



The Future of Analog IC Technology®

PRODUCT SELECTOR GUIDE

POWER MANAGEMENT SOLUTIONS FOR WORLDWIDE APPLICATIONS

MPS' Key Differentiations

Technology!

- ~ BiCMOS / DMOS (BCD)
- ~ 100% of Products Run on Our Process
- ~ MPS Industry Leading Proprietary Process

Market Differentiators

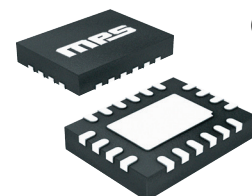
- ~ Superior Performance
- ~ Lower Cost
- ~ Higher Integration

Quality Assurance

- ~ MPS Quality System is Certified to ISO9001:2008 and ISO/TS16949 Standards
- ~ Automotive Products Qualified per AEC-Q100 Standard
- ~ PQA Process – Containment, Root Cause and Corrective Action
- ~ Europe RoHS & Reach Compliant; Sony Green Partner
- ~ Partners are TS16949 and ISL14001 Certified
- ~ Our AOQ is <1 ppm;
5 FIT (Ta= 125 C, Ev=0.7eV, CL=60%)



Monolithic Power Systems, Inc.



Q1 2013

SWITCHING POWER SUPPLY REGULATORS

DC/DC (STEP-DOWN) SYNCHRONOUS SWITCHERS

Part Number	V _{IN} (Min) (V)	V _{IN} (Max) (V)	I _{OUT} (A)	I _{SW} Limit (Typ) (A)	I _Q (Typ) (mA)	V _{FB} (V)	Switching Freq (kHz)	Soft Start	Ext Sync	Notes	Package	
Maximum Operating Input Voltage 1.1V ≤ V_{IN} ≤ 7V												
NEW	MPM3805	2.5	6	0.5	1.4	0.017	0.6	3500	Internal	-	3.5MHz, COT, 17µA I _q , PG with High Light-Load Efficiency and Integrated Inductor (Fewer External Components Needed)	QFN12 (3x2.5)
	MP28119	2.5	6	0.6	1.6	0.4	0.6	1700	Internal	-	Fixed (1.0V) and Adj. Output Options, Output Discharge, Internal Comp	QFN8 (2x2)
	MP2104	2.5	6	0.6	1	0.4	0.6	1700	-	-	Fixed (1.5V and 1.8V) and Adj. Output Options (0.6V to 6V)	TSOT23-5 TQFN-6
	MP28114	2.5	6	0.6	1	0.4	0.6	1700	Internal	-	Fixed (1.5V, 1.8V, 3.3V) and Adj. Output Voltage (0.6V to 6V)	QFN8 (2x2)
	MP2105	2.5	6	0.8	1.6	0.4	0.6	1000	-	-	Up to 95% Efficiency, Internal Comp., Adj. Output Voltage (0.6V to 6V)	TSOT23-5
	MP2109	2.5	6	0.8 (2x)	1.3	0.4	0.6	1240	-	-	Dual Output, Adj. Output Voltage (0.6V to 6V)	QFN10 (3x3)
	MP2128	2.5	6	1.0	1.5	0.35	0.594	3000	Internal	-	3MHz Sync Buck	SOT23 QFN8 (2x2)
AEC-Q100	MPQ2128	2.5	6	1.0	1.5	0.35	0.594	3000	Internal	-	3MHz Sync Buck, Available in AEC-Q100 and Industrial Grade	SOT23 QFN8 (2x2)
	MP2136	2.5	6	1.0	1.5	0.05	0.594	2000	Internal	-	2MHz Sync Buck with up to 95% Eff, p2p RT8010	QFN6 (2x2)
	MP2158	2.5	6	1.0	2	0.017	0.6	1500	Internal	-	1.5MHz, COT, 17µA I _q , PG with High Light-Load Efficiency and Good Transient Performance	QFN (2x1.5)
	MP2159	2.5	6	1.0	2	0.017	0.6	1500	Internal	-	1.5MHz, COT, 17µA I _q , PG with High Light-Load Efficiency and Good Transient Performance	TSOT23-8
NEW	MPM3810	2.5	6	1.2	2.1	0.017	0.6	3500	Internal	-	3.5MHz, COT, 17µA I _q , PG with High Light-Load Efficiency and Integrated Inductor (Fewer External Components Needed)	QFN12 (3x2.5)
NEW	MP2144	2.5	5.5	2.0	3.3 (Min)	0.04	0.6	COT	Internal	-	40µA I _q , High Efficiency, 90mΩ/60mΩ R _{ds(on)} , PG, +/-1.5% V _{fb} , Fast Transient Response	TSOT23-8
NEW	MP2161	2.5	6	2.0	3.2	0.017	0.6	1500	Internal	-	1.5MHz, COT, 17µA I _q , PG with High Light-Load Efficiency and Good Transient Performance	TSOT23-8
NEW	MP2162	2.5	6	2.0	3.2	0.017	0.6	1500	Internal	-	1.5MHz, COT, 17µA I _q , PG with High Light-Load Efficiency and Good Transient Performance	QFN (2x1.5)
	MP2143	2.5	5.5	3.0	4.8	0.04	0.6	COT	Internal	-	40µA I _q , High Efficiency, 80mΩ/40mΩ R _{ds(on)} , PG, ±1.5% V _{fb} , Fast Transient Response	TSOT23-8
	MP2130	2.7	6	3.5	4.5	0.04	0.6	COT	Internal	-	40µA I _q , High Efficiency, 50mΩ/40mΩ R _{ds(on)} , PG, ±1.5% V _{fb} , Fast Transient Response	QFN10 (2x2)
	MP38115	1.1	5.5	4.0	6.5	0.75	0.8	1500	Internal	√	1.1V to 5.5V, 1.5MHz, 4A Sync Buck with Power Good Output	QFN10 (3x3)
	MP8606	2.9	6.5	6.0	10	0.82	0.6	COT	External	-	High Efficiency, 14mΩ/8mΩ R _{ds(on)} , PG, SS, ±1% V _{fb} , Fast Transient Response Supports Pre-Bias Conditions	QFN18 (3x4)
NEW	MPQ8616-6	3	6	6.0	12	1.05	0.61	COT/Programmable	External	-	High Efficiency, 6A, 6V Synchronous Step-down Converter for Server/Telecom Market	QFN14 (3x4)
NEW	MPQ8616-12	3	6	12	23	1.05	0.61	COT/Programmable	External	-	High Efficiency, 12A, 6V Synchronous Step-down Converter for Server/Telecom Market	QFN14 (3x4)
NEW	MPQ8612-12	3	6	12	21	1.1	0.608	COT/Programmable	External	-	High Efficiency, 12A, 6V Synchronous Step-down Converter for Server/Telecom Market	QFN13 (3x4)
Maximum Operating Input Voltage ≤ 28V												
	MP2309	4.75	23	1.0	2	1.3	0.923	340	External	-	4.75V to 23V, 340kHz, 1A Sync Buck with External SS and External Comp	SOIC8
NEW	MP1469	4.7	16	1.5	3	0.83	0.8	500	Internal	-	High Efficiency, 1.5A, 16V, 500kHz Sync Buck with Built-in AAM (Light-Load Mode)	TSOT23-6
NEW	MP1470	4.7	16	2.0	3.7	0.83	0.8	500	Internal	-	High Efficiency, 2A, 16V, 500kHz Sync Buck with Built-in AAM (Light-Load Mode)	TSOT23-6
	MP2305S	4.75	23	2.0	3.4	1.3	0.923	340	External	-	4.75V to 23V, 340kHz, 2A Sync Buck with External SS and External Comp	SOIC8
	MP1472	4.75	18	2.0	4.1	1.3	0.923	340	External	-	4.75V to 18V, 340kHz, 2A Sync Buck, Low Cost	TSOT23-8
	MP1474	4.5	16	2.0	3 (Min)	0.5	0.807	500	Internal	√	High Efficiency, 100mΩ/40mΩ R _{ds(on)} , PG, Built-In AAM (Light-Load Mode), ±2% V _{fb}	TSOT23-8
	MP1492 MP1492-A	4.2	16	2.0	3 (Min)	1	0.805	COT	Internal	-	High Efficiency, 120mΩ/70mΩ R _{ds(on)} , ±2% V _{fb} , Fast Transient Response, Latch-Off or Hiccup OCP (MP1492-A)	SOIC8
	MP1494	4.5	16	2.0	3	0.5	0.8	500	Internal	√	High-Efficiency, 100mΩ/40mΩ R _{ds(on)} , with AAM (Light-Load Mode), ±2% V _{fb}	TSOT23-8
	MP1496	4.5	16	2.0	3	0.7	0.807	500	External	√	High-Efficiency, 100mΩ/40mΩ R _{ds(on)} , SS, ±2% V _{fb}	TSOT23-8
	MP1498	4.5	16	2.0	5	0.7	0.807	1400	External	√	High-Efficiency, 2A, Fixed 1.4MHz Frequency, with Ext. SS and Sync	TSOT23-8
	MP28259 MP28259-A	4.2	20	2.0	3 (Min)	0.36	0.815	COT	Internal	-	High-Efficiency, 130mΩ/80mΩ R _{ds(on)} , PG, ±1% V _{fb} , Fast Transient Response, Latch-Off or Hiccup OCP (MP28259-A)	QFN12 (2x3)
NEW	MP2314	4.5	24	2.0	4	0.17	0.788	500	Internal	√	High-Efficiency, 2A, Fixed 500kHz Frequency, with AAM and Sync	TSOT23-8
NEW	MP1471	4.7	16	3.0	4.2	0.83	0.8	500	Internal	-	High Efficiency, 3A peak, 16V, 500kHz Sync with Built-In AAM (Light-Load Mode)	TSOT23-6
	MP2233	4.5	16	3.0	5	0.7	0.807	1400	External	√	High-Efficiency, 3A, Fixed 1.4MHz Frequency, with Ext. SS and Sync	TSOT23-8
	MP1475	4.5	16	3.0	3 (Min)	0.5	0.807	500	Internal	√	High Efficiency, 80mΩ/30mΩ R _{ds(on)} , PG, Built-In AAM (Light-Load Mode), ±2% V _{fb}	TSOT23-8
	MP1493 MP1493-A	4.2	16	3.0	5	1	0.805	COT	Internal	-	High Eff, 120mΩ/60mΩ R _{ds(on)} , ±2% V _{fb} , Fast Trans Response, Latch-Off or Hiccup OCP (MP1493-A)	SOIC8
	MP1495	4.5	16	3.0	5	0.5	0.8	500	Internal	√	High Eff, 80mΩ/30mΩ R _{ds(on)} , AAM (LL Mode) ±2% V _{fb}	TSOT23-8

