [V]	V$_{out}$ PWM1 [V]	V$_{out}$ PWM2 [V]	V$_{out}$ PWM3 [V]	V$_{out}$ LD01 [V]	V$_{out}$ LD02 [V]	F$_{SW}$ [kHz]	I$_{out}$ PWM [A]	I$_{out}$ LD01 [mA]	I$_{out}$ LD02 [mA]
PM6685	QFN32 (5x5)	4 Output controller for notebook system power	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 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	-
PM6670	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	-
PM6675	QFN24 (4x4)	High efficiency step down controller with embedded 2A LDO regulator		4.5 to 28	0.6 to 3.3	-	-	0.6-2	-	200 to 500	up to 10	up to ±2000	-
PM6681	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	-
PM6670A	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	-
PM6675A	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	-

Backlight driver

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]	F_{SW} [kHz]	I_{out} PWM [A]	I_{out} LDO1 [mA]	I_{out} LDO2 [mA]
PM6600	QFN24 (4x4)	LED driver	LCD panel backlight	4.5 to 28	up to 36	-	-	5	-	200 to 1000	up to 2	up to 40	-

Lighting ICs

High voltage half bridge drivers for analog platform

Part number	Package	Description	High side reference 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 ballast driver with preheat 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	Combo IC for PFC and ballast control	600	250	-	13.3	14.3	15	9.6	10.3	11	16.2	17.2	17.7	480/290 (HB)

High voltage half bridge drivers for digital platform

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

Electronic drivers for CFL application

Part number	Package	Description	B_v [V]	I_{crms} [A]	I_{peak} [A]
VK05	SO-8	Electronic driver for CFL application	520	0.25	1.5

Computer power management ICs

CPU - PWM controllers

Part number	Package	Application	Phase number	Max input voltage bus [V]	Supply voltage bus [V]	Max output current [A]	Ipeak [A]
L6740L	HTQFP48	Hybrid AMD AM2, AM2+	4 + 1	12	12	130 + 30	-
L6755	VFQFPN40	Intel VR10.x, VR11	4	12	12	130	-
L6756	VFQFPN40	Intel VR10.x, VR11.1	4	12	12	130	-
L6750	VFQFPN48	Intel VR10.x, VR11.1	5	12	12	160	-
L6716	HTQFP48	Intel VR10.x, VR11.1	4	12	12	130	-
L6741	SO-8	Dual MOSFET driver for synchronous rectified converters	-	19	5 to 12	-	2
L6743	SO-8	Dual MOSFET driver for synchronous rectified converters	-	19	5 to 12	-	2
L6743Q	DFN10	Dual MOSFET driver for synchronous rectified converters	-	19	5 to 12	-	2
L6701	PowerSSO-36	Intel VR9, VR10.x, AMD K8	3	5, 12	12	95	-
L6711	HTQFP48	Intel VR10.x, AMD K8	3	5, 12	12	95	-
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	-
L6917B	SO-28	Intel VR9	2	5, 12	12	70	-
L6919E	SO-28	AMD K8	2	5, 12	12	70	-
L6911C	SO-20	Intel VR8.4	1	3.3, 5.12	5, 12	35	-
L6911D	SO-20	Intel VR9	1	3.3, 5.12	5, 12	35	-
L6911E	SO-20	Intel VR8.5	1	3.3, 5.12	5, 12	35	-

Non CPU high density PWM controllers

Part number	Package	Application	Phase number	Max input voltage bus [V]	Min output voltage [V]	Supply voltage [V]	Max output current [A]
L6725/A	SO-16N		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	Power modules, server, networking equipment	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
L6997S	TSSOP20		1	35	0.6	3 to 5.5	30
L6712	VFQFPN36		2	12	0.9	12	60
L6722	VFQFPN36		3	12	0.8	12	90

