



The Future of Analog IC Technology®

PRODUCT SELECTOR GUIDE

POWER MANAGEMENT SOLUTIONS FOR WORLDWIDE APPLICATIONS

▶ Regulators

- ~ DC/DC Step-Down (Buck)
- ~ DC/DC Step-Up (Boost)
- ~ Linear Regulators

▶ Lighting Solutions

- ~ Backlighting WLED
- ~ Lighting & Illumination
- ~ Photo Flash

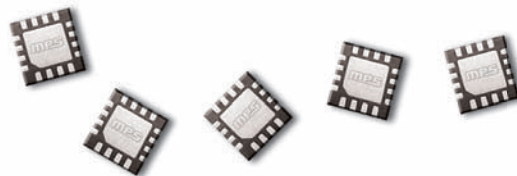
▶ AC/DC Offline

▶ Current-Limit Switches

▶ Battery Chargers/Protection

▶ Class-D Audio Amplifiers

Monolithic Power Systems, Inc.



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REGULATORS (STEP-DOWN)

DC/DC (STEP-DOWN) SYNCHRONOUS SWITCHERS

Part Number	V _{IN} (Min) (V)	V _{IN} (Max) (V)	Load Current (A)	I _{sw} Limit (Typ) (A)	I _Q (Typ) (mA)	Feedback Voltage (V)	Switching Freq (kHz)	Soft Start	Ext Sync	Notes	Package
Maximum Operating Input Voltage 1.1V ≤ Vin ≤ 7V											
MP28119	2.5	6.0	0.6	1.6	0.4	0.6	1700	Internal	-	Fixed (1.0V and 1.2V) and Adj. Output Options, Output Discharge, Internal Comp	QFN8 (2x2)
MP2104	2.5	6.0	0.6	1.0	0.4	0.6	1700	-	-	Fixed (1.5V and 1.8V) and Adj Output Options (0.6V to 6V) in a TSOT23-5 and TQFN-6	TSOT23-5 TQFN-6
MP28114	2.5	6.0	0.6	1.0	0.4	0.6	1700	Internal	-	Fixed (1.5V, 1.8V, 3.3V) and Adj Output Voltage (0.6V to 6V) in a QFN8	QFN8 (2x2)
MP2105	2.5	6.0	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	0.8 (2x)	1.3	0.4	0.6	1240	-	-	Dual Output, Adj Output Voltage (0.6V to 6V)	QFN10 (3x3)
MP2101	2.5	6.0	0.8 & 0.2	1.4	0.4	0.6	1600	-	-	0.8A Sync Buck + 0.2A LDO, Internal Power Switches, Power On Reset Output	QFN10 (3x3)
MP2112	2.5	6.0	1.0	1.6	0.44	0.6	1050	Internal	-	1MHz Sync Buck, Internal Comp	QFN6 (3x3)
MP2128	2.5	6.0	1.0	1.5	0.35	0.594	3000	Internal	-	3MHz Sync Buck	SOT23 QFN8 (2x2)
MP2136	2.5	6.0	1.0	1.5	0.05	0.594	2000	Internal	-	2MHz Sync Buck w/ Up to 95% Efficiency, p2p RT8010	QFN6 (2x2)
MP2113	2.7	6.0	1.5	2.2	0.55	0.6	1500	Internal	-	1.5MHz Sync Buck with Dynamic Vout Control	QFN8 (2x3)
MP2012	2.7	6.0	1.5	3.0	0.6	0.8	1200	Internal	-	1.2MHz Sync Buck with Power Good Output	QFN6 (3x3)
MP2125	2.7	6.0	1.5 (2x)	3.0	0.6	0.8	1200	Internal	-	1.2MHz, Dual 1.5A Sync Buck in a 3x4mm QFN14	QFN14 (3x4)
MP2127	2.7	6.0	2.0	3.0	0.5	0.8	1200	Internal	-	Internal Comp, 90% Efficiency, Internal Power Switches, Power Good Output	QFN6 (3x3)
MP2115	2.8	6.0	2.0	3.0 (Min)	0.5	0.607	700-2000	-	-	High Efficiency, Programmable Freq and Programmable Input Current Limit, Ideal for Powering USB Powered Portable Equipment	QFN10 (3x3)
MP2116	2.5	6.0	2 & 0.5	3.1	0.3	0.6	1250	Internal	-	Internal Comp, 95% Efficiency, Internal Power MOSFET Switches, Power Good Output, Also Comes with 0.5A LDO	QFN10 (3x3)
MP2119	2.7	5.5	2.0	3.5	0.75	0.8	1500	Internal	√	1.5MHz Sync Buck with Power Good Output and Adj Output from 0.8V to 0.9Vin	QFN10 (3x3)
MP2108	2.6	6.0	2.0	3.5	1.2	0.9	740	External	-	740kHz Sync Buck with Integrated Power Switches and Adj Output from 0.9V to 5V	MSOP10 QFN10 (3x3)
MP2117	2.5	6.0	2.2	3.3	0.35	0.596	1250	Internal	-	1.25MHz Sync Buck with Internal Power Switches and Power On Reset Output	QFN10 (3x3)
MP2120	2.7	5.5	2.5	4.5	0.75	0.8	1500	Internal	√	1.5MHz Sync Buck with Power Good Output and Adj Output from 0.8V to 0.9Vin	QFN10 (3x3)
MP2126	2.5	6.0	2.5	3.3	0.35	0.596	1250	Internal	-	Internal Comp, 90% Efficiency, Internal Power Switches, Power Good Output, Also Comes with 0.5A LDO	SOIC8E
MP28128	2.7	6.0	2.5	4.5	0.75	0.8	1500	Internal	√	1.5MHz, 2.5A Sync Buck with Integrated Power Switches, Power Good Output, and Adj Output from 0.8V to 0.9Vin	QFN10 (3x3)
MP2249	2.5	6.0	3.0	4.5	0.48	0.6	1000	Internal	-	High Efficiency, Power Save Mode at Light Load, Power Good Indicator, Ideal for One Li-Ion Battery Powered Applications	SOIC8E TQFN10 (3x3)
MP2121	2.7	6.0	3.0	4.5	0.75	0.8	1500	Internal	√	1.5MHz, 3A Sync Buck with Power Good Output	QFN10 (3x3)
MP38115	1.1	5.5	4.0	6.5	0.75	0.8	1500	Internal	√	1.1V-5.5Vin, 1.5MHz, 4A Sync Buck with Power Good Output	QFN10 (3x3)
MP28115	2.7	6.0	4.0	6.5	0.75	0.8	1500	Internal	√	1.5MHz, 4A Sync Buck with Power Good Output and 1.5% Output Accuracy	QFN10 (3x3)
MP28275	4.5	7.0	5.0	7.0	1	0.805	1100	Internal	√	4.5V-7Vin, 1MHz, 5A Sync Buck with Power Good Output	QFN14 (3x4)
MP8352	3.0	6.0	6.0	8.0	0.75	0.8	600	Internal	√	3V-6Vin, 6A, 600kHz Sync Buck with 45mΩ Integrated Top-Side FET and Bottom FET Driver	QFN14 (3x4)