SWITCHING POWER SUPPLY REGULATORS

DC/DC (STEP-DOWN) SYNCHRONOUS SWITCHERS

Part Number	V _{IN} (Min) (V)	V _{IN} (Max) (V)	I _{OUT} (A)	I _{sw} Limit (Typ) (A)	I _Q (Typ) (mA)	V _{FB} (V)	Switching Freq (kHz)	Soft Start	Ext Sync	Notes	Package
Maximum Operating Input Voltage ≤28V (continued)											
MP1497	4.5	16	3.0	5	0.7	0.807	500	External	√	High Efficiency, 80mΩ/30mΩ Rds(on), SS ±2% Vfb	TSOT23-8
MP28248	4.2	20	3.0	5	0.44	0.815	COT	External	-	High Efficiency, 120mΩ/50mΩ Rds(on), ±1% Vfb, SS, Fast Transient Response, Hiccup OCP	QFN12 (2x3)
MP28256	4.5	21	3.0	4.2	0.7	0.6	500	External	√	120/20 mΩ Rds(on), ±2% Vfb Separate EN and SYNC Pins, 300kHz-2MHz Sync Freq	QFN14 (3x4)
MP28266	6	21	3.0	5.5	0.6	0.603	500	External	√	120/20 mΩ Rds(on), ±2% Vfb, AAM (LL Mode) Separate EN and SYNC Pins, 300kHz-2MHz Sync Freq	QFN14 (3x4)
MP9181	4.5	20	3.0	5	0.36	0.815	COT	Internal	-	High Efficiency, 120mΩ/50mΩ Rds(on), ±1% Vfb, PG, Fast Transient Response, Hiccup OCP	QFN12 (2x3)
NEW MP2315	4.5	24	3.0	6.6	0.17	0.788	500	Internal	√	High-Efficiency, 3A, Fixed 500kHz Frequency, with AAM and Sync	TSOT23-8
MP28258	4.2	20	3.0	5	0.36	0.815	COT	Internal	-	High Efficiency, 120mΩ/50mΩ Rds(on), ±1% Vfb, PG, Fast Transient Response, Hiccup OCP	QFN12 (2x3)
MP2307	4.8	23	3.0	5.8	1.3	0.923	340	External	-	4.75V to 23V, 340kHz, 3A Sync Buck with External SS and External Comp.	SOIC8E
MP2303A	4.7	28	3.0	6.0	1.45	0.8	360	External	-	4.7V to 28V, 360kHz, 3A Sync Buck with External SS and External Comp.	SOIC8E
MP1499	4.5	16	4.0	9	0.6	0.807	500	External	√	5A Peak, 16V, Internal AAM, Ext. SS	QFN10 (2x3)
MP2308	4.8	18	4.0	5.6	1	0.815	Programmable	External	-	4A, High Efficiency Sync Buck, 60mΩ/30mΩ Rds(on), External SS, ±1.8% Vfb, Adj Fsw	QFN14 (2x3)
NEW MPQ8632-4	4.5	18	4.0	5	0.86	0.611	COT/Programmable	External	-	Fully Integrated, 4A, 18V, COT, Sync Buck Regulator for Server/Telecom Market	QFN13 (3x4)
MP28251	4.8	20	4.0	5.6	1	0.815	Programmable	External	√	High Efficiency, 60mΩ/30mΩ Rds(on), Low Power Mode, Programmable En Delay, ±1.8% Vfb, Ext Sync	QFN14 (2x3)
NEW MP9151	4.5	20	4.0	7	0.7	0.795	Programmable	External	-	High Efficiency, 60mΩ/30mΩ Rds(on), PG, SS, ±2% Vfb	QFN14 (2x3)
MP8715	4.5	21	4.0	7.0	0.66	0.805	500	External	√	100% Duty Cycle, 4A, 21V, 500kHz Synchronous Step-Down Converter	SOIC8E
MP8725	4.5	21	5.0	6	0.7	0.808	500	Internal	√	Monolithic High Voltage, High Efficiency, Step-Down with 20mΩ LS Rds(on)	QFN14 (3x4)
MP28265	4.5	21	5.0	6.0	0.7	0.81	1100	Internal	√	5V to 21V, 1.1MHz, 5A Sync Buck with Power Good Output and Internal Comp	QFN14 (3x4)
NEW MP8760	4.2	18	6.0	10	0.8	0.611	COT/Programmable	External	-	Fully Integrated, Low Rds(on) 23mΩ/18mΩ, High Efficiency, Fast Transient, Power Good, Pre-Bias Start-Up, ±1% Vfb at Room, ±2% Vfb Over Temp	QFN13 (3x4)
NEW MPQ8632-6	4.5	18	6.0	7.5	0.86	0.611	COT/Programmable	External	-	Fully Integrated, 6A, 18V, COT, Sync Buck Regulator for Server/Telecom Market	QFN13 (3x4)
MP8736	4.5	19	6.0	12	0.5	0.815	COT/Programmable	External	-	Fully Integrated 30mΩ/12mΩ, High Efficiency, Fast Transient, 6A, 19V, COT, Sync Buck Converter	QFN20 (3x4)
NEW MP9186	4.5	20	6.0	9.4	0.8	0.798	Programmable	External	√	High Efficiency, 60mΩ/30mΩ Rds(on), Low Power Mode, Programmable En Delay, ±1.8% Vfb, Ext Sync	QFN14 (3x3)
NB650	4.5	28	6.0	10	0.4	0.6	COT/Programmable	External	-	High-Efficiency, Fast-Transient, 6A, 28V Synchronous Step-Down Converters with 2-Bit VID, Latch-Off Mode	QFN17 (3 x 4)
NB650H	4.5	28	6.0	10	0.4	0.6	COT/Programmable	External	-	High-Efficiency, Fast-Transient, 6A, 28V Synchronous Step-Down Converters with 2-Bit VID, Hiccup Mode	QFN17 (3 x 4)
NEW NB669	6.5	24	6.0	8.5	0.22	-	500	Internal	-	High-Efficiency, Fast-Transient, 6A, 24V, Fully Integrated COT Sync Buck with 5V LDO	QFN16 (3x3)
NEW NB670	5.0	24	6.0	8.5	0.22	-	500	Internal	-	High-Efficiency, Fast-Transient, 6A, 24V, Fully Integrated COT Sync Buck with 3.3V LDO	QFN16 (3x3)
NEW NB670L	5	24	6.0	8.5	0.22	-	500	Internal	-	High-Efficiency, Fast-Transient, 6A, 24V, Fully Integrated COT Sync Buck with 3.3V LDO, Low Iq Version	QFN16 (3x3)
NEW NB670LH	5.0	24	6.0	8.5	0.22	-	800	Internal	-	High-Efficiency, Fast-Transient, 6A, 24V, Fully Integrated COT Sync Buck with 3.3V LDO, Low Iq Version	QFN16 (3x3)
NEW NB671	5	24	6.0	8.5	0.135	0.604	500	Internal	-	High-Efficiency, Fast-Transient, 6A, 24V, Fully Integrated COT Sync Buck	QFN16 (3x3)
NEW NB671A	5.0	24	6.0	8.5	0.135	0.604	500	Internal	-	High-Efficiency, Fast-Transient, 6A, 24V, Fully Integrated COT Sync Buck with 7ms SS Time	QFN16 (3x3)
NEW NB671L	5	24	6.0	8.5	0.135	0.604	500	Internal	-	High-Efficiency, Fast-Transient, 6A, 24V, Fully Integrated COT Sync Buck, Low Iq Version	QFN16 (3x3)
NEW NB671LH	5.0	24	6.0	8.5	0.135	0.604	800	Internal	-	High-Efficiency, Fast-Transient, 6A, 24V, Fully Integrated COT Sync Buck, Low Iq Version	QFN16 (3x3)
NB638	4.5	28	7.0	12	0.5	0.815	COT/Programmable	External	-	Fully Integrated, 30mΩ/12mΩ, High Efficiency, Fast Transient, 7A, 28V, COT, Sync Step-Down Converter	QFN20 (3x4)
MP8761	4.2	18	8.0	16	0.8	0.611	COT/Programmable	External	-	Fully Integrated, Low Rds(on) 21mΩ/7mΩ, High Efficiency, Fast Transient, PG, Pre-Bias Start-Up, ±1% Vfb at Room, ±2% Vfb Over Temp	QFN13 (3x4)
NEW MPQ8632-8	4.5	18	8.0	10	0.86	0.611	COT/Programmable	External	-	Fully Integrated, 8A, 18V, COT, Sync Buck Regulator for Server/Telecom Market	QFN13 (3x4)
NB6381	4.5	28.0	8.0	12	0.5	0.815	COT/Programmable	External	-	Fully Integrated, 30mΩ/12mΩ, High Efficiency, Fast Transient, 8A, 28V, COT, Sync Step-Down Converter	QFN20 (3x4)
NB639	4.5	28	8.0	17	0.39	0.815	COT/Programmable	External	-	Fully Integrated, 30mΩ/12mΩ, High Efficiency, Dual Supply, 8A, 28V, COT, Sync Step-Down Converter	QFN20 (3x4)
MPQ8632-10	4.5	18	10	11	0.86	0.611	COT/Programmable	External	-	Fully Integrated, 10A, 18V, COT, OVP Latch-off, Sync Buck Regulator for Server/Telecom Market	QFN13 (3x4)
NEW MPQ8632H-10	4.5	18	10	13	0.86	0.611	COT/Programmable	External	-	Fully Integrated, 10A, 18V, COT, Sync Buck Regulator for Server/Telecom Market	QFN13 (3x4)
MPQ8636-10	4.5	18	10	11	0.8	0.611	COT/Programmable	External	-	Fully Integrated, 10A, 18V, COT, OVP Latch-off, Sync Buck Regulator for Server/Telecom Market	QFN13 (3x4)

SWITCHING POWER SUPPLY REGULATORS

DC/DC (STEP-DOWN) SYNCHRONOUS SWITCHERS

Part Number	V _{IN} (Min) (V)	V _{IN} (Max) (V)	I _{OUT} (A)	I _{sw} Limit (Typ) (A)	I _Q (Typ) (mA)	V _{FB} (V)	Switching Freq (kHz)	Soft Start	Ext Sync	Notes	Package
Maximum Operating Input Voltage ≤28V (continued)											
NEW MPQ8636H-10	4.5	18	10	13	0.8	0.611	COT/Programmable	External	-	Fully Integrated, 10A, 18V, COT, OVP non-Latch-off, Sync Buck Regulator for Server/Telecom Market	QFN13 (3x4)
NEW NB675	5.0	24	10	11	0.4	0.604	500	Internal	-	High-Efficiency, Fast-Transient, 10A, 24V, Fully Integrated COT Sync Buck with With +/-2A LDO and Buffered Reference	QFN21 (3x4)
NEW NB675L	4.7	24	10	11	0.105	0.604	500	Internal	-	High-Efficiency, Fast-Transient, 10A, 24V, Fully Integrated COT Sync Buck with With +/-2A LDO and Buffered Reference, Low Iq Version	QFN21 (3x4)
NEW NB675LH	4.7	24	10	11	0.105	0.604	750	Internal	-	High-Efficiency, Fast-Transient, 10A, 24V, Fully Integrated COT Sync Buck with With +/-2A LDO and Buffered Reference, Low Iq Version	QFN21 (3x4)
MP38900	4.5	16	10	17	0.39	0.815	COT/Programmable	External	-	Fully Integrated, 27mΩ/10mΩ, High Efficiency, Fast Transient, 10A, 16V, COT, Sync Step-Down Converter	QFN20 (3x4)
MP38900-B	4.5	16	10	17	0.39	0.815	COT/Programmable	External	-	Fully Integrated, 27mΩ/10mΩ, 10A, 16V COT Sync Buck with Built-in Vcc in 3x4mm QFN Flip Chip, OCP Hiccup Mode	QFN20 (3x4)
MP8762	4.2	18	10	17	0.8	0.611	COT/Programmable	External	-	Fully Integrated, Low Rdson 21mΩ/7mΩ, High Efficiency, Fast Transient, PG, Pre-Bias Start-Up, ±1% Vfb at Room, ±2% Vfb Over Temp	QFN13 (3x4)
MP38671	4.5	25	10	12	1.1 (Max)	0.808	600	Internal	√	4.5V to 25V, 600kHz, 10A Sync Buck with PG Output and Low-Side Gate Driver	QFN14 (3x4)
NEW MPQ8632-12	4.5	18	12	15	0.86	0.611	COT/Programmable	External	-	Fully Integrated, 12A, 18V, COT, Sync Buck Regulator for Server/Telecom Market	QFN13 (3x4)
MP38873	4.5	14	15	21	1.2 (Max)	0.81	400	External	√	4.5V to 14V, 400kHz, 15A Sync Buck with PG, 18mΩ Integrated HS Power Switch and LS Gate Driver	QFN20 (3x4)
MP38875	4.5	16	15	21	1.2 (Max)	0.81	800	External	√	4.5V to 16V, 800kHz, 15A Sync Buck with PG, 18mΩ Integrated HS Power Switch and LS Gate Driver	QFN20 (3x4)
NEW MPQ8632-15	4.5	18	15	20	0.8	0.611	COT/Programmable	External	-	Fully Integrated, 15A, 18V, COT, OVP Non-Latch-off, Sync Buck Regulator for Server/Telecom Market	QFN25 (5x4) QFN29 (5x4)
MP38876	4.5	28	15	21	1.2 (Max)	0.81	400	External	√	4.5V to 28V, 400kHz, 15A Sync Buck with PG, 18mΩ Integrated HS Power Switch and LS Gate Driver	QFN20 (3x4)
NEW MPQ8632-20	4.5	18	20	25	0.8	0.611	COT/Programmable	External	-	Fully Integrated, 20A, 18V, COT, OVP Non-Latch-off, Sync Buck Regulator for Server/Telecom Market	QFN25 (5x4) QFN29 (5x4)
NEW MPQ8636-20	4.5	18	20	25	0.8	0.611	COT/Programmable	External	-	Fully Integrated, 20A, 18V, COT, OVP Latch-off, Sync Buck Regulator for Server/Telecom Market	QFN25 (5x4) QFN29 (5x4)
MP8620	6.0	16	25	20	2	0.8	600 (Adj.)	External	√	6.0V to 16V, 600kHz, 25A Sync Buck with PG, 12mΩ Integrated HS Power Switch and Programmable Ext SS	QFN46 (6x6)

SWITCHING POWER SUPPLY REGULATORS

DC/DC (STEP-DOWN) SYNCHRONOUS SWITCHERS

Part Number	V _{IN} (Min) (V)	V _{IN} (Max) (V)	I _{OUT} (A)	I _{sw} Limit (Typ) (A)	I _Q (Typ) (mA)	V _{FB} (V)	Switching Freq (kHz)	Soft Start	Ext Sync	Notes	Package
Maximum Operating Input Voltage >28V											
NEW MP4568	4.5	55	0.1	0.3	0.02	1	100	External	-	50V, 100mA Sync Buck with Adj. SS, Adj. SW. Frequency and Adj. Current Limit as 3.3V, 5.0V and Adj. Output Version	QFN10 (3x3)
MP2403	4.6	32	3.0	5.3	1.45	0.8	250	External	-	4.6V to 32V, 250kHz, 3A Sync Buck with External Comp and External SS	SOIC8E
MP38894	4.5	42	4.5	6.5	0.9	0.808	420	Internal	√	4.5V to 42V, 4.5A Sync Buck with Integrated High-Side Power Switch and LS Sync Gate Driver	SOIC8E
NEW MP4470	4.5	36	5.0	8.0	0.5	0.8	1000	External	-	36V, 5A Sync Buck with Adj. Frequency, Adj. SS and PG, AEC-Q100 Qualification in Progress	QFN20(3x4)
NEW MPQ4470	4.5	36	5.0	8.0	0.5	0.8	1000	External	-	Industrial Grade, 36V, 5A Sync Buck with Adj. Frequency, Adj. SS and PG	QFN20(3x4)
MP38891	4.5	30	6.0	8.0	0.9	0.808	420	Internal	√	4.5V to 30V, 6A Sync Buck with Integrated High-Side Power Switch and LS Sync Gate Driver	QFN14 (3x4)
MP38892	4.5	42	6.0	8.0	0.9	0.808	420	Internal	√	4.5V to 42V, 6A Sync Buck with Integrated High-Side Power Switch and LS Sync Gate Driver	SOIC8E