Smart regulators

Part number	Package	Application	Intput voltage [V]	Output voltage [V]	Max output current [V]	Max $R_{DS(on)}$ [mΩ]
L6935	VFQFPN20		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	Power modules, server, networking equipment	2 to 14	1.2 to 5	2	200
L6932H	HSOP8		2 to 14	1.2 to 5	2	200
L4957A	D^{2}PAK		3 to 14	1.5 to 3.3	5	300

Power over ethernet

Integrated powered device

Part number	Package	Description	Supported topology	Max abs rating [V]	Hot-swap $R_{DS(on)}$ [Ω]	max DC current [mA]	DC-DC switch freq [kHz]
PM8800A	HTSSOP16	Integrated PD for standard and high power PoE application	Flyback, forward, buck	100	0.5	800	100 to 700

Off-Line power supply ICs

Current mode PWM controllers

Part number	Package	Description	Topology	R_{oHS} compliant	V_{CC} range [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 fwd)	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 stand-by			12 to 20	7	93	100
L5991A	DIP-16, SO-16N				12 to 20	7	93	100
L6668	SaO-16N	Smart primary controller			9.4 to 22	2	75	100
L6566A/B	SaO-16N	Multimode primary controller			8 to 23	2.5	70	300 max

Voltage mode PWM controllers

Part number	Package	Description	Topology	R_{oHS} compliant	V_{CC} range [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

Quasi resonant controllers

Part number	Package	Description	Topology	R_{oHS} compliant	V_{CC} range [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 fwd)	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

Off-Line power supply ICs cont'd.

Resonant controllers

Part number	Package	Description	Topology	R$_{oHS}$ compliant	V$_{CC}$ range [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
L6599	DIP-16, SO-16N	High voltage improved resonant controller	Resonant half-bridge	Yes	8.85 to 16	800	1.5	500

Power factor correctors

Part number	Package	Description	Topology	R$_{oHS}$ compliant	V$_{CC}$ range [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	-

CC/CV controllers

Part Number	Package	V$_{ref}$ [V]	V$_{ref}$ precision [%]	V$_{CC}$ range [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	

CC/CV 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 mSec)	2.52	4	Y

High voltage converters

Part number	Package	Power capability [V] max	Drain source voltage [V] min	V_{CC} [V] min	V_{CC} [V] max	$R_{DS(on)}$ [Ω] max	I_0 [A] min	F_{SW} [KHz] typ	Switching frequency mode	Max duty cycle Typ	Topology	Current limiting mode	Stand-by mode
VIPer100-E	PENTAWATT5	60	620	9	15	2.5	3	up to 200	Fixed frequency (settable)	90	Buck-boost, fly-back	Pulse	Burst mode
VIPer100A-E	PENTAWATT5	60	700	9	15	2.8	3	up to 200	Fixed frequency (settable)	90	Buck-boost, fly-back	Pulse	Burst mode
VIPer100ASP-E	PowerSO-10	60	700	9	15	2.8	3	up to 200	Fixed frequency (settable)	90	Buck-boost, fly-back	Pulse	Burst mode
VIPer50-E	PENTAWATT5	40	620	9	15	5	1.5	up to 200	Fixed frequency (settable)	90	Buck-boost, fly-back	Pulse	Burst mode
VIPer50A-E	PENTAWATT5	40	700	9	15	5.7	1.5	up to 200	Fixed frequency (settable)	90	Buck-boost, fly-back	Pulse	Burst mode
VIPer50ASP-E	PowerSO-10	40	700	9	15	5.7	1.5	up to 200	Fixed frequency (settable)	90	Buck-boost, fly-back	Pulse	Burst mode
VIPer20-E	PENTAWATT5	15	620	9	15	16	0.5	up to 200	Fixed frequency (settable)	90	Buck-boost, buck, fly-back	Pulse	Burst mode
VIPer20DIP-E	DIP-8	12	620	9	15	16	0.5	up to 200	Fixed frequency (settable)	90	Buck-boost, buck, fly-back	Pulse	Burst mode
VIPer20A-E	PENTAWATT5	15	700	9	15	18	0.5	up to 200	Fixed frequency (settable)	90	Buck-boost, buck, fly-back	Pulse	Burst mode
VIPer20ASP-E	PowerSO-10	18	700	9	15	18	0.5	up to 200	Fixed frequency (settable)	90	Buck-boost, buck, fly-back	Pulse	Burst mode
VIPer20ADIP-E	DIP-8	12	700	9	15	18	0.5	up to 200	Fixed frequency (settable)	90	Buck-boost, buck, fly-back	Pulse	Burst mode
VIPer53SP-E	PowerSO-10	40	620	9.3	17	1	1.6	up to 300	Fixed frequency (settable)	90	Buck-boost, fly-back	Pulse	Burst mode
VIPer53DIP-E	DIP-8	30	620	9.3	17	1	1.6	up to 300	Fixed frequency (settable)	90	Buck-boost, fly-back	Pulse	Burst mode
VIPer53ESP-E	PowerSO-10	40	620	9.3	17	1	1.6	up to 300	Fixed frequency (settable)	90	Buck-boost, fly-back	Pulse	Burst mode
VIPer53EDIP-E	DIP-8	30	620	9.3	17	1	1.6	up to 300	Fixed frequency (settable)	90	Buck-boost, fly-back	Pulse	Burst mode
VIPer22AS-E	SO-8	7	730	9	38	17	0.56	60	Fixed frequency	90	Buck-boost, buck, fly-back	Pulse	Burst mode
VIPer22ADIP-E	DIP-8	12	730	9	38	17	0.56	60	Fixed frequency	90	Buck-boost, buck, fly-back	Pulse	Burst mode
VIPer12AS-E	SO-8	5	730	9	38	30	0.32	60	Fixed frequency	90	Buck-boost, buck, fly-back	Pulse	Burst mode
VIPer12ADIP-E	DIP-8	8	730	9	38	30	0.32	60	Fixed frequency	90	Buck-boost, buck, fly-back	Pulse	Burst mode