REGULATORS (STEP-DOWN)

DC/DC (STEP-DOWN) SYNCHRONOUS SWITCHERS

Part Number	V _{IN} (Min) (V)	V _{IN} (Max) (V)	Load Current (A)	I _{sw} Limit (Typ) (A)	I _Q (Typ) (mA)	Feedback Voltage (V)	Switching Freq (kHz)	Soft Start	Ext Sync	Notes	Package
Maximum Operating Input Voltage ≤ 28V											
MP28225	3.0	14.5	1.0	2.3	0.75	0.8	1300	Internal	✓	3.0V-14.5Vin, 1.3MHz, 1A Sync Buck	QFN14 (3x4)
MP2309	4.75	23	1.0	2.0	1.3	0.92	340	External	-	4.75V-23Vin, 340kHz, 1A Sync Buck with External SS and External Comp	SOIC8
MP2305	4.75	23	2.0	3.4	1.3	0.92	340	External	-	4.75V- 23Vin, 340kHz, 2A Sync Buck with External SS and External Comp	SOIC8
MP2209	3.0	16	2.0	4.0	0.75	0.8	600	External	✓	3V-16Vin, 600kHz, 2A Sync Buck with External SS and Power Good Output	QFN14 (3x4)
 MP1492	4.2	16	2.0	3	1	0.805	Programmable	Internal	-	2A, 4.2V-16V, COT, Synchronous Step-Down Converter in a SOIC8 Package	SOIC8
 MP28259	4.2	20	2.0	3	0.36	0.815	Programmable	Internal	-	2A, 4.2V-20V, COT, Synchronous Step-Down Converter in a 2X3mm QFN Package	QFN12 (2x3)
MP28262	4.50	21	2.0	4.5	0.7	0.81	1100	Internal	✓	4.5V-21Vin, 1.1MHz, 2A Sync Buck with 20mΩ LS FET, Power Good Output and Internal Comp	QFN14 (3x4)
MP2205A	3.0	16	2.5	4.0	0.75	0.8	1300	Internal	✓	3V-16Vin, 1.3MHz, 2.5A Sync Buck with Power Good Output and Internal Comp	QFN14 (3x4)
 MP1493	4.2	16	3.0	4	1	0.805	Programmable	Internal	-	3A, 4.2V-16V, COT, Synchronous Step-Down Converter in a SOIC8 Package	SOIC8
 MP28258	4.2	20	3.0	4.2	0.36	0.815	Programmable	Internal	-	3A, 4.2V-20V, COT, Synchronous Step-Down Converter in a 2X3mm QFN Package	QFN12 (2x3)
MP38870	4.5	14	3.0	4.0 (Min)	0.9	0.8	600	Internal	✓	4.5V-14Vin, 600kHz, 3A Sync Buck with Power Good Output	QFN14 (3x4)
MP8642	4.5	23	3.0 (2x)	4.0	0.9	0.8	600	Internal	✓	4.5V-23Vin, 600kHz, 3A Sync Buck with Dual Output	QFN32 (5x5)
MP2212	3.0	16	3.0	6.0	0.75	0.8	600	Internal	✓	Low Frequency, Higher Efficiency Option to MP2207	QFN10 (3x3) SOIC8E
MP2307	4.75	23	3.0	5.8	1.3	0.92	340	External	-	4.75V-23Vin, 340kHz, 3A Sync Buck with External SS and External Comp	SOIC8E
 MP2227	3.0	24	3.0	4.5	1	0.80	1600	External	✓	3.0V-24Vin, 1.6MHz, 3A Sync Buck with Internal LDO, Internal Comp and External SS	QFN10 (3x3)
MP2303	4.75	28	3.0	6.3	1.3	0.8	340	External	-	4.75V-28Vin, 340kHz, 3A Sync Buck with External SS and External Comp	QFN10 (3x3) SOIC8E
MP2207	3.0	16	4.0	6.5	0.75	0.8	1300	Internal	✓	3V-16Vin, 1.3MHz, 4A Sync Buck	QFN10 (3x3) SOIC8E
MP2214	3.0	16	4.0	7.5	0.75	0.8	600	Internal	✓	3V-16Vin, 600kHz, 4A Sync Buck with Power Good Output	QFN14 (3x4) SOIC8E
MP8709	4.5	21	4.0	6.1	0.7	0.8	500	Internal	✓	4.5V-21Vin, 500kHz, 4A Sync Buck with Low-EMI Switching Speed Technology	SOIC8E
MP8725	4.5	21	5.0	6.0	0.7	0.8	500	Internal	✓	Monolithic High Voltage, High Efficiency, Step-Down with 20mΩ LS Rds(on)	QFN14 (3x4)
MP28265	5	21	5.0	6.0	0.7	0.81	1100	Internal	✓	5V-21Vin, 1.1MHz, 5A Sync Buck with Power Good Output Internal Comp	QFN14 (3x4)
 MP8736	4.5	19	6.0	12.0	0.5	0.815	200-1000 (Adj.)	External	-	Fully Integrated 30mΩ/12mΩ, High Efficiency, Fast Transient, 6A, 19V Synchronous Buck Converter in a Tiny 3x4mm QFN Package	QFN20 (3x4)
MP8726	5	21	6.0	7.0	0.7	0.81	500	Internal	✓	5V-21Vin, 500kHz, 6A Sync Buck with Power Good Output and Internal Comp Output Adj. from 0.8V	QFN14 (3x4)
MP38872	4.5	21	6.0	8.0	0.9	0.81	600	Internal	✓	4.5V-21Vin, 600kHz, 6A Sync Buck with 45mΩ PG, Integrated Top-Side FET and Bottom FET Driver	QFN14 (3x4)
 NB638	4.5	28	7.0	12.0	0.5	0.815	200-1000 (Adj.)	External	-	Fully Integrated, 30mΩ/12mΩ, High Efficiency, Fast Transient, 7A, 28V Synchronous Step-Down Converter in a Tiny 3x4mm QFN Package	QFN20 (3x4)
MP38874	4.5	21	8.0	9.5 (Min)	1.1 (Max)	0.81	600	Internal	✓	4.5V-21V, 600kHz, 8A Sync Buck with 42mΩ Integrated Top-Side FET, Bottom FET Driver, and PG	QFN14 (3x4)
 NB6381	4.5	28	8.0	12.0	0.5	0.815	200-1000 (Adj.)	External	-	Fully Integrated, 30mΩ/12mΩ, High Efficiency, Fast Transient, 8A, 28V Synchronous Step-Down Converter in a Tiny 3x4mm QFN Package	QFN20 (3x4)
 NB639	4.5	28	8.0	16.5	0.04	0.815	200-1000 (Adj.)	External	-	Fully Integrated, 30mΩ/12mΩ, High Efficiency, Dual Supply, 8A, 28V Synchronous Step-Down Converter in a Tiny 3x4mm QFN Package	QFN20 (3x4)
 MP38900	4.5	16	10	16.5	0.04	0.815	200-1000 (Adj.)	External	-	Fully Integrated, 27mΩ/10mΩ, High Efficiency, Fast Transient, 10A, 16V Synchronous Step-Down Converter in a Tiny 3x4mm QFN Package	QFN20 (3x4)
MP38671	4.5	25	10	12	1.1 (Max)	0.81	600	Internal	✓	4.5V-25V, 600kHz, 10A Sync Buck with Power Good Output and LS Gate Driver	QFN14 (3x4)
MP38873	4.5	14	15	21	1.2 (Max)	0.81	400	External	✓	4.5V-14Vin, 400kHz, 15A Sync Buck with PG, Ext SS, 18mΩ Integrated Top-Side FET, and Bottom FET Driver	QFN20 (3x4)
MP38875	4.5	16	15	21	1.2 (Max)	0.81	800	External	✓	4.5V-16Vin, 800kHz, 15A Sync Buck with PG, 18mΩ Integrated Top-Side FET, and Bottom FET Driver	QFN20 (3x4)
MP38876	4.5	28	15	21	1.2 (Max)	0.81	400	External	✓	4.5V-28Vin, 400kHz, 15A Sync Buck with PG, 18mΩ Integrated Top-Side FET, and Bottom FET Driver	QFN20 (3x4)
 MP8620	6.0	16	25	20	2	0.8	600 (Adj.)	External	✓	6.0V-16Vin, 600kHz, 25A Sync Buck with PG, 12mΩ Integrated High-Side FET and Programmable Ext SS	QFN46 (6x6)