SWITCHING POWER SUPPLY REGULATORS

DC/DC (STEP-DOWN) NON-SYNCHRONOUS SWITCHERS

Part Number	V _{IN} (Min) (V)	V _{IN} (Max) (V)	I _{OUT} (A)	I _{SW} Limit (Typ) (A)	I _O (Typ) (mA)	V _{FB} (V)	Switching Freq (kHz)	Soft Start	Ext Sync	Notes	Package	
Maximum Operating Input Voltage <28V												
MP2357	4.5	24	0.5	0.8	0.8	0.81	1400	Internal	-	4.5V to 24V, 0.5A, Internal Comp	SOT23-6 TSOT23-6	
MP2359	4.5	24	1.2	1.8	0.8	0.81	1400	Internal	-	4.5V to 24V, 1.2A, Internal Comp	SOT23-6 TSOT23-6	
MP2364	4.75	23	1.5 (2x)	3	2.4	0.92	1400	External	-	External SS, External Comp, Dual Output	TSSOP20F	
MP2360	4.5	24	1.8	2.5	0.8	0.81	1400	Internal	-	4.5V to 24V, 1.8A, 1.4MHz, Internal Comp	QFN8 (2x2)	
MP2371	4.5	24	1.8	2.5	0.8	0.81	700	Internal	-	4.5V to 24V, 1.8A, 700kHz, Internal Comp	QFN8 (2x2)	
MP2354	4.8	23	2.0	3.4	1	1.22	380	Internal	√	4.75V to 23V, 2A, 380kHz, External Comp	SOIC8	
MP2358	4.75	23	2.0	3.4	1.1	0.92	370	External	-	4.75V to 23V, 2A, 370kHz, External SS, External Comp	QFN10 (3x3) SOIC8	
MP2361	4.8	23	2.0	3.5	1.2	0.92	1400	External	-	4.75V to 23V, 2A, 1.4MHz, External SS, External Comp	MSOP10 QFN10 (3x3)	
MP2362	4.75	23	2.0 (2x)	3.4	2	1.22	380	Internal	-	4.75V to 23V, 2A, 380kHz, Dual Output	TSSOP20F	
MP4350	4.5	20	2.5	3.5	0.1	0.8	4000 (Adj.)	Internal	-	4.5V to 20V, 2.5A, External Comp, Switching Frequency Programmable up to 4MHz	QFN10 (3x3)	
MP2355	4.75	23	3.0	4.3	1	1.22	380	External	-	4.75V to 23V, 3A, 380kHz, External SS, External Comp	SOIC8E	
MP2363	4.8	27	3.0	5.7	1	0.92	365	External	-	4.75V to 27V, 3A, 365kHz, External SS, External Comp	SOIC8E PDIP8	
MP2380	4.5	21	5.0	7.3	0.9	0.81	600	Internal	√	4.5V to 21V, 5A, 600kHz, Power Good Output	SOIC8E	
Maximum Operating Input Voltage ≥28V												
NEW	MP2459	4.5	55	0.5	1.25	0.73	0.8	480	-	-	55V, 500mA non-sync Buck for Metering	TSOT23-6
	MP2451	3.3	36	0.6	0.9	0.23	0.8	2000	Internal	-	Internal Comp & SS, Programmable, Consumer Grade	SOT23-6L
AEC-Q100	MPQ2451	3.3	36	0.6	0.85	0.23	0.8	2000	Internal	-	Internal Comp & SS, Programmable, Available in AEC-Q100 and Industrial Grade	SOT23-6L
	MP4566	4.5	36	0.6	1.2	0.035	1	1000	Internal	-	High-Efficiency, High-Voltage, Buck, Ultra-Low Quiescent Current, Functionally Compatible to LT3470A	QFN8 (2x3)
	MP4458	4.5	36	1.0	1.8	0.1	0.8	4000 (Adj.)	Internal	-	Light-Load Efficiency, Frequency Programmable up to 4MHz, Consumer Grade	TQFN10 (3x3)
NEW	MPQ4456	4.5	36	1.0	1.8	0.1	0.8	4000 (Adj.)	Internal	-	Light-Load Efficiency, Frequency Programmable up to 4MHz, Lower PFM Threshold, Available in Industrial Grade	TQFN10 (3x3)
AEC-Q100	MPQ4458	4.5	36	1.0	1.8	0.1	0.8	4000 (Adj.)	Internal	-	Light-Load Efficiency, Frequency Programmable up to 4MHz, Available in AEC-Q100 and Industrial Grade	TQFN10 (3x3)
	MP2452	3.3	36	1.0	1.5	0.13	0.8	1000	Internal	-	High-Voltage Buck with Few External Components, Output Adj From 0.794V to 33V	QFN8 (2x3)
	MP2562	4.5	50	1.0	1.8	0.12	0.8	4000	Internal	-	High-Switching Freq, Current-Limit, Output Adjustable from 0.8V to 47V	QFN10 (3x3) SOIC8
	MP4558	4.5	55	1.0	3.2	0.12	0.8	2000 (Adj.)	Internal	-	55V Max V _{IN} , Superior Light-Load Efficiency, Consumer Grade	QFN10 (3x3) SOIC8E
AEC-Q100	MPQ4558	4.5	55	1.0	3.2	0.12	0.8	2000 (Adj.)	Internal	-	55V Max V _{IN} , Superior Light-Load Efficiency, Available in AEC-Q100 and Industrial Grade	QFN10 (3x3) SOIC8E
	MP4459	4.5	36	1.5	2.5	0.1	0.8	4000 (Adj.)	Internal	-	Light-Load Efficiency, Frequency Programmable up to 4MHz	TQFN10 (3x3)
AEC-Q100	MPQ4459	4.5	36	1.5	2.5	0.1	0.8	4000 (Adj.)	Internal	-	Light-Load Efficiency, Frequency Programmable up to 4MHz, Available in AEC-Q100 and Industrial Grade	TQFN10 (3x3)
	MP4559	4.5	55	1.5	3.2	0.12	0.8	2000 (Adj.)	Internal	-	55V Max V _{IN} , Superior Light-Load Efficiency, Consumer Grade	QFN10 (3x3) SOIC8E
AEC-Q100	MPQ4559	4.5	55	1.5	3.2	0.12	0.8	2000 (Adj.)	Internal	-	55V Max V _{IN} , Superior Light-Load Efficiency, Available in AEC-Q100 and Industrial Grade	QFN10 (3x3) SOIC8E
	MP4561	4.5	55	1.5	2.5	0.12	0.8	2000 (Adj.)	External	-	55V Max V _{IN} , Superior Light-Load Eff, Ext SS, Consumer Grade	QFN10 (3x3)
AEC-Q100	MPQ4561	4.5	55	1.5	2.5	0.12	0.8	2000 (Adj.)	External	-	55V Max V _{IN} , Superior Light-Load Eff, Ext SS, Available in AEC-Q100 and Industrial Grade	QFN10 (3x3)
	MP2490	4.5	36	1.5	2.6	0.5	0.805	700	External	-	Programmable Current-Limit, Consumer Grade Available in Industrial Grade	QFN10 (3x3) SOIC PDIP8
	MP24971	8	50	1.5	4.4	1.2	0.8	100	Internal	-	1.5A, 50V, 100kHz, Programmable Current Limit, Output Line-Drop Compensation, Output Over-voltage Protection	SOIC8 SOIC8E
	MP2493	4.5	36	2.0	3.0	0.5	0.8	130	External	-	Adj. Output from 0.8V to 15V, Internal Comp, Programmable Output Current Limit	SOIC8E SOIC8
	MP2492	4.5	55	2.0	3.5	0.5	0.8	100	External	-	55V, 2A, 100kHz, Programmable Output Current Limit	QFN10 (3x3) SOIC8E
	MP2494	4.5	55	2.0	3.5	0.5	0.8	100	External	-	55V, 2A, 100kHz	SOIC8E SOIC8
	MP4560	4.5	55	2.0	3.2	0.12	0.8	2000 (Adj.)	Internal	-	55V Max V _{IN} , Superior Light-Load Efficiency	QFN10 (3x3) SOIC8E
AEC-Q100	MPQ4560	4.5	55	2.0	3.2	0.12	0.8	2000 (Adj.)	Internal	-	55V Max V _{IN} , Superior Light-Load Efficiency, Available in AEC-Q100 and Industrial Grade	QFN10 (3x3) SOIC8E
	MP2499	5.0	24	2.0 Prog.	3.0	0.5	0.8	100	External	-	100V Integrated Load-Dump Protection, Low 100kHz f _{sw} for Low EMI Applications, Prog Current Limit	SOIC16

SWITCHING POWER SUPPLY REGULATORS

DC/DC (STEP-DOWN) NON-SYNCHRONOUS SWITCHERS

Part Number	V _{IN} (Min) (V)	V _{IN} (Max) (V)	I _{OUT} (A)	I _{SW} Limit (Typ) (A)	I _O (Typ) (mA)	V _{FB} (V)	Switching Freq (kHz)	Soft Start	Ext Sync	Notes	Package
Maximum Operating Input Voltage ≥28V (continued)											
MP2498	5	24	2.0	3.2	0.12	0.8	150 to 2000	Internal	-	100V Integ Load Dump Protection, Prog Switching Freq	QFN28
MP1591	6.5	32	2.0	3.6	1	1.23	330	Internal	-	6.5V to 32V, 2A, 330kHz, External Comp	SOIC8 SOIC8E
MP2560	4.5	42	2.5	3.5	0.1	0.8	4000 (Adj.)	Internal	-	Light-Load Eff, Frequency Prog up to 4MHz, Ext Comp	QFN10 (3x3) SOIC8E
MP24943	4.5	55	3.0	6.5	0.65	0.8	100	External	-	3A, 55V, 100kHz, Prog Output OVP Threshold	SOIC8 SOIC8E
MP4460	4.5	36	2.5	3.5	0.1	0.8	4000 (Adj.)	Internal	-	Light-Load Efficiency, Frequency Programmable up to 4MHz, Consumer Grade	QFN10 (3x3)
MPQ4460	4.5	36	2.5	3.5	0.1	0.8	4000 (Adj.)	Internal	-	Light-Load Efficiency, Frequency Programmable up to 4MHz	QFN10 (3x3)
MP2467	6	36	2.5	3.5	0.1	0.8	500	Internal	-	High Voltage Input, Light-Load Efficiency	SOIC8E
MP2565	4.5	50	2.5	3.5	0.1	0.8	4000 (Adj.)	Internal	-	Light-Load Efficiency, Frequency Prog up to 4MHz	QFN10 (3x3) SOIC8E
MP2497	4.5	50	3.0	5.0	1.2	0.8	100	Internal	-	3A, 50V, 100kHz, Prog Output OVP Threshold, Prog Current-Limit, Output Line-Drop Compensation	SOIC8 SOIC8E
MP2497-A	4.5	50	3.0	5.0	1.2	0.8	100	Internal	-	High Eff 3A, 50V, 100kHz, Prog Output OVP Threshold, Prog Current-Limit, Output Line-Drop Compensation	SOIC8E
MP1586	4.5	28	3.0	4.7	0.1	0.8	50 to 400	Internal	-	50kHz to 400kHz, Internal SS, External Comp	SOIC8E
MP1593	4.8	28	3.0	6.2	1	1.222	385	External	-	385kHz, External SS, External Comp	SOIC8E
MP2372	4.75	28	3.0	6.5	1.3	0.92	925	External	-	925kHz, External SS, External Comp	SOIC8E
MP2365	4.8	28	3.0	6.5	1.3	0.92	1400	External	-	1.4MHz, External SS, External Comp	SOIC8E
MP4462	4.5	36	3.5	4.7	0.1	0.8	4000 (Adj.)	Internal	-	Light-Load Efficiency, Frequency Prog up to 4MHz, Consumer Grade	QFN10 (3x3) SOIC8E
MPQ4462	4.5	36	3.5	4.7	0.1	0.8	4000 (Adj.)	Internal	-	Light-Load Efficiency, Frequency Prog up to 4MHz, Available in AEC-Q100 and Industrial Grade	QFN10 (3x3) SOIC8E

DC/DC (STEP-DOWN) CONTROLLERS

Part Number	V _{IN} (Min) (V)	V _{IN} (Max) (V)	I _{OUT} (A)	I _{SW} Limit (Typ) (A)	I _O (Typ) (mA)	V _{FB} (V)	Switching Freq (kHz)	Soft Start	Ext Sync	Notes	Package
MP2910	5	12	-	-	0.6	0.8	300	Internal	-	Sync Buck PWM DC-DC and Linear Power Controller, Specific Power Good indicator for Intel®, Grantsdale F _{SB_VTT} Power Sequence	SOIC14 SOIC8E
MP2905	3.0	28	-	-	0.6	0.6	500 (Adj.)	External	-	Ideal for Applications Greater than 15A	MSOP10
MP2932	4.75	5.25	-	-	14	0.8	1,000 (Adj.)	Internal	-	6 Phase Controller with 8-Bit DAC for VR10 & 11	QFN48 6x6

INTELLI-PHASE (MONOLITHIC DRIVER + MOSFET)

Part Number	V _{IN} (Min) (V)	V _{IN} (Max) (V)	I _{OUT} (A)	I _{SW} Limit (Typ) (A)	I _O (Typ) (mA)	V _{FB} (V)	Switching Freq (kHz)	Sync	Notes	Package
MP86963	4.5	21	20		0.551	-	100kHz to 1MHz	√	Integ HS/LS FETs and Driver, 20A, 21V Intelli-Phase, 3.3V PWM Logic	TQFN (5x5)
MP86885	4.5	14	40	60	0.055	-	100kHz to 1MHz	√	Integ HS/LS FETs and Driver, 40A, 14V Intelli-Phase, 3.3V PWM Logic	TQFN (4x6)
MP86884	4.5	14	55	80	0.06	-	100kHz to 1MHz	√	Integ HS/LS FETs and Driver, 55A, 14V Intelli-Phase, 5V PWM Logic	TQFN (6x6)
MP86884-3	4.5	14	55	80	0.06	-	100kHz to 1MHz	√	Integ HS/LS FETs and Driver, 55A, 14V Intelli-Phase, 3.3V PWM Logic	TQFN (6x6)

AEC-Q100

NEW

SWITCHING POWER SUPPLY REGULATORS

DC/DC (STEP-UP) SYNCHRONOUS SWITCHERS

NEW

Part Number	V _{IN} (Min) (V)	V _{IN} (Max) (V)	V _{OUT} (Max) (V)	I _{SW} Limit (Typ) (A)	I _o (Typ) (mA)	V _{FB} (V)	Switching Freq (kHz)	Sync	Notes	Package
MP3418	0.6	4	4	0.4	0.038	1.21	1200	√	400mA, 1.2MHz, Very Low Iq, Output Disconnect	TSOT23-8
MP3120	0.8	5	5	1.2	0.47	1.19	1100	√	Output Disconnect, Has LDO Mode	TSOT23-6
MP3410	1.8	6	6	1.3	0.36	1.19	550	√	Output Disconnect	TSOT23-5
MP3414	0.6	4	4	1.8	0.035	1.21	1000	√	Very Low Iq, Output Disconnect	TSOT23-8

