

 Monolithic Power Systems PRODUCT SELECTOR GUIDE 2H2009											
REGULATORS											
SYNCHRONOUS STEP-DOWN (BUCK)											
Part Number	V _{IN} (Min) (V)	V _{IN} (Max) (V)	Load Current (A)	I _{SW} Limit (Typ) (A)	I _O (Typ) (mA)	Feedback Voltage (V)	Switching Freq (kHz)	Soft Start	Ext Sync	Notes	Package
Maximum Operating Input Voltage 1.1V ≤ V _{IN} ≤ 6V											
	MP2104	2.5	6.0	0.6	1.0	0.4	0.6	1700	Internal	Internal Comp	TSOT23-5
	MP28114	2.5	6.0	0.6	1.0	0.4	0.6	1700	Internal	External Fb/Fixed Vout, Ultra-Small Footprint	QFN8 (2x2)
	MP2105	2.5	6.0	0.8	1.6	0.4	0.6	1000	Internal	Internal Comp	TSOT23-5
	MP2109	2.5	6.0	0.8 (2x)	1.3	0.4	0.6	1240	Internal	Dual Output	QFN10 (3x3)
	MP28117	2.5	6.0	0.8 (2x)	1.3	0.4	0.6	1240	Internal	Dual Output	QFN10 (3x3)
	MP2101	2.5	6.0	0.8 & 0.2	1.4	0.4	0.6	1600	Internal	Step Down + LDO	QFN10 (3x3)
	MP2112	2.5	6.0	1.0	1.6	0.44	0.6	1050	Internal	Internal Comp	QFN6 (3x3)
NEW	MP2128	2.5	6.0	1.0	1.5	0.35	0.594	3000	Internal	3 MHz Sync Buck	TSOT23, QFN8 (2x2)
NEW	MP28225	3.0	14.5	1.0	2.3	0.75	0.8	1300	Internal	√ Wide Input Supply Range 3.0V to 14.5V	QFN14 (3x4)
NEW	MP2113	2.7	6.0	1.5	2.2	0.55	0.6	1500	Internal	Dynamic Vout Control High Efficiency 100% Duty Cycle	QFN8 (2x3)
NEW	MP2012	2.7	6.0	1.5	3.0	0.6	0.8	1200	Internal	100% Duty Cycle	QFN6 (3x3)
NEW	MP2125	2.7	6.0	1.5	3.0	0.6	0.8	1200	Internal	Dual 1.5 Sync Buck in 3x4 mm QFN14	QFN14 (3x4)
NEW	MP2127	2.7	6.0	2.0	3.0	0.5	0.8	1200	Internal	100% Duty Cycle Power Good Output	QFN6 (3x3)
	MP2119	2.7	5.5	2.0	3.5	0.75	0.8	1500	Internal	√ Power Good Output	QFN10 (3x3)
	MP2108	2.6	6.0	2.0	3.5	1.2	0.9	740	External	External Comp	MSOP10, QFN10 (3x3)
	MP2120	2.7	5.5	2.5	4.5	0.75	0.8	1500	Internal	√ Power Good Output	QFN10 (3x3)
	MP28128	2.7	6.0	2.5	4.5	0.75	0.8	1500	Internal	√ Power Good Output	QFN10 (3x3)
	MP2121	2.7	6.0	3.0	4.5	0.75	0.8	1500	Internal	√ Power Good Output	QFN10 (3x3)
	MP38115A	1.1	5.5	4.0	6.5	0.75	0.8	1500	Internal	√ Ultra-Low Input Voltage, Power Good Out	QFN10 (3x3)
	MP28115	2.7	6.0	4.0	6.5	0.75	0.8	1500	Internal	√ Precision, Smallest Footprint, Power Good Out	QFN10 (3x3)
NEW	MP28275	4.5	6.0	5.0	7.0	1	0.808	1000	Internal	√ Low Voltage, 1MHz High SW Frequency Sync Buck with PG	QFN14 (3x4)
	MP8352	3.0	6.0	6.0	8.0	0.75	0.8	600	Internal	√ Ultra-Low Input Voltage, 45mΩ Integrated Top Side FET w/ Bottom FET Driver	QFN14 (3x4)
Maximum Operating Input Voltage ≤ 28V											
	MP2309	4.75	23	1.0	2.0	1.3	0.92	340	External	External Comp	SOIC8
	MP2106	2.6	15	1.5	2.5	1.2	0.9	800	External	External Comp	MSOP10, QFN10 (3x3)