REGULATORS (STEP-DOWN)

DC/DC (STEP-DOWN) SYNCHRONOUS SWITCHERS

Part Number	V _{IN} (Min) (V)	V _{IN} (Max) (V)	Load Current (A)	I _{sw} Limit (Typ) (A)	I _Q (Typ) (mA)	Feedback Voltage (V)	Switching Freq (kHz)	Soft Start	Ext Sync	Notes	Package
Maximum Operating Input Voltage > 28V											
MP2403	4.6	32	3.0	5.3	1.45	0.8	250	External	-	4.6V-32Vin, 250kHz, 3A Sync Buck with External Comp and External SS	SOIC8E
MP38894	4.5	42	4.5	6.5	0.9	0.8	420	Internal	✓	4.5V-42Vin, 4.5A Sync Buck with Integrated High-Side FET and LS Sync Gate Driver	SOIC8E
MP38891	4.5	30	6.0	8.0	0.9	0.8	420	Internal	✓	4.5V-30Vin, 6A Sync Buck with Integrated High-Side FET and LS Sync Gate Driver	QFN14 (3x4)
MP38892	4.5	42	6.0	8.0	0.9	0.8	420	Internal	✓	4.5V-42V, 6A Sync Buck w/ Integrated High-Side FET and LS Sync Gate Driver	SOIC8E