DC/DC (STEP-UP) NON-SYNCHRONOUS SWITCHERS

Part Number	V _{IN} (Min) (V)	V _{IN} (Max) (V)	V _{OUT} (Max) (V)	I _{SW} Limit (Typ) (A)	I _o (Typ) (mA)	V _{FB} (V)	Switching Freq (kHz)	Sync	Notes	Package
MP3209	2.5	6	22	0.35	0.64	1.25	1400	-	Internal Comp, Tiny Inductors and Capacitors Can be Used	TSOT23-5 UTQFN8 (2x2)
MP3217	2.5	6	36	0.5	0.46	1.24	670	-	Cycle-by-Cycle Over Current Protection, UVLO, Thermal Shutdown, p2p with MAX5025-5028	TSOT23-6
MP1531	2.7	5.5	22	0.65	0.8	1.25	250	-	Triple Output Step-Up and Charge Pump for TFT Bias	QFN16 (3x3) TSSOP16
MP3216	2.5	6	36	0.75	0.55	1.24	1300	-	Output Disconnect, Output Short Protection, Cycle-by-Cycle Over Current Protection	TSOT23-6
MP3430	2.7	5.5	90	1.2	0.3	0.8	1300	-	APD Current Monitoring (1:10 or 1:2 Ratio) with 5% Accuracy and 50ns Response Time, Programmable APD Current Limit and Protection, Internal Comp and SS	QFN16 (3x3)
MP3212	2.3	5.5	28	1.3	0.18	1.23	1000	-	Integrated Input Disconnect Switch, Internal SS and Internal Comp	QFN10 (3x3)
MP1541	2.5	6	22	1.9	0.64	1.25	1300	-	-	TSOT23-5
MP1542	2.5	22	22	2.6	0.7	1.25	700/1300	-	-	MSOP8
MP3213	2.5	22	22	3.5	0.7	1.25	700/1300	-	-	MSOP8E
MP1530	2.7	5.5	22	3.6	1.3	1.25	1400	-	Triple Output Charge Pump and LDO for TFT Bias	QFN16 (3x3) TSSOP16
MP1517	2.6	25	25	4	0.9	0.7	1100	-	-	QFN16 (4x4)
MP3425	3.1	22	55	5	0.65	1.25	Variable	-	Programmable UVLO and EN Hysteresis, Consumer Grade	QFN14 (3x4)

DC/DC (STEP-UP) CONTROLLERS

Part Number	V _{IN} (Min) (V)	V _{IN} (Max) (V)	V _{OUT} (V)	I _{SW} Limit (Typ) (A)	I _o (Typ) (mA)	V _{FB} (V)	Switching Freq (kHz)	Sync	Notes	Package
MP3908	4.75	12	10V Gate Driver	0.19V/ Rsense	0.27	0.818	260	√	Sync Boost Controller, Lossless Current Sense, Forward, Flyback, SEPIC Apps, External SS	MSOP10
MP3900	8.6	12	10V Gate Driver	0.2V/ Rsense	0.18	0.816	330	-	(Boost Controller) 10V Gate Driver	MSOP8

ENERGY STORAGE AND RELEASE MANAGEMENT

NEW

Part Number	V _{IN} (Min) (V)	V _{IN} (Max) (V)	V _{strg} (Max) (V)	I Limit (A) Charging	I Limit (A) Dumping	I _o (Typ) (mA)	V _{FB} (V)	Notes	Package
MP6302	4.2	18	32	0.25	2.5	0.25	1	Prog Storage and Release Voltage, Indicators for Storage and Input Voltage	QFN10 (2x3)
MP201	4.5	18	32	0.26	2.5	0.25	1	Programmable Storage and Release Voltage, Flag Indicator	SOIC8
MP5505	2.7	7	30	0.5	5	2 (Max)	0.79	Programmable Storage and Release Voltage, Hot-swap Management Unit	QFN20 (3x4)

LNB POWER SUPPLY

Part Number	V _{IN} (Min) (V)	V _{IN} (Max) (V)	Standard	I _{OUT} (Max) (A)	22kHz Tone Signal Generated	POK Indicator	I2C	Notes	Package
MP8125	8	14	DiSEqC™ 1.x	0.55	Internal	√	-	Boost Converter with Internal Switch, Low-Noise LDO Output, Line Drop Compensation, Settable LDO Current Limit, Selectable Vout Compensation, Adjustable Output Soft Start	TSSOP16 QFN24 (4x4)
MP8126	8	14	DiSEqC™ 1.x	0.55	Internal	√	-	Boost Converter with Internal Switch, Low-Noise LDO Output, Line Drop Compensation, Settable LDO Current Limit, Selectable Vout Compensation, Adjustable Output SS, Direct 22kHz Input	TSSOP16EP QFN24 (4x4)

LDO LINEAR REGULATORS

Part Number	V _{IN} (Min) (V)	V _{IN} (Max) (V)	I _{OUT} (mA)	I _Q (Typ) (μA)	Load Reg (%/mA)	PSRR @1kHz (dB)	V _{F_B} (V)	Dropout Voltage (mV)	V _{OUT} (V)	Notes	Package
MP2000	1.35	6.0	150	65	0.001	50	0.5	250 (IO: 100mA) 300 (IO: 150mA)	0.5 to 5.0 Only Adjustable Option Available Now	Low Voltage Input (1.35V to 6V)	TSOT23-5
MP20049	2.3	6	150	55	0.001	78	-	50 (IO: 120mA)	Fixed, 1.2V to 4.5V Available Option: 2.8V	Ultra-Low Noise, High PSRR in WLCSP Package, p2p ADP120 & LP5900	WLCSP (0.8x0.8)
MP8801	2.7	6.5	150	125	0.001	70	1.22	150 (IO: 150mA)	Adj., Available Fixed Options: 2.5V, 2.85V and 3.3V	Low Noise, Excellent for RF Applications, Lower Cost	TSOT23-5
MP8903	2.7	6.5	150	125	0.001	50	1.22	150 (IO: 150mA)	Adj., Available Fixed Options: 2.5V, 2.85V and 3.3V	Low Cost, Small QFN 2x2mm Option Consumer Grade	QFN8 (2x2) TSOT23-5
MPQ8903	2.7	6.5	150	125	0.001	50	1.22	150 (IO: 150mA)	Adj., Available Fixed Options: 2.5V, 2.85V and 3.3V	Low Cost, Small QFN 2x2mm Option	QFN8 (2x2) TSOT23-5
MP20142	2.5	5.5	200 (2x)	150	-	75	-	60 (IO: 100mA) 180 (IO: 300mA)	1.5V to 3.3V, Programmable	Dual outputs, Programmable with 2-Pin Control Input	TQNF8 (2x2)
MP2004	2.7	6.5	200 (2x)	114	0.005	69	-	90 (IO: 100mA) 180 (IO: 200mA)	Available Options: 2.5/1.8, 5.0/3.3, 3.0/2.85, 1.85/1.85, 3.3/2.5, 2.8/1.8	Dual LDO Adjustable	TSOT23-6
MP20249	2.3	6	200 (2x)	125	0.001	65	-	60 (IO: 150mA) 75 (IO: 200mA)	Fixed, 1.2V to 3.3V. Available Option: 2.8V/1.2V	Dual-Channel, Ultra-Low Noise, High PSRR in 6-Ball WLCSP Package	WLCSP (1x1.5)
MP20048	1.7	5.5	250	350	0.0005	35	1.234	60 (IO: 250mA)	Adj. 1.234V to 5.0V	Stable Without Any Output Capacitors	TSOT23-5
MP8802	2.7	6.5	250	125	0.001	70	1.22	230 (IO: 250mA)	Adj., Available Fixed Options: 2.5V, 2.85V and 3.3V	Excellent for RF Applications, Lower Cost	TSOT23-5
MP20041	2.5	6.0	300 (2x)	114	0.003	65	-	75 (IO: 100mA) 220 (IO: 300mA)	Available Options: 1.8/1.2, 1.8/1.3, 1.8/2.5, 1.8/3.3, 2.5/3.3, 2.8/1.8, 2.8/3.3, 3.3/2.7, 3.3/3.3, 3.0/3.0	Dual Fixed Output, 300mA/CH LDO, p2p RT9012	QFN8 (2x2)
MP20044	2.5	6	300 (2x)	114	0.002	65	-	75 (IO: 100mA) 220 (IO: 300mA)	1.2V to 5.0V. Available Option: 3.0V/3.0V	Dual Fixed Output, Good Load Regulation, 300mA/Ch LDO	TQFN8 (2x2)
MP20043	2.5	5.5	300 (2x)	150	-	75	-	60 (IO: 100mA) 180 (IO: 300mA)	1.2V to 3.3V. Available versions: -A, -B, -C, -D, -E	Dual outputs, Programmable with 2-Pin Control Input	TQNF8 (2x2)
MP6402	2.5	5.5	500 (2x)	400	0.003	60(CH1) 51(CH2)	-	260 (IO: 500mA)	Fixed, 0.9V to 3.3V. Available Option: 1.8V/2.5V	Dual LDO, Integrated Reset Circuit, Fixed Output Voltages from 0.9V to 3.3V	SOIC8E TQFN8 (3x3)
MP2002	1.35	6.5	500	100	0.001	26	0.5	290 (IO: 500mA)	Adj. 0.5V to 5.0V	Low Voltage Input, Power Good	QFN8 (2x3)
MP8904	2.5	6.5	500	100	0.001	26	0.5	290 (IO: 500mA)	Adj. 0.5V to 5.0V	Power Good Output	QFN8 (2x3)
MP20045	2.5	5.5	1000	110	0.0003	56	1.5	140 (IO: 1000mA)	Adj., 1.5V-5.0V. Available Fixed Options: 1.8V, 2.5V and 3.3V	High Input/Output Current with Fast Response, Fixed and Adj. Output Voltages	QFN8 (3x3) SOIC8E
MP20051	2.5	5.5	1000	110	0.0003	63	0.8	140 (IO: 1000mA)	Adj., 0.8V to 5.0V	0.8V VFB Version of MP20045, with Adj. Output Voltage from 0.8V to 5.0V	QFN8 (3x3) SOIC8E
MP20046	2.7	5.5	2000	75	0.0003	70	-	210 (IO: 2000mA)	Fixed, 1.5V to 3.3V. Available Options: 1.5V, 1.8V, 2.5V, 3.3V	High Input/Output Current with Fast Response	SOIC8E QFN10 (3x3)
MP20073	1.3	6	2000	-	N/A	N/A	N/A	N/A	V _{TT} /V _{TT} Ref	DDR2/3 Termination Regulator, V _{DRV} =3.3V	MSOP8E
MP2007	1.3	6.0	3000	-	N/A	N/A	N/A	N/A	V _{TT} /V _{TT} Ref	DDR2/3 Termination Regulator	MSOP8E
MP20075	1.3	3.6	3000	-	N/A	N/A	N/A	N/A	V _{TT} /V _{TT} Ref	DDR2/3 Termination Regulator, V _{DRV} =3.3V	MSOP8E
High-Performance, Low-Dropout Linear Regulators											
MP2016	4	42.0	30	12	0.003	50	1.23	700 (IO:30mA)	Adj. 1.2V to 20V	Ideal for Automotive	QFN8 (2x3) TSOT23-5
MP2009	2	6	120	50	0.002	78	-	172 (IO:120mA)	Adj. 1.5V-4.5V Available Fixed Options: 1.8V, 2.5V and 3.3V	No Bypass Capacitor Required	SC70-5
MP20042	2.7	6.5	200 (2x)	114	0.005	73	-	73 (IO:100mA) 145 (IO:150mA)	1.2V to 3.3V. Available Options: 1.85/1.85, 2.5/1.8, 2.8/1.8, 3.0/2.85, 3.3/2.5, 5.0/3.3	Dual LDO Adjustable and Fixed Output Option	QFN8 (2x2)
MP2005	1	5.5	800	100	0.0005	65	0.5	70 (IO:800mA)	Adj. 0.5V to 4.0V	Ultra Low Dropout, Fast Transient, 48dB PSRR @ 1MHz	QFN8 (2x3)
MP2030	1.1	5.0	3000	220	0.001	32	0.5	150 (IO:3000mA)	Adj., 0.9V to 3.8V	Dual Supply, Fast Transient, Ultra-Low, Dropout with Bias Supply, Power Good, Current Limit and Internal Thermal Protection	QFN10 (3x3) QFN32 (5x5)
MP2040	1.1	5	3000	3500	0.001	40	0.5	150 (IO:3000mA)	Adj., 0.9V to 3.3V	Highest PSRR, Fast Transient Response, 3A, Very Low Dropout Linear Regulator	QFN10 (3x3) QFN32 (5x5)

AC/DC OFFLINE

REGULATORS & EASYPower

Part Number	V _{CC} (Min) (V)	V _{CC} (Max) (V)	Power (W)	Control Method	R _{ds(on)} (Ω)	High Voltage Startup?	No Load Power (mW)	Notes	Package
HF01B00	7.2	22	Up to 54	Quasi Resonant/ Flyback	1.9	Yes	-	Universal Input, Flyback, Low Standby Power, Power Dependent on Open Frame	PDIP8-7B
HF01B01	7.2	22	Up to 45	Quasi Resonant/ Flyback	3.3	Yes	-	Universal Input, Flyback, Low Standby Power, Power Dependent on Open Frame	PDIP8-7B
HF01B02	7.2	22	Up to 33	Quasi Resonant/ Flyback	5.5	Yes	-	Universal Input, Flyback, Low Standby Power, Power Dependent on Open Frame	PDIP8-7B
HF01B03	7.2	22	Up to 30	Quasi Resonant/ Flyback	7.7	Yes	-	Universal Input, Flyback, Low Standby Power, Power Dependent on Open Frame	PDIP8-7B
HF01B04	7.2	22	Up to 23	Quasi Resonant/ Flyback	11	Yes	-	Universal Input, Flyback, Low Standby Power, Power Dependent on Open Frame	PDIP8-7B SOIC8-7B
EasyPower MP100	-	-	Up to 1	Smart LDO	-	Yes	-	85 _{AC} -305 _{AC} , Inductor-Less for Low-Power Applications, (EasyPower)	SOIC8E
EasyPower MP150	5.3	6.5	Up to 2	Non-Isolated Buck	30	No	150	85 _{AC} -305 _{AC} , Primary-Side Regulator for Low-Power Application, (EasyPower)	TSOT23-5
New EasyPower MP153	4.5	6.5	Up to 6	Non-Isolated Buck	15	No	150	Universal Input, Smallest Energy Efficient, Regulator with Extended Power Range, (EasyPower)	TSOT23-5
EasyPower MP155	5.3	6.5	Up to 3	Non-Isolated Buck	20	No	100	Universal Input, Energy Efficient, Primary-Side Regulator, (EasyPower)	TSOT23-5
EasyPower MP156	5.3	6.5	Up to 3	Non-Isolated Buck	20	No	30	Universal Input, Smallest Energy Efficient, (EasyPower)	TSOT23-5
NEW EasyPower MP157	4.45	6.5	Up to 6	Non-Isolated Buck	10	No	100	Universal Input, Smallest Energy Efficient, Regulator with Extended Power Range, (EasyPower)	TSOT23-5
NEW MP020-5	6.6	3.0	Up to 8	Primary-Side Regulator	10	Yes	30	Universal Input, Primary-Side Regulator with CC/CV Control	SOIC8-7A