	MP2305	4.75	23	2.0	3.4	1.3	0.92	340	External	External Comp	SOIC8
NEW	MP2209	3.0	16	2.0	4.0	0.75	0.8	600	External	√ Small Footprint, External Soft Start Power Good Output	QFN14 (3x4)
	MP28252	4.5	21	2.0	3.0	0.7	0.8	500	Internal	√ High Efficiency, Monolithic Sync Buck with 20mΩ LS FET & PG	QFN14 (3x4)
	MP2205	3.0	16	2.5	4.0	0.75	0.8	1300	Internal	√ Power Good Output	QFN14 (3x4)
NEW	MP8706	4.5	16	3.0	5.0	1	0.808	500	Internal	√ High Efficiency, Monolithic Buck with 20mΩ LS FET	SOIC8E
	MP38870	4.5	14	3.0	4.0 (Min)	0.9	0.8	600	Internal	√ Power Good Output	QFN14 (3x4)
	MP8642	4.5	23	3.0 (2x)	4.0	0.9	0.8	600	Internal	√ 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	External Comp	SOIC8E
	MP2303	4.75	28	3.0	6.3	1.3	0.8	340	External	High Input Voltage, Small Footprint, External Comp	QFN10 (3x3), SOIC8E
	MP2207	3.0	16	4.0	6.5	0.75	0.8	1300	Internal	√ Small Footprint QFN Package, High SW Frequency for Small Inductor	QFN10 (3x3), SOIC8E
	MP2208	3.0	16	4.0	6.0	0.75	0.8	600	External	√ External Soft Start Power Good Output	QFN14 (3x4)
	MP2214	3.0	16	4.0	7.5	0.75	0.8	600	Internal	√ Power Good Output	QFN14 (3x4), SOIC8E
NEW	MP28254	4.5	21	4.0	5.0	0.7	0.8	500	Internal	√ High Efficiency, Monolithic Sync Buck with 20mΩ LS FET & PG	QFN14 (3x4)
NEW	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)
	MP38872	4.5	21	6.0	8.0	0.9	0.81	600	Internal	√ 45mΩ Integrated Top Side FET with Bottom FET Driver and Power Good	QFN14 (3x4)
	MP38874	4.5	21	8.0	9.5 (Min)	1.1 (Max)	0.81	600	Internal	√ 42mΩ Integrated Top Side FET with Bottom FET Driver and Power Good	QFN14 (3x4)
	MP38671	4.5	25	10	12	1.1 (Max)	0.81	600	Internal	√ Power Good Output, LS Sync Gate Driver	QFN14 (3x4)
	MP38873	4.5	14	15	21	1.2 (Max)	0.81	400	External	√ 18mΩ Integrated Top Side FET w/ Bottom FET Driver, PG, Freq Tracking, Sync Out + Phase Shift	QFN14 (3x4)
	MP38875	4.5	16	15	21	1.2 (Max)	0.81	800	External	√ 18mΩ Integrated Top Side FET w/ Bottom FET Driver, PG, Freq Tracking, Sync Out + Phase Shift	QFN20 (3x4)
	MP38876	4.5	28	15	21	1.2 (Max)	0.81	400	External	√ 18mΩ Integrated Top Side FET w/ Bottom FET Driver, PG, Freq Tracking, Sync Out + Phase Shift	QFN20 (3x4)
Maximum Operating Input Voltage > 28V											
	MP2403	4.6	32	3.0	5.3	1.45	0.8	250	External	External Comp	SOIC8E
	MP38894	4.5	42	4.5	6.5	0.9	0.8	420	Internal	√ Integrated High Side FET w/ LS Sync Gate Driver	SOIC8E
	MP38891	4.5	30	6.0	8.0	0.9	0.8	420	Internal	√ Integrated High Side FET w/ LS Sync Gate Driver	QFN14 (3x4)
	MP38892	4.5	42	6.0	8.0	0.9	0.8	420	Internal	√ Integrated High Side FET w/ LS Sync Gate Driver	SOIC8E