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

Part Number	V _{IN} (Min) (V)	V _{IN} (Max) (V)	Load Current (A)	I _{sw} Limit (Typ) (A)	I _Q (Typ) (mA)	Feedback Voltage (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-24Vin, 0.5A, Internal Comp	SOT23-6 TSOT23-6
MP2359	4.5	24	1.2	1.8	0.8	0.81	1400	Internal	-	4.5V-24Vin, 1.2A, Internal Comp	SOT23-6 TSOT23-6
MP2351	4.75	23	1.5	2.8	1.1	1.23	1400	Internal	✓	4.75V-23Vin, 1.5A, External Comp, Frequency Sync	MSOP10 QFN10 (3x3)
MP2364	4.75	23	1.5 (2x)	3.0	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-24Vin, 1.8A, 1.4MHz, Internal Comp	QFN8 (2x2)
MP2371	4.5	24	1.8	2.5	0.8	0.81	700	Internal	-	4.5V-24Vin, 1.8A, 700kHz, Internal Comp	QFN8 (2x2)
MP2270	4.5	8.0	1.8	2.5	0.8	0.81	700	Internal	-	4.5V-8Vin, 1.8A, 700kHz, Internal Comp	MSOP10E
MP2354	4.75	23	2.0	3.4	1.0	1.22	380	Internal	✓	4.75V-23Vin, 2A, 380kHz, External Comp	SOIC8
MP2358	4.75	23	2.0	3.4	1.1	0.92	370	External	-	External SS, 4.75V-23V, 2A, 370kHz, External Comp	QFN10 (3x3) SOIC8
MP2361	4.75	23	2.0	3.5	1.2	0.92	1400	External	-	4.75V-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-23Vin, 2A, 380kHz, Dual Output	TSSOP20F
MP4350	4.5	20	2.5	3.5	0.1	0.8	4000 (Adj.)	Internal	-	4.5V-20Vin, 2.5A, External Comp, Switching Frequency Programmable up to 4MHz	QFN10 (3x3)
MP2377	4.5	21	3.0	4.0 (Min)	0.9	0.81	600	Internal	✓	4.5V-21Vin, 3A, 600kHz, PG, Latch Off at Fault	SOIC8E
MP8716	4.5	21	3.0	6.1	0.7	0.81	500	Internal	✓	1.5ms Soft-Start Time	SOIC8E
MP2355	4.75	23	3.0	4.3	1.0	1.22	380	External	-	4.75V-23Vin, 3A, 380kHz, External SS, External Comp	SOIC8E
MP2363	4.75	27	3.0	5.7	1.0	0.92	365	External	-	4.75V-27Vin, 3A, 365kHz, External SS, External Comp	SOIC8E PDIP8
MP8718	4.5	21	4.0	6.1	0.7	0.8	500	Internal	✓	1.5ms Soft-Start Time	SOIC8E
MP2380	4.5	21	5.0	7.3	0.9	0.81	600	Internal	✓	4.5V-21Vin, 5A, 600kHz, Power Good Output	SOIC8E
Maximum Operating Input Voltage ≥ 28V											
MP2451	3.3	36	0.6	0.85	0.23	0.8	2000	Internal	-	Internal Comp & SS, Programmable	SOT23-6L
MP4458	4.5	36	1.0	1.8	0.1	0.8	4000 (Adj.)	Internal	-	Light-Load Eff, Resistor Programmable up to 4MHz	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 Frequency, Current Limit, Output Adj From 0.8V to 47V	QFN10 (3x3) SOIC8
MP4459	4.5	36	1.5	2.5	0.1	0.8	4000 (Adj.)	Internal	-	Light-Load Eff, Resistor Programmable up to 4MHz	TQFN10 (3x3)
MP4561	4.5	55	1.5	2.5	0.12	0.80	1000 (Adj.)	External	-	55V Max V _{IN} , Superior Light-Load Eff, External SS	QFN10 (3x3)
MP2490	4.5	36	1.5	2.6	0.5	0.81	700	External	-	Programmable Current Limit	QFN10 (3x3) SOIC, PDIP8
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	0.80	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	0.1	0.8	1000 (Adj.)	Internal	-	55V Max V _{IN} , Superior Light-Load Efficiency, External Comp	QFN10 (3x3) SOIC8E
MP2499	5	24	2.0 Prog	3.0	0.5	0.80	100	External	-	100V Integrated Load Dump Protection, Low (100kHz) F _{sw} for Low EMI Applications, Prog Current Limit	SOIC16
MP2498	5	24	2.0	3.2	0.12	0.80	150-2000	Internal	-	100V Integrated Load Dump Protection, Prog Switching Freq	QFN28
MP1591	6.5	32	2.0	3.6	1.0	1.23	330	Internal	-	6.5V-32Vin, 2A, 330kHz, External Comp	SOIC8 SOIC8E
MP2560	4.5	42	2.5	3.5	0.1	0.8	4000 (Adj.)	Internal	-	Light-Load Eff, Resistor Programmable up to 4MHz, External Comp,	QFN10 (3x3) SOIC8E

REGULATORS (STEP-DOWN)

Part Number	V _{IN} (Min) (V)	V _{IN} (Max) (V)	Load Current (A)	I _{sw} Limit (Typ) (A)	I _Q (Typ) (mA)	Feedback Voltage (V)	Switching Freq (kHz)	Soft Start	Ext Sync	Notes	Package
Maximum Operating Input Voltage ≥ 28V (Continued)											
MP4460	4.5	36	2.5	3.5	0.1	0.8	4000 (Adj.)	Internal	-	Light-Load Eff, Resistor Programmable up to 4MHz	QFN10 (3x3)
MP2467	6.0	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 Eff, Resistor Programmable up to 4MHz	QFN10 (3x3) SOIC8E
MP1586	4.5	28	3.0	4.7	0.1	0.8	50-400	Internal	-	50kHz~400kHz, Internal SS, External Comp	SOIC8E
MP1593	4.75	28	3.0	6.2	1.0	1.22	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	4.75	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 Eff, Resistor Programmable up to 4MHz	QFN10 (3x3) SOIC8E

DC/DC (STEP-DOWN) CONTROLLERS

Part Number	V _{IN} (Min) (V)	V _{IN} (Max) (V)	Load Current (A)	I _{sw} Limit (Typ) (A)	I _Q (Typ) (mA)	Feedback Voltage (V)	Switching Freq (kHz)	Soft Start	Ext Sync	Notes	Package
MP2910	5	12	-	-	0.6	0.8	300	Internal	-	Synchronous Buck PWM DC-DC and Linear Power Controller. Specific PG indicator for Intel® Grantsdale FSB_VTT Power Sequence	SOIC14 SOIC8E
MP2905	3.0	28	-	-	0.6	0.6	500 (Adj.)	External	-	Ideal for Applications Greater than 15A	MSOP10

REGULATORS (STEP-UP)

DC/DC (STEP-UP) SYNCHRONOUS SWITCHERS

Part Number	V _{IN} (Min) (V)	V _{IN} (Max) (V)	V _{OUT} (Max) (V)	I _{sw} Limit (Typ) (A)	I _Q (Typ) (mA)	Feedback Voltage (V)	Switching Freq (kHz)	Sync	Notes	Package
MP3120	0.8	5.0	5.0	1.2	0.47	1.19	1100	√	Output Disconnect	TSOT23-6
MP3410	1.8	6.0	6.0	1.3	0.36	1.19	550	√	Output Disconnect	TSOT23-5