CONTROLLERS

Part Number	V _{CC} (Min) (V)	V _{CC} (Max) (V)	R _{src} /R _{sink} (Ω)	Control Method	Topology	High Voltage Startup?	Notes	Package
MP44010	10.0	22	-	Boundary Mode	Boost / Buck Boost	No	Universal Input, PFC Controller, Ultra Low Start Up Current (15μA)	SOIC8 DIP8
MP44011	10.0	22	-	Boundary Mode	Boost / Buck Boost	No	Universal Input, PFC Controller, Harmonic Injection Function, (Reduced Capacitor Value and Inductor Size Compared with MP44010)	SOIC8
HFC0100	7.2	22	17/7	Quasi Resonant	Flyback	Yes	Universal Input, Low Standby Power	SOIC8
HFC0300	7.6	30	10/3	Variable Off-Time	Flyback	Yes	Universal Input, Low Standby Power	SOIC-7
HFC0310	8.5	30	20/10	Fixed Frequency	Flyback	No	Universal Input, Low Standby Power	SOIC8
NEW HFC0400	8	30	20/8	Fixed Frequency	Flyback	Yes	Universal Input, Integrated X-Cap Discharger, Very Low Standby Power	SOIC8-7A
HR1000	8.9	15.5	4/2	Resonant	LLC	-	Universal Input, Half-Bridge Controller, Variable Frequency, High-Power Application, Not Recommended for New Design/Contact Factory.	SOIC16
HR1000A	8.9	15.5	4/2	Resonant	LLC	-	Universal Input, Half-Bridge Controller, Variable Frequency, High-Power Application	SOIC16
NEW HR2000	10	15	-	Resonant	LLC	-	Universal Input, PFC+Half-Bridge Fluorescent Lamp Driver, High-Power Application	SOIC16
LN60A01	-	-	-	-	-	-	600V Triple N-Channel MOSFET with Common Gate Control	SOIC8 PDIP8

SYNCHRONOUS RECTIFIERS

Part Number	Description	Drain Rating	Switching FET	Turn Off Delay (ns)	V _{out} (Max) (V)	Minimum On Time (ns)	Light Load Management	Package
Flyback (High-Side and Low-Side Configurable)								
MP6900DJ	Rectifier	180	External	20	24	200	-	TSOT23-5
MP6900DS	Rectifier	180	External	20	24	200	-	SOIC8
MP6900DQ	Rectifier	180	External	20	24	200	-	QFN6 (3x3)
MP6901DJ	Rectifier	180	External	20	24	1600	-	SOIC8
MP6901DS	Rectifier	180	External	20	24	1600	-	TSOT23-5
MP6902DS	Rectifier	180	External	35	24	1600	Yes	SOIC8
MP6960	Rectifier	180	External	35	24	1600	Yes	SOIC8
MP6910DZ	Ideal Diode	100	Integrated/10mOhm	30	19	1600	Yes	TO220-3
MP6920	Ideal Diode	60	Integrated/10mOhm	30	19	1600	Yes	SOIC8E
LLC (High-Side and Low-Side Configurable)								
MP6903DS	Single SR	180	External	60	24	800	Yes	SOIC-8E
MP6922DSE/DN	Dual SR	180	External	35	24	1000	Yes	SOIC8/8E
MP6922DS	Dual SR	180	External	35	24	1000	Yes	SOIC-14
MP6922AGSE/GN	Dual SR	180	External	50	24	1000	Yes	SOIC8/8E
MP6922AGS	Dual SR	180	External	50	24	1000	Yes	SOIC-14

BACKLIGHTING SOLUTIONS

WHITE LED DRIVERS (INDUCTORS & CHARGE PUMPS)

Part Number	V _{IN} (Min) (V)	V _{IN} (Max) (V)	V _{OUT} (Max) (V)	# of Channels	Current Limit (Typ) (A)	V _{FB} (V)	Switching Freq (kHz)	Open LED Protection	Type	Notes	Package
MP3412	0.8	4.4	5	1	1.1	0.2	1000	✓	Boost	High Efficiency, 0.8V Low Start-Up Voltage	TSOT23-6
MP9361	2.8	5.0	5	1	-	-	1350	-	Regulated Charge Pump	Internal SS	TSOT23-6
MQP9361	2.8	5.0	5	1	-	-	1350	-	Regulated Charge Pump	Internal SS, Available in Industrial Grade	TSOT23-6
MP1519L	2.5	5.5	-	3	-	-	1300	✓	Charge Pump	Common Cathode	QFN16 (3x3), TQFN16 (3x3)
MP1519	2.5	5.5	-	4	-	-	1300	-	Charge Pump	Common Cathode	QFN16 (3x3)
MP1529	2.7	5.5	25	3	1.2	-	1200	✓	Boost	Integrated Flash	QFN16 (4x4)
MP3001	2.7	5.5	-	5	-	-	1200	-	Charge Pump	Single-Wire Brightness Control, Common Anode with Flash	QFN16 (3x3)
MP3021	2.7	5.5	-	4	-	-	1250	-	Charge Pump	Single-Wire Brightness Control, Common Anode	QFN16 (3x3)
MP3204	2.5	6.0	21	1	0.35	0.104	1300	✓	Boost	UVLO, Low EMI, Thermal Shutdown	TSOT23-6
MP3205	2.5	6.0	21	1	0.35	0.104	1300	-	Boost	MP3204 without OV Pn	TSOT23-5
MP3304 (A/B/C)	3	6.0	36/24/18	1	1.33	0.2	2200	✓	Boost	High Efficiency, True PWM Dimming	QFN8 (2x3)
MP3305	3	6.0	36	1	1.33	0.2	2200	✓	Boost	High Efficiency, True PWM Dimming, Adj. OVP Threshold	QFN8 (2x3)
MP3308	3	6.0	36	1	1.3	0.2	2200	✓	Boost	Boost WLED Driver Supporting CABC Dimming for Tablet PC or Smart Phone Backlight	QFN14 (3x4)
NEW MP3306	3	12.0	30	1	1.8	0.2	700	✓	Boost	Synchronous Boost LED Driver with Integrated Disconnect FET for small size LCD panel	QFN12 (2x2)
MP1518	2.5	6.0	25	1	0.35	0.104	1300	-	Boost	-	QFN8 (2x2), TSOT23-6
MP3301	2.5	6.0	36	1	1	-	1300	✓	Boost	Boost WLED Driver for up to 10 Series LED, for Smart Phone LCD Panel Backlight	TSOT23-5
MP3302	2.5	6.0	36	1	1.3	0.2	1300	✓	Boost	Large Panel Drive, High Voltage Output	QFN8 (2x3), TSOT23-5
MP3202	2.5	6.0	25	1	1.3	0.104	1300	✓	Boost	1.3A Current Limit, UVLO, Low EMI, Thermal Shutdown	QFN8 (2x2), TSOT23-5
MP1517	2.6	25	25	1	4	0.7	1100	✓	Boost	UVLO, External Comp	QFN16 (4x4)
NEW MP3388S	4.5	25	50	8	2	0.6	625 or 1250	✓	Boost	PWM or DC Input Burst PWM Dimming	QFN24 (4x4) SOIC28
MP3386	4.5	25	50	6	2	0.6	625 or 1250	✓	Boost	With Integrated Power FET, PWM or DC Input, Burst PWM Dimming	QFN24 (4x4) SOIC28
MP3310	4.5	25	50	1	1.3	0.5	1200 Programmable	✓	Boost	50V, 1.3A Wide, 4.5V to 25V Input Range	QFN10 (3x3)
MP3384	4.5	25	50	4	1.3	0.6	1250 or 625	✓	Boost	50V, 1.2A, 4-Channel Balanced Current Source	QFN16 (3x3)
NEW MP3384L	3	25	50	4	1.3	0.6	1250 or 625	✓	Boost	50V, 1.2A, 4-Channel Balanced Current Source	QFN16 (3x3)
MP3389	5	28	Ext. FET	12	-	0.6	100 to 500	✓	Boost	External MOSFET, PWM or DC Input Burst PWM Dimming	TSSOP28E SOIC28
MP3399	5	28	Ext. FET	12	-	0.6	150 to 500	✓	Boost	Cascade Version of MP3389	TSSOP28E SOIC28
MP3394	5	28	Ext. FET	4	Ext. FET	0.35	150 to 500	✓	Boost	NRFND, For new design, promote MP3394S	SOIC16 TSSOP16E
MP3393	9	32	Ext. FET	8	Ext. FET	0.32	100 to 500	✓	Boost	350mA Channel Current for Mid Large Sized TV, Rich Features, Fault Flag, Programmable SW Freq, Fault String Mark Off	SOIC28 TSSOP28E
MP4651	9	30	Ext. FET	1	Ext. FET	0.6	20 to 150	✓	LLC/Half Bridge	Offline LED Driver, Single Power Stage for Cost and Space Saving	SOIC16
MP3391	9	35	-	8	Ext. FET	0.45	150-500	✓	Boost	8-Ch, 80mA/Ch, Boost Controller for 18-24" LCD Panel/TV	SOIC28 TSSOP28E
MP3394S	5	28	55	4	Ext. FET	0.3	150-500	✓	Boost	P2P Compatible with MP3394, For New Designs Recommend MP3394S	TSSOP16EP SOIC16
MP3397	5	28	Ext. FET	4	Ext. FET	0.35	150 to 500	✓	Boost	Max 350mA per channel @ 10% Dpwm for 3D Monitor or TV, also work for regular 2D	SOIC16 TSSOP16E
MP2480	5	36	--	1	4.3A	0.2	Up to 2000	-	Buck	3A Output Current, 3% Current Accuracy, Hysteretic Control	SOIC8E
MP1528	2.7	36	-	1	0.95	0.4	Variable	✓	Boost	-	MSOP8 QFN6 (3x3) QFN8 (2x2)
MP2488	4.5	55	-	1	3.2	0.2	200 Programmable	-	Buck	Up to 97.5% Efficiency, 220mΩ Internal Power MOSFET	QFN10 (3x3) SOIC8E
MP4012	8	55	-	1	Ext. FET	>0.3, adj.	115 to 580 Programmable	-	Boost & Other Topologies	HV9912 Pin Compatible, for Backlight (Ex: Vout=200V) and Lighting (High Output Power).	SOIC16
MP4601	4.5	75	-	1	2.5	0.2	200 to 2000 Programmable	✓	Buck-Boost	Novel Power-Leverage Technology for 60+ TV, Can Regulate LED String Voltage up to 350V	TSSOP16E SOIC16
MP4603	4.5	80	-	1	2.5	0.2	200 to 2000 Programmable	✓	Buck-Boost	Advanced Version of MP4601, with Separate ADIM and PWM DIM Pin, Add OVP Fault Flag	TSSOP16E SOIC16
MP4652	Offline	Offline	Ext. FET	1, 2, 4	Ext. FET	0.6	20 to 150	✓	LLC, Half Bridge, Flyback	2-PWR-Stage, Great Cost Saving / Simplicity, Audible Noise Free	SOIC16
MP4653	Offline	Offline	Ext. FET	1, 2, 4	Ext. FET	0.2	20 to 250	✓	LLC	LIPS CC/CV Mode LLC LED Driver for Large TV, 2-Power-Stage for Low BOM Cost & High Efficiency for Large TV	SOIC20
NEW MP4700	Offline	Offline	Ext. FET	1	Ext. FET	0.3	Up to 160	External Components	Buck	BCM Zero Current & Valley Voltage Switching for >97% Efficiency, Low BOM Cost Due to Low Power Stress	SOIC8E
MP24830	Offline	Offline	Ext. FET	1, 2, 4	Ext. FET	0.2	50 to 365	✓	Buck Boost	Power Leverage LED Driver in 2.5-Power Stage, Low BOM Cost & High Efficiency for Large TV	SOIC14, QFN14 (Coming)

EL DRIVERS

Part Number	V _{IN} (Min) (V)	V _{IN} (Max) (V)	V _{OUT} (Max) (V)	# of Channels	Current Limit (Typ) (A)	V _{FB} (V)	Switching Freq (kHz)	Open LED Protection	Type	Notes	Package
MP3802	1.8	5.5	120V AC (240Vpp)	-	-	-	240 EL Lamp	-	EL Lamp Driver	240Vpp AC Output EL	MSOP8 QFN8 (3x3)
MP3801	2.5	5.5	95 AC (190Vpp)	-	-	-	240 EL Lamp	-	EL Lamp Driver	190Vpp AC Output EL	MSOP8

LIGHTING

ISOLATED AC/DC LIGHTING

Part Number	V _{IN} (Min) (V)	V _{IN} (Max) (V)	Power (W)	Control Method	Type	Notes	Package
MP4021	85 _{AC}	265 _{AC}	Ext. FET	Flyback	Controller	Primary-Side Control Offline LED Controller with Active PFC, Not Recommended for New Design/Contact Factory	SOIC8
MP4021A	85 _{AC}	265 _{AC}	Ext. FET	Flyback	Controller	Primary-Side Control Offline LED Controller with Active PFC	SOIC8
MP4030	85 _{AC}	265 _{AC}	Ext. FET	Flyback	Controller	TRIAC Dimmable, Deep Dimming, Primary-Side Control Offline LED Controller with Active PFC	SOIC8
NEW MP4031	85 _{AC}	265 _{AC}	Ext. FET	Flyback	Controller	TRIAC and Analog Dimmable, Deep Dimming, Primary-Side Control Offline LED Controller with Active PFC	SOIC8
MP4032-1	85 _{AC}	120 _{AC}	Int. FET	Flyback	Regulator	Integrated 500V FET, TRIAC Dimmable, Deep Dimming, Primary-Side Control Offline LED Controller with Active PFC	SOIC8-7A
NEW MP44010	10	22	-	Boost / Buck Boost	Controller	Offline PFC Controller, Boundary Conduction, Ultra Low Start Up Current (15µA)	SOIC8 DIP8
NEW MP44011	10	22	-	Boost / Buck Boost	Controller	Offline PFC Controller, Boundary Conduction, Harmonic Injection Function, (Reduced Capacitor Value and Inductor Size Compared with MP44010)	SOIC8
NEW HR1000A	8.9	15.5	-	Resonant	Controller	Resonant Half-Bridge Controller, Variable Frequency, High-Power Application	SOIC16
NEW HR2000	10	12	-	Resonant	Controller	PFC+Resonant Half-Bridge Fluorescent Lamp Driver, High-Power Application	SOIC16
NEW MP4034	85 _{AC}	120 _{AC}	Int. FET	Flyback	Regulator	Offline Primary-side Isolated LED Driver IC	SOIC8-7A