Housekeeping and supervisor ICs

Part number	Package	Nr. Of op-amp	Nr. Of comparators	V_{ref} [V]	V_{ref} precision [%]	V_{CC} range [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-amp @ 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	Over voltage monitored lines [V]	Under voltage monitored lines [V]	Over current monitored lines	V_{ref} [V]	V_{CC} range [V]	OPTO drive	I_{CC} typ [mA]	Adj. 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
TSM114	SO-14, DIP-14	3.3, 5, ±12	3.3, ±5, ±12	Na	1.25	4.2 to 24	Na	8	Tuv Tpg Trem
TSM115	DIP-20	3.3, 5, ±12	3.3, ± 5, ± 12	3.3, 5, 2∗12	Na	3 to 15	Na	1	Tuv 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} range [V]	Reset otputs	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 RESET	1.8	Yes
TL7705A	SO-8, DIP-8	4.55	15	1	2.53	3.6 to 18		1.8	Yes

Secondary synchronous rectification

Part number	Package	Topology	Typical peak output current [A]	Operating frquency [kHz]	Inhibit blanking time [ns]	V_{CC} range [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

Load sharing

Part number	Package	Sense amplifier input resistance [kΩ]	Current sense	High side mirror accuracy (typ) [%]	Low side mirror accuracy (typ) [%]	V_{CC} range [V]	Hysteresis on UVLO [mV]	I_{CC} typ [mA]	ADJ max current (typ) [mA]
L6615	SO-8, DIP-8	32	High and low side	±1	±1	2.7 to 22	100	5	10

For selected STMicroelectronics sales offices fax:
China +86 21 34054689; France +33 1 55489569; Germany +49 89 4605454; Italy +39 02 8250449; Japan +81 3 57838216;
Singapore +65 6481 5124; Sweden +46 8 58774411; Switzerland +41 22 9292900; United Kingdom and Eire +44 1628 890391;
USA +1 781 861 2678
Full product information at www.st.com

Order code: SGIPC1007

Recycled and chlorine free paper