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 _Q (Typ) (mA)	Feedback Voltage (V)	Switching Freq (kHz)	Sync	Notes	Package
MP3209	2.5	6.0	22	0.35	0.64	1.25	1400	-	Internal Comp, Tiny Inductors and Capacitors Can be Used	TSOT23-5 UTQFN8 (2x2)
MP1522	2.7	25	25	0.45	0.65	1.23	Variable	-	UVLO, Variable Frequency, 1.23Vfb	SOT23-5
MP3208	2.7	25	25	0.45	0.65	0.30	Variable	-	-	TSOT23-5
MP3217	2.5	6.0	36	0.50	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 + Charge Pump for TFT Bias	QFN16 (3x3) TSSOP16
MP3216	2.5	6.0	36	0.75	0.55	1.24	1300	-	Output Disconnect, Output Short Protection, Cycle-by-Cycle Over Current Protection	TSOT23-6
MP3115	0.95	2.5	4	1.3	0.2	1.23	1300	√	All Internal FETs	SOT23-6
MP3212	2.3	5.5	28	1.3	0.4	1.23	1000	-	Integrated Input Disconnect Switch, Internal Soft Start and Internal Comp	QFN10
MP3201	2.7	6.0	20	1.5	0.2	1.24	1100	-	Fast Transient Response	TSOT23-5
MP1541	2.5	6.0	22	1.9	0.64	1.25	1300	-	-	TSOT23-5
MP1542	2.5	22	22	2.6	0.7	1.25	700/1300	-	-	MSOP8
MP1527	2.6	25	25	3.0	0.9	1.22	1300	-	-	QFN16 (4x4) TSSOP14
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 + LDO for TFT Bias	QFN16 (3x3) TSSOP16
MP1517	2.6	25	25	4.0	0.9	0.70	1100	-	-	QFN16 (4x4)
MP3425	3.1	22	55	5.0	0.65	1.25	Variable	-	Programmable UVLO and EN Hysteresis	QFN14

DC/DC (STEP-UP) CONTROLLERS







Part Number	V _{IN} (Min) (V)	V _{IN} (Max) (V)	V _{OUT} (V)	I _{sw} Limit (Typ) (A)	I _Q (Typ) (mA)	Feedback Voltage (V)	Switching Freq (kHz)	Sync	Notes	Package
MP3908	4.75	12	10V Gate Driver	0.19V/ R _{sense}	0.27	0.82	260	√	Sync Boost Controller, Lossless Current Sense, Forward, Flyback, Septic Apps, External Soft Start	MSOP10
MP3900	8.6	12	10V Gate Driver	0.2V/ R _{sense}	0.18	0.82	330	-	(Boost Controller) 10V Gate Driver	MSOP8

ACDC OFFLINE (INTELLIGENT RECTIFIER)


SYNCHRONOUS RECTIFIER IC

Part Number	V _{IN} (Min) (V)	V _{IN} (Max) (V)	Switching Freq (kHz)	Drain Source Rating (V)	Operating Current (mA)	Quiescent Current (mA)	Min Turn-On Time	Notes	Package
MP6900	8.0	24	400	180	8	3	200ns	Fast Turn-Off Intelligent Rectifier, Ultra-Fast Turnoff Transient Response (20ns)	SOIC8 TSOT23-5
MP6901	8.0	24	400	180	8	3	1600ns	Fast Turn-Off Intelligent Rectifier, Ultra-Fast Turnoff Transient Response (20ns) with a Longer Blanking Time (1600ns)	SOIC8 TSOT23-5
MP6902	8.0	24	400	180	8	3	1600ns	Fast Turn-Off Intelligent Rectifier, Fast Turn-off Intelligent Rectifier with No Load Auto Shutdown for Energy Star	SOIC8
MP6903	8.0	24	400	180	8	3	1000ns	Fast Turn-Off Intelligent Rectifier for LLC topology	SOIC8

LINEAR REGULATORS

Part Number	V _{IN} (Min) (V)	V _{IN} (Max) (V)	Load Current (mA)	Load Reg (%/mA)	PSRR @1kHz (dB)	Feedback Voltage (V)	Dropout Voltage (mV)	V _{OUT} (V)	Notes	Package
MP2000	1.35	6.0	150	0.001	50	0.5	250 (IO: 100mA) 300 (IO: 150mA)	0.5 - 5.0	Low Voltage Input (1.35V-6Vin)	TSOT23-5
 MP20049	2.3	6	150	0.001	78	-	50 (IO: 120mA)	Fixed, 1.2V - 4.5V	Ultra-Low Noise, High PSRR in WLCSP Package, p2p ADP120 & LP5900	0.8x0.8mm WLCSP
MP8801	2.7	6.5	150	0.001	70	1.22	150 (IO: 150mA)	Adj., 2.5V, 2.85V & 3.3V	Low Noise, Excellent for RF Applications	TSOT23-5
MP8903	2.7	6.5	150	0.001	50	1.22	150 (IO: 150mA)	Adj., 2.5V, 2.85V & 3.3V	Low Cost, Small QFN 2x2mm Option	QFN8 (2x2) TSOT23-5
 MP20142	2.5	5.5	200 (2x)	-	75	-	60 (IO: 100mA) 180 (IO: 300mA)	1.2 - 3.3	Dual outputs, Programmable with 2-Pin Control Input	TQFN8 (2x2)
MP2004	2.7	6.5	200 (2x)	0.005	69	-	90 (IO: 100mA) 180 (IO: 200mA)	1.2 - 3.3	Dual LDO Adjustable	TSOT23-6
 MP20249	2.3	6	200 (2x)	0.001	65	-	60 (IO: 150mA) 75 (IO: 200mA)	Fixed, 1.2V - 3.3V	Dual, Ultra-Low Noise, High PSRR in 6-Ball WLCSP Package.	WLCSP (1x1.5)
MP20048	1.7	5.5	250	0.0005	35	1.234	60 (IO: 250mA)	1.234 - 5.0	Stable Without Any Output Capacitors	TSOT23-5
MP8802	2.7	6.5	250	0.001	70	1.22	230 (IO: 250mA)	Adj., 2.5V, 2.85V & 3.3V	Excellent for RF Applications	TSOT23-5
MP20041	2.5	6	300 (2x)	0.003	65	-	75 (IO: 100mA) 220 (IO: 300mA)	1.2 - 3.6	Dual Fixed Output, 300mA/CH LDO, p2p RT9012	QFN8 (2x2)
 MP20044	2.5	6	300 (2x)	0.002	65	-	75 (IO: 100mA) 220 (IO: 300mA)	1.2 - 5.0	Dual Fixed Output, Good load regulation, 300mA/CH LDO	TQFN8 (2x2)
MP20043	2.5	5.5	300 (2x)	-	75	-	60 (IO: 100mA) 180 (IO: 300mA)	1.2 - 3.3	Dual outputs, Programmable with 2-Pin Control Input	TQFN8 (2x2)
 MP6402	2.5	5.5	500 (2x)	0.003	60(CH1) 51(CH2)	-	260 (I _O : 500mA)	Fixed, 0.9V- 3.3V	Dual LDO, Integrated Reset Circuit, Fixed Output Voltages from 0.9V-3.3V	SOIC8E TQFN8 (3x3)
MP2002	1.35	6.5	500	0.001	26	0.5	290 (IO: 500mA)	0.5 - 5.0	Low Voltage Input, Power Good	QFN8 (2x3)
MP8904	2.5	6.5	500	0.001	26	0.5	290 (IO: 500mA)	0.5 - 5.0	Power Good Output	QFN8 (2x3)
MP20045	2.5	5.5	1000	0.0003	56	1.5	140 (IO: 1000mA)	Adj., 1.5-5.0 and Fixed, 1.5, 1.8, 2.5, 3.3, 5	High Input/Output Current with Fast Response, Fixed and Adj. Output Voltages	QFN8 (3x3) SOIC8E
MP20046	2.7	5.5	2000	0.0003	70	-	210 (IO: 2000mA)	1.5 - 3.3	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, VDRV=3.3V	MSOP8E
MP2007	1.3	6	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, VDRV=3.3V	MSOP8E