NON-ISOLATED AC/DC LIGHTING

Part Number	V _{IN} (Min) (V)	V _{IN} (Max) (V)	Power (W)	Control Method	Type	Notes	Package
MP4000	85 _{AC}	265 _{AC}	Ext. FET	Low-Side Buck	Controller	Universal Input, Non-Isolated WLED Driver Controller for Lowest Cost LED Lamps DC and PWM Dimming	SOIC8
MP4001	85 _{AC}	265 _{AC}	Ext. FET	Low-Side Buck	Controller	Offline LED Controller with integrated High Voltage LDO and DC/PWM Dimming	SOIC8
NEW MP4051	85 _{AC}	265 _{AC}	Ext. FET	Buck Boost	Controller	Non-Isolated Offline LED Controller with Active PFC	SOIC8

DC/DC LIGHTING

Part Number	V _{IN} (Min) (V)	V _{IN} (Max) (V)	Power (W)	Control Method	Type	Notes	Package
MP3412	0.8	4.4	-	Boost	Regulator	1.1A, 1MHz Sync Boost WLED Driver with Output Disconnect	TSOT23-6
MP2480	5.0	36	-	Buck	Regulator	3A Output Current, 3% Current Accuracy, Hysteretic Control	SOIC8E
MP2481	4.5	36	-	Buck-Boost	Regulator	Buck-Boost WLED Halogen Replacement up to 5W	MSOP8
MP24892	4.5	36	-	Low-Side Buck	Regulator	Lower Voltage Higher Current, Lower Cost version of MP2489	TSOT23-5
MP24893	6.0	36	-	Low-Side Buck	Regulator	Hysteretic, Low-Side Buck for Minimal Ext., Low Cost Version of MP2489	QFN6(3x3) TSOT23-5
MP24894	6.0	60	Ext. FET	Low-Side Buck	Controller	Step-Down WLED-Current Controller with Wide 6V to 60V Input Voltage	TSOT6
MP2483	4.5	55	-	Buck, Buck-Boost	Regulator	DC and PWM Dimming Control Using One Single Pin, Consumer Grade	QFN10 (3x3) SOIC14
AEC-Q100 MPQ2483	4.5	55	-	Buck, Buck-Boost	Regulator	DC and PWM Dimming Control Using One Single Pin, Available in AEC-Q100	QFN10 (3x3) SOIC14
MP24183	4.5	55	-	Buck, Buck-Boost	Regulator	DC and PWM Dimming Control Using One Single Pin	QFN10 (3x3)
MP2488	4.5	55	-	Buck	Regulator	Up to 97.5% Efficiency, 220mΩ Internal Power MOSFET	QFN10 (3x3) SOIC8E
MP2487	4.5	55	-	Buck	Regulator	Up to 97.5% Efficiency, 220mΩ Internal Power MOSFET	SOIC8E
MP2489	6.0	60	-	Low-Side Buck	Regulator	Hysteretic, Low-Side Buck for Minimal Ext., Component & Fast Transient Response	QFN6(3x3) TSOT23-5 SOIC8E
MP4688	4.5	75	-	Buck	Regulator	MPS Adaptive Hysteretic for High-Output Current Accuracy	SOIC8E
MP4689	4.5	95	-	Buck	Regulator	MPS Adaptive Hysteretic for High-Output Current Accuracy	SOIC8E
MP4012	8.0	55	Ext. FET	Boost & Other Topologies	Controller	HV9912 Pin Compatible, for Backlight (Ex: Vout >200V) and Lighting (High-Output Power)	SOIC16
MP4690	-	-	-	Shunt	-	Smart Bypass for LED Protection 6V Threshold Voltage Protects One LED	SOD123

PHOTO FLASH SOLUTIONS

Part Number	Charge Type	V _{IN} (Min) (V)	V _{IN} (Max) (V)	V _{SW} (Max) (V)	V _{OUT} (Max) (V)	I _{OUT} (Max) (A)	I _{OUT} (Min) (A)	Notes	Package
MP3361	Xenon Flash	2.5	6	60	300	1.2	1.0 (Typ)	300V, 1A, Highly Integrated Xenon Photo Flash Charger and IGBT Driver	MSOP10
MP3360	Xenon Flash	2.5	6	60	300	1.7	0.4	60V, Programmable Peak Current, Highly Integrated Xenon Photo Flash Charger and IGBT Driver for Mobile Phones	QFN10 (2x2)
MP3356	Xenon Flash	2.8	6	50	300	1.7	1.5	50V, Fixed 1.5A, Highly Integrated Xenon Photo Flash Charger and IGBT Driver for DSC	QFN10 (2x2)
MP3351	Xenon Flash	3	6	60	300	2	0.3	60V, 2A Integrated Photo Flash Charger with IGBT Driver	QFN16 (3x3)
MP3352	Xenon Flash	3	6	60	300	2.5	0.3	60V, 2.5A Integrated Photo Flash Charger with IGBT Driver and Quench	QFN16 (3x3)

BATTERY CHARGERS

CRADLE CHARGERS

Part Number	V _{IN} (Min) (V)	V _{IN} (Max) (V)	# of Cells	I _{CHARGE} (A)	Trickle Charge	Charge Status	Charge Type	Notes	Package
MP26085	7	20	-	-	-	-	CV/CC Controller	CC/CV Controller with 1.223V Voltage Reference	SOT23-8
MP26075	2.2	28	1	1.00	√	√	CV/CC Linear	Includes Pre-Charge Function, Thermal Foldback and Voltage Control Function for Flyback Controller	QFN10 (3x3)

LINEAR CHARGERS

Part Number	V _{IN} (Min) (V)	V _{IN} (Max) (V)	# of Cells	I _{CHARGE} (A)	Trickle Charge	Charge Status	Charge Type	Notes	Package
MP2607	4.5	12	1	Up to 1.5	√	√	CV/CC Linear	Li-Ion Linear Charger with System Power Path Management	QFN14 (3x4)
MP26028	3.5	20	1	Up to 1.0	√	√	CV/CC Linear	Includes Battery Temp Monitor, Trickle Charge	QFN10 (3x3)
MP26060	3.5	24	1	Up to 1.0	√	√	CV/CC Linear	4.15V Output Safe Charge	QFN10 (3x3)
MP2603	4.75	25	1	Up to 0.15	√	√	CV/CC Linear	Simple System Charger, 50mA to 150mA Prog Charge, No NTC	TSOT23-5
MP2631	3	28	1	Up to 1.0	√	√	CV/CC Linear	Li-Ion, Linear Battery Charger with 10mA High Voltage LDO	QFN10 (3x3)
MP2608	3.5	28	1	Up to 1.0	√	√	CV/CC Linear	Dual Input USB & AC-Adapter	QFN10 (3x3)
MP2604	3.5	28	1	Up to 1.0	-	√	CV/CC Linear	Includes NTC, Battery Temp Monitor	QFN10 (3x3)
MP2602	3.5	28	1	Up to 1.0	√	√	CV/CC Linear	Includes NTC, Battery Temp Monitor, Trickle Charge	QFN10 (3x3)
MP2606	3.5	28	1	Up to 1.0	-	√	CV/CC Linear	Wide IBF Hysteresis, NTC	QFN10 (3x3)
MP26056	3.5	28	1	Up to 1.0	√	√	CV/CC Linear	Dual-Mode USB & AC-Adapter	QFN10 (3x3)
MP2605	3.5	28	1	Up to 1.0	√	√	CV/CC Linear	Auto-Charge Term & Recharge, Timer	QFN10 (3x3)
MP26053	3.5	28	1	Up to 1.0	√	√	CV/CC Linear	I _{chg} =10% of Iset, Auto-Charge Term & Recharge, Timer	QFN10 (3x3)
MP26058	3.5	28	1	Up to 1.0	-	√	CV/CC Linear	Includes LDO Mode & Timer	QFN10 (3x3)
MP26057	3.5	28	1	Up to 1.0	√	√	CV/CC Linear	Travel Charger	QFN10 (3x3)
MP26121	3.5	28	1	Up to 1.0	√	√	CV/CC Linear	Li-Ion Linear Battery Charger with 10% Battery-Full Thres, Flexible NTC Interface	QFN10 (3x3)

PROTECTION

Part Number	V _{IN} (Min) (V)	V _{IN} (Max) (V)	# of Cells	I _{CHARGE} (A)	Trickle Charge	Charge Status	Charge Type	Notes	Package
MP2671	2.6	30	1	-	-	-	Battery Protect	Li-Ion Battery Charger with Protection Circuit	QFN12 (3x4)
MP2670	4.3	30	1	-	-	-	Battery Protect	Li-Ion Battery Charger with Protection Circuit	QFN10 (3x3)
MP2674	4.3	30	1	-	-	-	Battery Protect	Li-Ion Charger, Protection Circuit, Tolerates Input Surge up to 30V, Small Pkg	QFN8 (2x2)
MP2676	4.3	30	1	-	-	-	Battery Protect	Li-Ion Charger Protection IC with Integrated P-MOSFET for PMU Charger Protection	QFN8 (2x2)
MP2678	3.3	30	1	-	-	-	Battery Protect	Li-Ion Battery Charger Protection IC with 5V LDO Mode	QFN8 (2x2)

SWITCHING CHARGERS

Part Number	V _{IN} (Min) (V)	V _{IN} (Max) (V)	# of Cells	I _{CHARGE} (A)	Trickle Charge	Charge Status	Charge Type	Switching Freq (kHz)	Notes	Package
MP2611	4.5	6	1	Up to 2.0	√	√	CV/CC Switching	1500	Single Cell Switching Charger with Separate Input for USB and AC Adapter	QFN14 (3x4)
MP2617	4	16	1	3	√	√	CC/CV switching	1.5MHz	3A Single Input, Single Cell Switch Mode Battery Charger with Narrow VDC Power Path Management	QFN20 (3x4)
MP2633	4.5	16	1	2	√	√	CC/CV switching	600/1200	1.5A Single Cell Switch Mode Battery Charger with Power Path Management and Boost OTG	QFN24 (4x4)
MP2635	4.5	16	1	2	√	√	CC/CV switching	600/1200	2A Single Cell Switch Mode Battery Charger with Power Path Management and Boost OTG	QFN24 (4x4)
MP2610	5	24	1/2	Up to 2.0	√	√	CV/CC Switching	1100	1.1MHz Switching Li-Ion Charger, up to 90% Efficiency	QFN16 (4x4)
MP2618	5.5	24	2/3	Up to 2.0	√	√	CV/CC Switching	600	600kHz Switching Li-Ion Charger with System Power Path Mgmt	QFN28 (4x5)
MP2619	4.5	24	2/3	2	√	√	CV/CC Switching	600	2A, 24V Input, 600kHz, 2-3 Cell Switching Li-Ion Battery Charger with System Power Path Management	QFN28 (4x5)
MP26101	5	24	1/2	Up to 2.0	√	√	CV/CC Switching	1100	4.1V/Cell Switching Li-Ion Charger	QFN16 (4x4)
MP26123	9	24	2/3	Up to 2.0	√	√	CV/CC Switching	600	600kHz Switching Li-Ion Battery Charger	QFN16 (4x4)
MP2623	4.5	24	1/2	Up to 2.0	√	√	CV/CC Switching	1100	3.6V/Cell Switching Li-Ion Charger	QFN16 (4x4)

NEW

USB & CURRENT-LIMIT LOAD SWITCHES

USB LOAD SWITCHES

Part Number	V _{IN} (Min) (V)	V _{IN} (Max) (V)	Max Cont Current (A)	Max Current Limit (A)	Enable Logic	Fault Flag	Output Discharge	Note	Package
Single Channel									
MP6205	2.7	5.5	0.5	1	Active High	Over-Current, Active Low	No	Single 500mA Current-Limit Switch, p2p TPS2041B/51B	QFN8 (2x3), MSOP8E, SOIC8E
MP62055 (-3)	2.7	5.5	0.5	1.1	Active High	Over-Current, Active High	No	0.5A Current-Limit Switch, Small Package, Industry Standard, Pin Out, p2p TPS2051B	TSOT23-5, SOIC8 (62055-3)
MP62130 MP62131	2.7	5.5	0.5	1.1	Active Low Active High	Over-Current, Active Low	Yes	Single 500mA Current-Limit Switch With Output Discharge, p2p LM3525M-L	MSOP8, SOIC8
MP62061	2.7	5.5	0.7	1.25	Active High	Over-Current, Active High	No	Single 700mA Current-Limit Switch, p2p TPS2051B	MSOP8E, SOIC8E
MP62071	2.7	5.5	0.8	1.1	Active High	Over-Current, Active High	No	Single 800mA Current-Limit Switch, p2p TPS2051B	MSOP8E
MP6211	2.7	5.5	1	2.2	Active High	Over-Current, Active Low	No	Single 1A Current-Limit Switch, p2p TPS2051B	SOIC8E, MSOP8E
MP6212	2.7	5.5	1	2.2	Active Low	Over-Current, Active Low	No	Single 1A Current-Limit Switch with 90uA I _q & 1.5A Current Limit	SOIC8E, MSOP8E
MP6211-3 MP6212-3	2.7	5.5	1	2.2	Active High Active Low	Over-Current, Active Low	No	Single 1A Current-Limit Switch, FLAG Output Remains Low After a Short Circuit or Thermal Current-Limit Event	SOIC8E, MSOP8E
MP6215	2.7	5.5	1.5	2.3	Active High	Over-Current, Active Low	No	Single 1.5A Current-Limit Switch	MSOP8E
MP62170 MP62171	2.7	5.5	1.5	2.3	Active Low Active High	Over-Current, Active Low	No	1.5A Current-Limit Switch, p2p TPS2061 and p2p TPS2065	SOIC8, MSOP8
MP62170-1 MP62171-1 MP62171-3	2.7	5.5	1.5	2.3	Active Low Active High	Over-Current, Active Low	Yes	1.5A Current-Limit Switch with Output Discharge, p2p TPS2061 and p2p TPS2065	SOIC8, MSOP8
MP62550 MP62551	2.5	5.5	1.5	1.7	Active Low Active High	Over-Current, Active Low	No	Precision Adjustable Current-Limited Power Distribution Switch 60mA, 1.7A, 88/100mΩ @100mA, 1.5μA Max Shutdown Current	TQFN6 (2x2), TSOT23-6
MP62040	1.7	5.5	2	-	Active Low	-	No	Single Channel, up to 2A Continuous Current in Ultra Small Package	UTQFN4
MP62040-1 MP62041-1	1.7	5.5	2	-	Active Low Active High	-	Yes	Single Channel, up to 2A Continuous Current with Output Discharge in Ultra Small Package	UTQFN4
MP62160 MP62161	2.7	5.5	2	2.8	Active Low Active High	Over-Current, Active Low	Yes	2A Current-Limit Switch with Output Discharge	QFN8E, MSOP8E, SOIC8
MP62180 MP62181	2.7	5.5	2	2.8	Active Low Active High	Over-Current, Active Low	No	2A Current-Limit Switch, without Output Discharge Version of MP62160/1	QFN8E, MSOP8E, SOIC8
MP62260 MP62261	2.7	5.5	2	3	Active Low Active High	Over-Current, Active Low	No	2A, 50mΩ R _{ds(on)} , Current-Limit Switch, p2p TPS2024 and p2p TPS2034	SOIC8
MP62260-1 MP62261-1	2.7	5.5	2	3	Active Low Active High	Over-Current, Active Low	Yes	2A, 45mΩ R _{ds(on)} , Current-Limit Switch with Output Discharge, p2p TPS2024 and p2p TPS2034	SOIC8
Dual Channel									
MP62350 MP62351	2.7	5.5	0.5	0.75	Active Low Active High	Over-Current, Active Low	Yes	Dual 500 mA/ch Current-Limit Switch, p2p LM3526	SOIC8, MSOP8
MP6231 MP6232	2.7	5.5	0.5	1.1	Active High Active Low	Over-Current, Active High	No	Dual 500 mA/ch Current-Limit Switch, p2p TPS2052B and p2p TPS2042B	SOIC8, SOIC8E, MSOP8E
MP62340 MP62341	2.7	5.5	1.0	1.5	Active Low Active High	Over-Current, Active Low	No	3.3V/5V Dual 1A Current-Limit Switch, p2p TPS2066/2	MSOP8E, SOIC8
MP62340-1 MP62341-1	2.7	5.5	1.0	1.5	Active Low Active High	Over-Current, Active Low	Yes	3.3V/5V Dual 1A Current-Limit Switch with Output Discharge, p2p TPS2066/2	MSOP8E, SOIC8
MP6233	2.7	5.5	1.5	2.6	Active High	Over-Current, Active Low	No	1.5A Current-Limit Switch	MSOP8E
ELECTRONIC FUSES (INTEG HOT-SWAP SWITCHES)									
Part Number	V _{IN} (Min) (V)	V _{IN} (Max) (V)	Max Cont Current (A)	Max Current Limit (A)	Enable Logic	Fault Flag	Output Discharge	Note	Package
MP6219	2.7	5.5	2.0	Prog.	Active High	Thermal Fault = Tri-State	No	1A-2A Programmable Current-Limit, 1.4ms Turn-On Time	SOIC8E
MP5002	2.5	6	3	Prog.	Active High	Thermal Fault = Tri-State	No	3.3V, 56mΩ R _{ds(on)} , Programmable Current-Limit with Built-In Protection and Fault Indication, with Slew-Rate Control	QFN10 (3x3)
MP5003	2.5	6	3.0	Prog.	Active High	Thermal Fault = Tri-State	No	3.3V, 44mΩ R _{ds(on)} , Programmable Current-Limit with Slew-Rate Control & Automatic Startup After Thermal Protection	QFN10 (3x3)
MP5010	4	10	4.2	Prog.	Active High	Thermal Fault = Tri-State	No	1A-5A, 44mΩ R _{ds(on)} , Programmable Current-Limit & Slew-Rate Control, Improved Version of MP5001, p2p NIS5135.	QFN10 (3x3)
MP5011	10	18	4.2	Prog.	Active High	Thermal Fault = Tri-State	No	1A-5A, 44mΩ R _{ds(on)} , Programmable Current-Limit & Slew-Rate Control, p2p NIS5132	QFN10 (3x3)
NEW MP5010A	3	18	4.2	Prog.	Active High	Thermal Fault = Tri-State	No	1A-5A, 40mΩ R _{ds(on)} , Programmable Current-Limit & Slew-Rate Control, 3A/ 2.13A Trip/ hold Current, 3ms Soft-start time	QFN10 (3x3)
NEW MP5010B	3	18	4.2	Prog.	Active High	Thermal Fault = Tri-State	No	1A-5A, 40mΩ R _{ds(on)} , Programmable Current-Limit & Slew-Rate Control, 4.3A/ 3A Trip/ hold Current, 2.58ms Soft-start time	QFN10 (3x3)
MP5007	4	6	5	Prog.	Active High	Thermal Fault = Tri-State	No	5V, 1A-5A, 37mΩ R _{ds(on)} , Programmable Current-Limit with Slew-Rate Control	QFN10 (3x3)
MP5006	4	10	5.0	Prog.	Active High	Thermal Fault = Tri-State	No	5V, 44mΩ R _{ds(on)} , Programmable Current-Limit with Slew-Rate Control and Automatic Start-Up/Retry After Thermal Protection	QFN10 (3x3)
NEW MP5021	8	16	10	Prog. to 15A	Active High	Current-Limit, Thermal Shut Down and Damaged MOSFET	Yes	12V, 7mΩ R _{ds(on)} Hot-Swap Protection Device with Current Monitoring	QFN22 (3x5)

AUTOMOTIVE

CLASS-D AUDIO

Part Number	V _{IN} (Min) (V)	V _{IN} (Max) (V)	P _{OUT} (W)	Efficiency (%)	THD+N (%)	PSRR (dB)	Type	Notes	Package
MPQ7731	9.5	18	30	90	0.1 @ 1W	60	Mono	5W - 30W Class D Mono Bridged Audio Amplifier, Available in AEC-Q100 and Industrial Grade	TSSOP20

DC/DC

Part Number	V _{IN} (Min) (V)	V _{IN} (Max) (V)	I _{OUT} (A)	I _{SW} Limit (Typ) (A)	I _O (Typ) (mA)	V _{FB} (V)	Switching Freq (kHz)	Soft Start	Ext Sync	Notes	Package
MPQ2451	3.3	36	0.6	0.85	0.23	0.8	2000	Internal	-	Industrial/Automotive-Grade 36V, 2MHz, 0.6A Step-Down Converter, Available in AEC-Q100 and Industrial Grade	SOT23-6L, QFN6 (2x2)
MPQ2128	2.5	6	1	1.5	0.35	0.594	3000	Internal	-	3MHz Sync Buck, Available in AEC-Q100 and Industrial Grade	QFN8 (2x2)
MPQ4558	3.8	55	1	1.9	0.14	0.8	2000 (Adj.)	Internal	-	1A, 2MHz, 55V Step-Down Converter, Available in AEC-Q100 and Industrial Grade	QFN10 (3x3), SOIC8E
MPQ4561	3.8	55	1.5	2.5	0.14	0.8	2000 (Adj.)	External	-	1.5A, 2MHz, 55V Step-Down Converter, Available in AEC-Q100 and Industrial Grade	QFN10 (3x3)
MPQ4560	3.8	55	2	3.2	0.14	0.8	2000 (Adj.)	Internal	-	2A, 2MHz, 55V Step-Down Converter, Available in AEC-Q100 and Industrial Grade	QFN10 (3x3), SOIC8E
MPQ4462	3.8	36	3.5	4.7	0.12	0.8	4000 (Adj.)	Internal	-	3.5A, 4MHz, 36V, Step-Down Converter, Available in AEC-Q100 and Industrial Grade	QFN10 (3x3), SOIC8E
MPQ4470	4.5	36	5	8	0.5	0.815	200kHz to 1MHz (Adj.)	External	-	High-Efficiency, Fast-Transient, 5A, 36V Synchronous, Step-Down Converter, AEC-Q100 qualification in process	QFN20 (3x4)

LED DRIVER

Part Number	V _{IN} (Min) (V)	V _{IN} (Max) (V)	I _{SW} Limit (Typ) (A)	I _O (Typ) (mA)	V _{FB} (V)	Switching Freq (kHz)	Open LED Protection	Type	Notes	Package
MPQ2483	4.5	55	3	0.8	0.198	1350	√	Buck, Buck-Boost	Industrial Grade, 2.5A, 55V, Programmable Frequency White LED Driver, Available in AEC-Q100 and Industrial Grade	QFN10 (3x3)

SUPERVISORY

Part Number	V _{IN} (Min) (V)	V _{IN} (Max) (V)	Reset Threshold (V)	Threshold Accuracy (%)	I _O (Typ) (μA)	Notes	Package
MPQ6400	1.8	6	93% V _{SENSE}	±1.0	1.6	Low Quiescent Current Programmable-Delay Supervisory Circuit, Available in AEC-Q100 and Industrial Grade	QFN6 (2x2)

INDUSTRIAL

	Part Number	V _{IN} (Min) (V)	V _{IN} (Max) (V)	I _{OUT} (A)	I _{sw} Limit (Typ) (A)	I _o (Typ) (mA)	V _{FB} (V)	Switching Freq (kHz)	Soft Start	Ext Sync	Notes	Package
AEC-Q100	MPQ2451	3.3	36	0.6	0.85	0.23	0.8	2000	Internal	-	Industrial/Automotive-Grade 36V, 2MHz, 0.6A Step-Down Converter, Available in AEC-Q100 and Industrial Grade	SOT23-6L, QFN6 (2x2)
AEC-Q100	MPQ4558	3.8	55	1	1.9	0.14	0.8	2000 (Adj.)	Internal	-	1A, 2MHz, 55V Step-Down Converter, Available in AEC-Q100 and Industrial Grade	QFN10 (3x3), SOIC8E
AEC-Q100	MPQ4561	3.8	55	1.5	2.5	0.14	0.8	2000 (Adj.)	External	-	1.5A, 2MHz, 55V Step-Down Converter, Available in AEC-Q100 and Industrial Grade	QFN10 (3x3)
AEC-Q100	MPQ4560	3.8	55	2	3.2	0.14	0.8	2000 (Adj.)	Internal	-	2A, 2MHz, 55V Step-Down Converter, Available in AEC-Q100 and Industrial Grade	QFN10 (3x3), SOIC8E
	Part Number	V _{DD} (Min) (V)	V _{DD} (Max) (V)	Drain Source Rating (V)	Source On-Resistance	Operating Current (mA)	I _o (Typ) (mA)	Notes	Package			
	MP6914	6	24	30	5.3	1	0.09	Intelligent Rectifier with Integrated 5.3mΩ 60V Power Switch	SOIC8			

AUDIO PRODUCTS (CLASS D-AUDIO AMPLIFIERS)

Part Number	V _{IN} (Min) (V)	V _{IN} (Max) (V)	P _{OUT} (W)	Efficiency (%)	THD+N (%)	PSRR (dB)	Type	Notes	Package
MP1720	2.5	5.5	2.7	90	0.11 @ 1W	60	Mono	Mono BTL, Low-EMI, High-Efficiency, Flexible Switching Frequency Setting	QFN10 (3x3), MSOP10E
MP1740	2.5	5.5	3	90	0.11 @ 1W	62	Mono	Mono BTL, Ultra Small for Portable and Mobile Phones	9-Ball, WLCSOP (1.5x1.5)
MP7741	9.5	36	10	94	0.02 @ 1W	58	Mono	Single-Ended, Fully Integrated Audio Amplifier	QFN10 (3x3)
MP7742	9.5	28	15 (2x)	90	0.018 @ 1W	60	Stereo	Stereo, Single-Ended, Fully Integrated Audio Amplifier, p2p with MP7722	TSSOP20F
MP7740	9.5	36	15	90	0.018 @ 1W	60	Mono	Single-Ended, p2p MP7720	SOIC8
MP7720	9.5	24	20	93	0.04 @ 1W	60	Mono	Single-Ended Audio Amplifier	PDIP8, SOIC8
MP7722	9.5	24	20 (2x)	93	0.06 @ 1W	60	Stereo	Stereo, Single-Ended Audio Amplifier	TSSOP20F
MP7745	9.5	26	20 (2x)	93	0.05 @ 1W	59	Stereo	Stereo, Single-Ended, Fully Integrated Audio Amplifier, p2p with MP7722	TSSOP20F
MP7747	9.5	36	20	91	0.02 @ 1W	59	Mono	Single-Ended, Fully Integrated Audio Amplifier	QFN10 (3x3)
MP7748	9.5	36	20 (2x)	91	0.02 @ 1W	60	Stereo	Stereo Single Ended, Fully Integrated Audio Amplifier	TSSOP28F
NEW MP7770	9.5	36	45 (2x)	95	0.03@1W	60	Stereo	2x45W Stereo SE or 1x90W BTL Audio Amplifier, 8.5A peak	TSSOP28F, TSSOP28FR
MP7731	9.5	18	30	90	0.10 @ 1W	60	Mono	30W Class-D Mono Amplifier	TSSOP20F
NEW AEC-Q100 MPQ7731	9.5	18	30	90	0.10 @ 1W	60	Mono	30W Class-D Mono Amplifier Available in AEC-Q100 and Industrial Grade	TSSOP20F
MP7782	9.5	24	50	90	0.06 @ 1W	60	Mono	Full-Bridge BTL Output	TSSOP20F