High-Performance, Low-Dropout Linear Regulators

 MP2016	4.0	42	30	0.003	50	1.23	700 (IO:30mA)	1.2 - 20	Ideal for Automotive	QFN8 (2x3) TSOT23-5
MP2009	2.0	6	120	0.002	78	-	172 (IO:120mA)	1.5 - 4.5	No Bypass Capacitor Required	SC70-5
MP20042	2.7	6.5	200 (2x)	0.005	73	-	73 (IO:100mA) 145 (IO:150mA)	1.2 - 3.3	Dual LDO Adjustable and Fixed Output Option	QFN8 (2x2)
MP2005	1.0	5.5	800	0.0005	65	0.5	70 (IO:800mA)	0.5 - 4.0	Ultra Low Dropout, Fast Transient 48dB PSRR @ 1MHz	QFN8 (2x3)
MP2030	1.1	5	3000	0.001	32	0.5	150 (IO:3000mA)	Adj., 0.9 - 3.8	Dual Supply, Fast Transient, Ultra-Low Dropout with Bias Supply, PG, Current Limit and Internal Thermal Protection	QFN10 (3x3) QFN32 (5x5)
MP2040	1.1	5	3000	0.001	40	0.5	150 (IO:3000mA)	Adj., 0.9 - 3.3	Highest PSRR, Fast Transient Response, 3A, Very Low Dropout Linear Regulator	QFN10 (3x3) QFN32 (5x5)

BATTERY CHARGERS / PROTECTION

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)	Description	Package
MP2612	9	24	3	Up to 2.0	√	√	CV/CC Switching	600	600kHz Switching Li-Ion Battery Charger	QFN16 (3x3)
MP2610	5.5	24	2	Up to 2.0	√	√	CV/CC Switching	1100	1.1MHz Switching Li-Ion Charger, up to 90% efficiency	QFN16 (3x3)
MP2618	5.5	24	3	Up to 2.0	√	√	CV/CC Switching	600	600kHz Switching Li-Ion Charger with System Power Path Mgmt	QFN28 (4x5)

CRADLE CHARGERS

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)
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LINEAR CHARGERS

MP2607	4.5	12	1	Up to 1.5	√	√	CV/CC Linear	Li + 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)
MP2601	4.75	25	1	Up to 0.3	√	√	CV/CC Linear	Simple System Charger, 50mA – 300mA Prog Charge, No NTC		TSOT23-5
MP2603	4.75	25	1	Up to 0.15	√	√	CV/CC Linear	Simple System Charger, 50mA – 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	Ichg=10% of Iset, Timer, Auto-term & Recharge		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+ Linear Battery Charger with 10% Battery-Full Thres, Flexible NTC Interface		QFN10 (3x3)

PROTECTION

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+ Charger Protection IC with Integrated P-MOSFET for PMU Charger Protection		QFN8 (2x2)

TRANSFORMER BASED POWER SUPPLIES

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

SUPERVISORY CIRCUITS / VOLTAGE SUPERVISORS

Part Number	V _{IN} (Min) (V)	V _{IN} (Max) (V)	Reset Thres (V)	Threshold Acc(%)	Reset Delay Time (ms)	I _o (Typ) (μA)	Notes	Package
MP6400	1.8	6	93% VSENSE	±1.0	Adjustable: 2.1 to 10000	1.6	Reset Voltage can be Preset or Adjustable	TSOT23-6 QFN6
MP6401	2.5	5.5	92.5% Vout (A) 87.5% Vout (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% Vout 2	±3.0	Adjustable: 2.1 to 10000	17	With dual 500mA LDOs that comes with fixed outputs from 0.9V-3.3V	SOIC8E 3x3 TQFN8