PRECISION ANALOG

ANALOG SWITCH

Part Number	V _{IN} (Min) (V)	V _{IN} (Max) (V)	Channels	T _{ON} (ns)	T _{OFF} (ns)	R _{ON} (Max) (Ω)	Notes	Package
MP2735	1.65	5.5	2	29	23	0.45	Low Voltage Dual SPDT Analog Switch	QFN10 (1.4x1.8)
MP2736	1.65	5.5	2	29	23	0.45	Low Voltage Dual SPDT Analog Switch with EN Function	QFN10 (1.4x1.8)

HIGH-SIDE CURRENT SENSE AMPLIFIERS

Part Number	V _{IN} (Min) (V)	V _{IN} (Max) (V)	I _O (Typ) (μA)	PSRR (%/V)	Offset Voltage (mV)	Notes	Package
MP8110	2.5	40	12	0.05	0.5	High-Side Current Sense	SOIC8, MSOP8

OPERATIONAL AMPLIFIERS

Part Number	V _{IN} (Min) (V)	V _{IN} (Max) (V)	GBW (kHz)	I _O (Typ) (μA)	PSRR (dB)	Slew Rate (V/μs)	Offset Voltage (mV)	Notes	Package
MP8102	1.8	5.5	200	7.5	80	0.1	1.0	Ultra-Low Power 1.8V, 600kHz Op Amp	TSOT23-5
MP8101	1.8	5.5	400	11	80	0.2	1.0	Ultra-Low Power 1.8V, 400kHz Op Amp	TSOT23-5
MP8103	1.8	5.5	200	14	80	0.1	1.0	Dual Ultra-Low Power 1.8V, 600kHz Op Amp	MSOP8
MP8104	1.8	5.5	400	11	80	0.2	1.0	Ultra-Low Power 1.8V, 400kHz Op Amp with Industry Standard Pin Out	TSOT23-5
MP5120	3.2	18.0	14000	1600	85	45	2.0	Single-Channel, High-Speed, High-Voltage Rail-to-Rail Input-Output	TSOT-5
MP5220	3.2	18.0	14000	3200	85	45	2.0	Dual-Channel, High-Speed, High-Voltage Rail-to-Rail Input-Output	MSOP-8
MP5420	3.2	18.0	14000	6400	85	45	2.0	Quad-Channel, High-Speed, High-Voltage Rail-to-Rail Input-Output	TSSOP-14
MP5121	3.2	20.0	14000	1600	85	45	2.0	Single-Channel, High-Speed, High-Voltage Rail-to-Rail Input-Output	TSOT-5
MP5221	3.2	20.0	14000	3200	85	45	2.0	Dual-Channel, High-Speed, High-Voltage Rail-to-Rail Input-Output	MSOP-8
MP5421	3.2	20.0	14000	6400	85	45	2.0	Quad-Channel, High-Speed, High-Voltage Rail-to-Rail Input-Output	TSSOP-14
MP8130	2.7	36.0	100	10	80	0.1	1.0	Ultra-Low Power 36V, 200kHz, High-Voltage Op Amp	TSOT23-5

VOLTAGE REFERENCE

Part Number	V _{IN} (Min) (V)	V _{IN} (Max) (V)	V _{OUT} (V)	Initial Acc (%)	Operating Current (mA)	Z _{OUT} (Ω)	Description	Notes	Package
MP8201	1.2	12	1.2 - 10	0.5	60μA to 20mA	1	1.0V Shunt Reference	Precision Adjustable Shunt Voltage Regulator	SOT23
MP8200	1.0	12	1.00	1.0	100μA to 10mA	0.5	1.0V Shunt Reference	Precision Shunt Reference	SOT23

ISOLATED & TRANSFORMER BASED POWER SUPPLIES

Part Number	V _{IN} (Min) (V)	V _{IN} (Max) (V)	P _{OUT} (W)	I _{SW} Limit (Typ) (A)	Topology	I _Q (Typ) (mA)	V _{FB} (V)	Switching Freq (kHz)	Notes	Package
MP3908	4.75	12	60W (Max)	0.19V/R _{SENSE}	Flyback/Forward	0.27	0.82	260	Lossless Current Sense, SEPIC Apps	MSOP10
MP3900	8.6	12	60W (Max)	0.2V/R _{SENSE}	Flyback/Forward	0.18	0.82	330	Boost Controller 10V Gate Driver	MSOP8
MP6001	4.5	100	15W (Max)	2.0	Flyback/Forward	-	-	55 to 550	15W, Integrated 150V Power Switch	SOIC8E
MP6002	10	100	30W	4.0	Flyback/Forward	1	1.21	55 to 550	30W, Integrated 150V Power Switch	SOIC8E
MP6003	10	100	15W	0.7	Flyback/Forward	1	1.21	60 to 550	15W, Integrated 150V Power Switch	SOIC8E

FULL-BRIDGE & HALF-BRIDGE POWER DRIVERS

BRIDGE RECTIFIER IC

Part Number	V _{IN} (Min) (V)	V _{IN} (Max) (V)	R _{dson} (mΩ)	Drain Source Rating (V)	Rise/Fall Time (ns)	Forward Voltage (V)	Reverse Recovery Time (ns)	Leakage Current (μA)	Output Current (A)	Notes	Package
MP8051	4	16	45	23	25.00	0.4	78	80	1	Integrated 2 MOSFETs and 2 Schottky Diodes, 0.45mm Height	TQFN (3x3)

FULL-BRIDGE

Part Number	V _{IN} (Min) (V)	V _{IN} (Max) (V)	Boot Strap Supp (Max) (V)	Peak Pull-Up Current (A)	Peak Pull-Down Current (A)	Rise Time (ns)	Fall Time (ns)	Turn Off/On Delay (ns)	Notes	Package
MP8042	7.5	24	5	5	5	10	10	54/37	24V, 5A Dual-Channel Power Half-Bridge Driver	TSSOP20E
MP8049	5	26	-	5.5	5.5	5	5	30/30	24V, 5A Quad-Channel Power Half-Bridge Driver	QFN40 (5x5)

HALF-BRIDGE

Part Number	V _{IN} (Min) (V)	V _{IN} (Max) (V)	Boot Strap Supp (Max) (V)	Peak Pull-Up Current (A)	Peak Pull-Down Current (A)	Rise Time (ns)	Fall Time (ns)	Turn Off/On Delay (ns)	Notes	Package
MP18021	9	16	100	1.5	2.5	12	9	16	100V High Frequency, N-MOSFET Half-Bridge Gate Driver with 1ns Matching Delay, p2p HIP2100, MIC4103/4, MAX5062, UCC27200, and LM5100/1	SOIC8E
MP18021A	9	18	100	1.5	2.5	12	9	16	100V, 2.5A, High Frequency, Half-Bridge Gate Driver, Including New Package to MP18021, Consumer Grade	SOIC8E, QFN8 (3x3)
MPQ18021A	9	18	100	1.5	2.5	12	9	16	100V, 2.5A, High Frequency, Half-Bridge Gate Driver	SOIC8E, QFN8 (3x3)
MP18024	9	16	100	2.6	4.5	15	12	20	100V, 4A, High Frequency, Half-Bridge Gate Driver	SOIC8E
MP1907	6	18	100	1.5	2.5	12	9	20	100V, 2.5A, High Frequency, Half-Bridge Gate Driver, Including Input Signal Overlap Protection and UVLO Latch Function	QFN10 (3x3)
MP1906	10	16	80	0.4	1	50	30	80	80V, Half-Bridge, Gate Driver Including Input Signal Overlap Protection and Under-Voltage Lockout for Both Channels	SOIC8E
MPQ8039	7.5	25	5	9.0	9	20	20	70	9A, 25V Integrated Half-Bridge and Driver	SOIC8E
MP8040	7.5	25	5	9.0	9	20	20	70	9A, 25V Integrated Half-Bridge and Driver	SOIC8E
MP8044	7.5	25	-	-	-	-	-	-	22V, 4A Dual-Channel Power Half-Bridge	TSSOP20F

NEW

MOTOR DRIVERS

BRUSHLESS DC MOTOR DRIVERS

Part Number	V _{IN} (Min) (V)	V _{IN} (Max) (V)	I _{OUT} (mA)	V _{HB} (V)	I _Q (mA)	Type	Notes	Package
MP6505	4.5	16	400	1.2	1.4	Single-Phase	Single-Phase Brushless DC Motor Driver with IOVP, OCP, Built-in Locked-Rotor Protection	TSSOP16 (5x6.4), QFN16 (3x3)
MP6510	4.5	16	1200	1.2	1.4	Single-Phase	Single-Phase Brushless DC Motor Driver with IOVP, OCP, Built-in Locked-Rotor Protection	TSSOP16 (5x6.4)

STEPPER DC MOTOR DRIVERS

Part Number	V _{IN} (Min) (V)	V _{IN} (Max) (V)	I _{OUT} (mA)	V _{HB} (V)	I _Q (mA)	Type	Notes	Package
MP6507	2.7	15	700	-	1.1	-	Bipolar Stepper-Motor Driver with Integrated MOSFETs	TSSOP16 (5x6.4), QFN16 (3x3)

POWER OVER ETHERNET (PoE) PD SOLUTIONS

PD CONTROLLERS

Part Number	V _{IN} (Min) (V)	V _{IN} (Max) (V)	V _{OUT} (V)	I _{SW} Limit (Typ) (A)	I _O (Typ) (mA)	V _{FB} (V)	Switching Freq (kHz)	Sync	Notes	Package
MP3900	8.6	12	10V Gate Driver	0.2V/R _{SENSE}	0.18	0.816	330	-	(Boost Controller) 10V Gate Drive	MSOP8
MP3908	4.75	12	10V Gate Driver	0.19V/R _{SENSE}	0.27	0.82	260	√	Sync Boost Controller, Optimized for PoE PD Power, Lossless Current Sense, Forward, Flyback, SEPIC Apps, External SS	MSOP10
MP6001	4.5	100	5V	2.0	-	-	55 to 550	-	15W, Integrated 150V Power Switch	SOIC8E
MP6002	10	100	5V	4.0	1	1.21	55 to 550	-	30W, Integrated 150V Power Switch	SOIC8E

PD IDENTITY

Part Number	Pass Device	Current Limit (mA)	Thermal Protection	IEEE Detection & Classification	Notes	Package
MP8005	100V, 1Ω DMOS	440	Yes	802.3af	13W PoE PD interface and PWM Controller	TSSOP20
MP8001	100V, 0.8Ω DMOS	440	Yes	802.3af	15W PoE PD Controller	SOIC8

SUPERVISORY CIRCUITS / VOLTAGE SUPERVISORS

AEC-Q100

Part Number	V _{IN} (Min) (V)	V _{IN} (Max) (V)	Reset Thres (V)	Threshold Acc (%)	Reset Delay Time (ms)	I _Q (Typ) (μA)	Notes	Package
MPQ6400	1.8	6	93% V _{SENSE}	±1.0	Adjustable: 2.1 to 10000	1.6	Reset Voltage can be Preset or Adjustable, Available in AEC-Q100	TSOT23-6, QFN6 (2x2)
MP6401	2.5	5.5	92.5% V _{OUT} (A) 87.5% V _{OUT} (B)	-7.5 (A) -12.5 (B)	Selectable: 3.75, 30, 200 and 1900	80	With 300mA LDO that Comes with Fixed Outputs 1.8V, 2.5V, or 3.3V or Adj. 1.229V - 5V	TQFN6, TQFN8, TSOT23-6
MP6402	2.5	5.5	92.5% V _{OUT}	±3.0	Adjustable: 2.1 to 10000	17	With Dual 500mA LDOs that Comes with Fixed Outputs from 0.9V to 3.3V	SOIC8E, TQFN8 (3x3)

PMU

Part Number	V _{IN} (Min) (V)	V _{IN} (Max) (V)	V _{OUT} (V)	V _{FB} (V)	I _{sw} Limit (Typ) (A)	Switching Freq (kHz)	Notes	Package
MP5410	1.8	5.5	10	1.23	10	Variable	Low Start-Up Voltage Boost Converter with Four SPDT Switches	QFN16 (3x3)
MP5414	1.8	5.5	10	1.23	10	Variable	Step-Up Converter, Four SPDT Switches, LDO and Charger Designed for 3D Glasses	QFN28 (4x5)

PART NUMBERING NOMENCLATURE

PART NUMBERING EXAMPLE: MP1234EK-LF-Z

MP		1234	E		K					-LF	-Z	
Monolithic Power		Part Number	Temperature Grade (T _A)		Package					Lead Free	Tape & Reel	
MP### MP#### MP##### MPQ#### HF#### NB###	Older Devices		C	0°C to +70°C	C	WLCSP	QM	QFN (6x7)	C	C-Spec	-LF	-Z
D			-40°C to +85°C	D	QFN (2x3)	QN	QFN (7x7)	E	Enhanced			
E			-20°C to +85°C	E	SC70	QP	QFN (7x8)	R	Reserve Lead Bend or Top Exposed Pad			
H			-40°C to +125°C	F	TSSOP w/ EXPOSED PAD	QQ	QFN (8x8)	S	Customer Specific			
K			-55°C to +125°C	FP	QFP	QV	QFN (3x5)	T	Thin Package			
G			Temperature Internal to Datasheet -40°C to +125°C (T _J) Standard	G	QFN (2x2)	QW	QFN (4x6)	U	Ultra Thin Package			
H				MSOP w/ EXPOSED PAD	QX	QFN (6x10)						
J				TSOT23 (0.9mm Height)	QY	QFN (5x8)						
K				MSOP	R	QFN (4x4)						
L				QFN (3x4)	S	SOIC						
M				TSSOP	SD	SOD123						
N				SOIC w/ EXPOSED PAD	T	SOT23 (1.1mm Height)						
P				PDIP (300 Mil)	U	QFN (5x5)						
Q				QFN (3x3)	V	QFN (4x5)						
QD				QFN (1x1.5)	W	SOIC - WB w/ EXPOSED PAD						
QF	QFN (1.2x1.6)	X	Sorted Wafer									
QG	QFN (1.4x1.8)	XN	Unsorted Wafer									
QH	QFN (1.5x2)	Y	SOIC-WB (Wide-Body)									
QJ	QFN (5x6)	Z	TO220									
QK	QFN (6x6)	ZF	TO263									
Parts introduced after July 2011												
MP### MP#### MP##### MPQ#### HF#### NB###	Newer Devices		G	Temperature Internal to Datasheet -40°C to +125°C (T _J) Standard	Same as Above					No LF Indicator	-Z	