USB & CURRENT-LIMIT LOAD SWITCHES

USB

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	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
NEW 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	1.0	2.2	Active High	Over-Current, Active Low	No	Single 1A Current-Limit Switch, p2p TPS2051B	SOIC8E MSOP8E
MP6212	2.7	5.5	1.0	2.2	Active Low	Over-Current, Active Low	No	Single 1A Current-Limit Switch	SOIC8E MSOP8E
NEW MP6211-3 MP6212-3	2.7	5.5	1.0	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	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
NEW MP65150 MP65151	2.5	5.5	1.5	1.7	Active Low Active High	Over-Current, Active Low	No	Precision Adjustable Current-Limited Power Distribution Switch	TQFN6 (2x2) TSOT23-6
MP62040 MP62041	1.7	5.5	2.0	-	Active Low Active High	-	No	Single Channel, up to 2A Continuous Current in Ultra Small Package	UTQFN4
MP62040-1 MP62041-1	1.7	5.5	2.0	-	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	2.0	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	2.0	2.8	Active Low Active High	Over-Current, Active Low	No	2A Current-Limit Switch	QFN8E MSOP8E SOIC8
MP62260 MP62261	2.7	5.5	2.0	3	Active Low Active High	Over-Current, Active Low	No	2A Current-Limit Switch, p2p TPS2024 and p2p TPS2034	SOIC8
MP62260-1 MP62261-1	2.7	5.5	2.0	3	Active Low Active High	Over-Current, Active Low	Yes	2A 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	SOIC8E MSOP8E
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	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	1.5 Current-Limit Switch	MSOP8E
ENTERPRISE / PROGRAMMABLE									
MP6219	2.7	5.5	2.0	Prog	Active High	Thermal Fault = Tri-State	No	1-2A Programmable Current-Limit, 1.4ms Turn-On Time	SOIC8E
MP5002	2.5	6	3.0	Prog	Active High	Thermal Fault = Tri-State	No	3.3V, Programmable Current-Limit with Built-In Protection and Fault Indication	QFN10 (3x3)
MP5003	2.5	6	3.0	Prog	Active High	Thermal Fault = Tri-State	No	3.3V, Programmable Current-Limit with Automatic Startup After Thermal Protection	QFN10 (3x3)
MP5001	4	10	4.2	Prog	Active High	Thermal Fault = Tri-State	No	1-5A Programmable Current-Limit & Slew Rate Control, p2p NIS5135	QFN10 (3x3)
MP5000	10	18	4.2	Prog	Active High	Thermal Fault = Tri-State	No	1-5A Programmable Current-Limit & Slew Rate Control, p2p NIS5231	QFN10 (3x3)
MP5007	4	6	5.0	Prog	Active High	Thermal Fault = Tri-State	No	5V, 1-5A Programmable Current-Limit with Automatic Startup After Thermal Protection	QFN10 (3x3)
MP5006	4	10	5.0	Prog	Active High	Thermal Fault = Tri-State	No	5V, Programmable Current-Limit with Automatic Startup After Thermal Protection	QFN10 (3x3)

LIGHTING SOLUTIONS

BACKLIGHTING WLED DRIVERS

Part Number	V _{IN} (Min) (V)	V _{IN} (Max) (V)	V _{OUT} (Max) (V)	# of LEDs (Max)	# of Strings	Current Limit (Typ) (A)	Feedback Voltage (V)	Switching Freq (kHz)	Open LED Protection	Type	Notes	Package
MP3388	4.5	25	50	80	8	2	0.6	625 or 1250	✓	Boost	PWM or DC Input Burst PWM Dimming	QFN24 (4x4) SOIC28
MP2370	4.5	24	15	3	1	1.8	0.155	1400	-	Buck	High Voltage Input, High Efficiency	TSOT23-6
MP3386	4.5	25	50	12	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	40	4	1.3	0.5	1200 Prog	✓	Boost	50V, 1.3A Wide, 4.5V-25V Input Range	QFN10 (3x3)
MP3384	4.5	25	50	40	4	1.3	0.6	1250 or 625	✓	Boost	50V, 1.2A, 4-Channel Balanced Current Source	QFN16 (3x3)
MP3389	5	28	50	14	12	-	0.6	100 to 500 Prog	✓	Boost	External MOSFET, PWM or DC Input Burst PWM Dimming	TSSOP28E SOIC28
NEW MP3399	5	28	50	14	12	-	0.6	150 to 500 Prog	✓	Boost	External MOSFET, PWM or DC Input Burst PWM Dimming	TSSOP28E SOIC28
NEW MP4651	9	30	9	107 (with Ext.FET)	1	Ext. FET	0.6	20 to 150	✓	Half Bridge	Offline LED Driver, One Power Stage for Cost and Space Saving	SOIC16
MP2488	4.5	55	-	10	1	3.2	0.2	200 Prog	-	Buck	Up to 97.5% Eff, 220mΩ Internal Power MOSFET	QFN10 (3x3) SOIC8E
NEW MP4601	4.5	75	-	100	1	2.5	0.2	200 to 2000 Prog	✓	Buck-Boost	Novel Power-Leverage Technology for 60+” TV, Can Regulate LED	TSSOP16E SOIC16

LIGHTING & ILLUMINATION

MP3412	0.8	4.4	-	-	1	-	0.2	1000	-	Boost	1.1A, 1MHz Synchronous Boost WLED Driver with Output Disconnect	TSOT23-6
MP2481	4.5	36	-	-	1	2.0	0.203	1400	✓	Buck-Boost	Buck-Boost WLED Halogen Replacement up to 5W	MSOP8
NEW MP24892	4.5	36	-	-	1	-	0.2	200-600	✓	Buck	Lower Voltage Higher Current Lower Cost version of MP2489	QFN6(3x3) TSOT23-5
MP2483	4.5	55	-	-	1	3.0	0.198	1350 Prog	✓	Buck, Buck-Boost	DC and PWM Dimming Control Using One Single Pin	QFN10 (3x3) SOIC14
MP24183	4.5	55	-	-	1	2.0	0.198	1350 Prog	✓	Buck, Buck-Boost	DC and PWM Dimming Control Using One Single Pin	QFN10 (3x3)
MP2488	4.5	55	-	-	1	3.2	0.2	200 Prog	-	Buck	Up to 97.5% Efficiency, 220mΩ Internal Power MOSFET	QFN10 (3x3) SOIC8E
MP2487	4.5	55	-	-	1	1.5	0.2	200 Prog	-	Buck	Up to 97.5% Efficiency, 220mΩ Internal Power MOSFET	SOIC8E
MP2489	6	60	-	-	1	-	0.2	300-600	✓	Low-Side Buck	Hysteretic, Low-Side Buck for Minimal Ext. Component & Fast	QFN6(3x3) TSOT23-5
MP4688	4.5	80	-	-	1	3.2	0.2	up to 2000	✓	Buck	MPS Adaptive Hysteretic for High Output Current Accuracy	SOIC8E
NEW MP4689	4.5	95	-	-	1	3.2	0.2	Up to 2000	✓	Buck	MPS Adaptive Hysteretic for High Output Current Accuracy	SOIC8E
NEW MP4001	12	350	Ext. FET	-	1	-	0.3	30-110	✓	Buck	Offline Non-Isolated WLED Controller for Lowest Cost LED Bulbs	SOIC8
NEW MP4000	85 Vac	265 Vac	Ext. FET	-	1	-	0.3	up to 110	✓	Buck	Universal Input, Non-Isolated WLED Driver Controller for	SOIC8
NEW MP4020	85 Vac	265 Vac	Ext. FET	-	1	-	0.4	up to 333	✓	Buck-Boost	Offline, Isolated WLED Controller with Active PDC, TRIAC Dimmable	SOIC8
NEW MP4021	85 Vac	265 Vac	Ext. FET	-	1	-	0.4	up to 333	✓	Buck-Boost	Non-TRIAC Dimmable Version of MP4020	SOIC8
NEW MP4690	-	-	-	-	-	-	-	-	-	Shunt	Smart Bypass for LED Protection 6V Threshold Voltage Protects	SOD123


EL DRIVERS

MP3802	1.8	5.5	120V AC (240Vpp)	EL	-	-	-	240 EL Lamp	-	EL Lamp Driver	240Vpp AC Output EL	MSOP8 QFN8 (3x3)
MP3801	2.5	5.5	95 AC (190Vpp)	EL	-	-	-	240 EL Lamp	-	EL Lamp Driver	190Vpp AC Output EL	MSOP8

PHOTO FLASH SOLUTIONS

Part Number	Charge Type	V _{IN} (Min) (V)	V _{IN} (Max) (V)	V _{SW} (Max)	V _{OUT} (Max)	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)

AUDIO PRODUCTS (CLASS D-AUDIO AMPLIFIERS)

Part Number	V _{IN} (Min) (V)	V _{IN} (Max) (V)	Output Power (W)	Efficiency (%)	THD+N (%)	PSRR (dB)	Type	Notes	Package
MP1720	2.5	5.5	2.7	90	0.13 @ 0.8W	60	Mono	Full-Bridge BTL Output, Ultra-Small for Portables and Mobile Phones	QFN10 (3x3) MSOP10EP
MP1740	2.5	5.5	3.0	90	0.1 @ 1.8W	70	Mono	Full-Bridge BTL Output, Differential, Input Capacitors Not Required	WLCSP
 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	Single-Ended, Fully Integrated Stereo, p2p MP7722	TSSOP20F
MP7740	9.5	36	15	90	0.018 @ 1W	60	Mono	Single-Ended, p2p MP7720	SOIC8
MP7720	9.5	20	20	93	0.04 @ 1W	60	Mono	Single-Ended, Mute/Standby with Mode	PDIP8 SOIC8
MP7722	9.5	20	20 (2x)	93	0.06 @ 1W	60	Stereo	Single-Ended, Mute/Standby with Mode	TSSOP20F
MP7745	9.5	26	20	93	0.05 @ 1W	59	Stereo	Single-Ended, p2p MP7722	TSSOP20
MP7747	9.5	36	20	91	0.02 @ 1W	59	Mono	Single-Ended, Fully Integrated Audio Amplifier	QFN10 (3x3)
MP8044	7.5	22	25	94	0.09 @ 1W	-	Stereo	Single-Ended, Dual Channel, Power Half-Bridge, p2p MP7742	TSSOP20F
MP7731	9.5	18	30	90	0.10 @ 1W	60	Mono	BTL	TSSOP20F
MP7782	9.5	20	50	90	0.06 @ 1W	60	Mono	Full-Bridge BTL Output	TSSOP20F

PRECISION ANALOG

OPERATIONAL AMPLIFIERS

Part Number	V _{IN} (Min) (V)	V _{IN} (Max) (V)	GBW (kHz)	I _Q (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	-	TSOT23-5
MP8101	1.8	5.5	400	11	80	0.2	1.0	-	TSOT23-5
MP8103	1.8	5.5	200	14	80	0.1	1.0	Dual-Channel	MSOP8
MP5120	3.2	18	14000	1600	85	45	2.0	Single-Channel, High-Speed, High-Voltage Rail-to-Rail Input-Output	TSOT-5
MP5220	3.2	18	14000	3200	85	45	2.0	Dual-Channel, High-Speed, High-Voltage Rail-to-Rail Input-Output	MSOP-8
MP5420	3.2	18	14000	6400	85	45	2.0	Quad-Channel, High-Speed, High-Voltage Rail-to-Rail Input-Output	TSSOP-14
MP5121	3.2	20	14000	1600	85	45	2.0	Single-Channel, High-Speed, High-Voltage Rail-to-Rail Input-Output	TSOT-5
MP5221	3.2	20	14000	3200	85	45	2.0	Dual-Channel, High-Speed, High-Voltage Rail-to-Rail Input-Output	MSOP-8
MP5421	3.2	20	14000	6400	85	45	2.0	Quad-Channel, High-Speed, High-Voltage Rail-to-Rail Input-Output	TSSOP-14
MP8130	2.7	36	100	10	80	0.1	1.0	High-Voltage	TSOT23-5


HIGH-SIDE CURRENT SENSE AMPLIFIERS

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

VOLTAGE REFERENCE

Part Number	V _{IN} (Min) (V)	V _{IN} (Max) (V)	Output Voltage (V)	Initial Acc (%)	Operating Curr (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

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
 MP2735/6	1.65	5.5	2	29.0	23	0.45	Low Voltage Dual SPDT Analog Switch	QFN10

HALF-BRIDGE & FULL-BRIDGE POWER DRIVERS


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

HALF-BRIDGE

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
MP8042	7.5	24	5	5	5	10	10	54/37	24V, 5A Dual Channel Power Half-Bridge Driver	TSSOP20E
MP8040	7.5	25	5	9	9	20	20	70	9A, 25V Integrated Half-Bridge and Driver	SOIC8E
MP8044	7.5	25	-	-	-	-	-	-	22V, 4A Dual-Channel Power Half-Bridge	TSSOP20F

PUSH BUTTON INTERFACE

Part Number	V _{IN} (Min) (V)	V _{IN} (Max) (V)	Quiescent Current (uA)	ESD Voltage (kV)	Debounce Timer (ms)	Notes	Package
 MP1150	0.9	36	50	15.0	10	No External Component Required, Built-In Debounce Timer, Low Idle Current (0uA)	TSOT23

PoE

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

PD CONTROLLERS

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



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