NON-SYNCHRONOUS STEP-DOWN (BUCK)

Part Number	V _{IN} (Min) (V)	V _{IN} (Max) (V)	Load Current (A)	I _{SW} Limit (Typ) (A)	I _O (Typ) (mA)	Feedback Voltage (V)	Switching Freq (kHz)	Soft Start	Ext Sync	Notes	Package
Maximum Operating Input Voltage ≤ 24V											
MP2357	4.5	24	0.5	0.8	0.8	0.81	1400	Internal		Internal Comp	SOT23-6, TSOT23-6
MP2359	4.5	24	1.2	1.8	0.8	0.81	1400	Internal		Internal Comp	SOT23-6, TSOT23-6
MP2351	4.75	23	1.5	2.8	1.1	1.23	1400	Internal	✓	External Comp, Frequency Sync	MSOP10, QFN10 (3x3)
MP28372	4.75	23	1.5 (2x)	3.0	2.4	0.92	1400	External		External Comp, Dual Output	SOIC16, TSSOP20F
MP2364	4.75	23	1.5 (2x)	3.0	2.4	0.92	1400	External		External Comp, Dual Output	TSSOP20F
MP2360	4.5	24	1.8	2.5	0.8	0.81	1400	Internal		Ultra-Small	QFN8 (2x2)
MP2371	4.5	24	1.8	2.5	0.8	0.81	700	Internal		Internal Comp	QFN8 (2x2)
MP2270	4.5	8.0	1.8	2.5	0.8	0.81	700	Internal		Internal Comp	MSOP10E
MP2358	4.75	23	2.0	3.4	1.1	0.92	370	External		External Comp	QFN10 (3x3), SOIC8
MP2361	4.75	23	2.0	3.5	1.2	0.92	1400	External		External Comp	MSOP10, QFN10 (3x3)
MP2354	4.75	23	2.0	3.4	1.0	1.22	380	Internal	✓	External Comp	SOIC8
MP2362	4.75	23	2.0 (2x)	3.4	2	1.22	380	Internal		Dual Output	TSSOP20F
MP4350	4.5	20	2.5	3.5	0.1	0.8	4000 (Adj.)	Internal		External Comp, Resistor Programmable up to 4MHz	QFN10 (3x3)
MP2377	4.5	21	3.0	4.0 (Min)	0.9	0.81	600	Internal	✓	Power Good and Latch Off at Fault	SOIC8E
MP2355	4.75	23	3.0	4.3	1.0	1.22	380	External		External Comp	SOIC8E
MP2363	4.75	27	3.0	5.7	1.0	0.92	365	External		External Comp	SOIC8E, PDIP8
MP2380	4.5	21	5.0	7.3	0.9	0.81	600	Internal	✓	Power Good	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		Resistor Programmable up to 4MHz, Light Load Eff	TQFN10 (3x3)
MP2452	3.3	36	1.0	1.5	0.23	0.8	1000	Internal		High Voltage Buck with few external components	QFN8 (2x3)
MP2562	4.5	50	1.0	1.8	0.12	0.9	4000	Internal		High switching frequency with external components	QFN10 (3x3), SOIC8
MP4459	4.5	36	1.5	2.5	0.1	0.8	4000 (Adj.)	Internal		Resistor Programmable up to 4MHz, Light Load Eff	TQFN10 (3x3)
MP4561	4.5	55	1.5	2.5	0.12	0.80	1000 (Adj.)	External		55V Max Vin, 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
MP2495	4.5	36	1.5	2.6	0.5	0.81	700	External		100V Load Dump Protection, Programmable Output Current	SOIC16
MP4560	4.5	55	2.0	3.2	0.1	0.8	1000 (Adj.)	Internal		55V Max Vin, Superior Light-Load Eff, Ext Comp	QFN10 (3x3), SOIC8E
MP1591	6.5	32	2.0	3.6	1.0	1.23	330	Internal		External Comp	SOIC8, SOIC8E
MP2560	4.5	42	2.5	3.5	0.1	0.8	4000 (Adj.)	Internal		External Comp, Resistor Programmable up to 4MHz, Light Load Eff	QFN10 (3x3), SOIC8E
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		Resistor Programmable up to 4MHz, Light-Load Eff	QFN10 (3x3), SOIC8E
MP1593	4.75	28	3.0	6.2	1.0	1.22	385	External		External Comp	SOIC8E
MP2372	4.75	28	3.0	6.5	1.3	0.92	925	External		External Comp	SOIC8E
MP2365	4.75	28	3.0	6.5	1.3	0.92	1400	External		External Comp	SOIC8E
MP4462	4.5	36	3.5	4.7	0.1	0.8	4000 (Adj.)	Internal		Resistor Programmable up to 4MHz, Light Load Eff	QFN10 (3x3), SOIC8E

STEP-DOWN (BUCK) CONTROLLERS

Part Number	V _{IN} (Min) (V)	V _{IN} (Max) (V)	Load Current (A)	I _{SW} Limit (Typ) (A)	I _O (Typ) (mA)	Feedback Voltage (V)	Switching Freq (kHz)	Soft Start	Ext Sync	Notes	Package
MP2905	3.0	28	-	-	0.6	0.6	500	External		Ideal for Applications Greater than 15A	MSOP10

LOW DROPOUT (LDO) LINEAR REGULATORS

Part Number	V _{IN} (Min) (V)	V _{IN} (Max) (V)	Load Current (mA)	Load Regulation (%/mA)	PSRR @1kHz (dB)	Feedback Voltage (V)	Droput Voltage (mV)	V _{OUT} (V)	Notes	Package
MP2000	1.35	6.0	150	0.001	50	0.5	250 (I _O : 100mA) 300 (I _O : 150mA)	0.5 – 5.0	Low Voltage Input	TSOT23-5
MP8801	2.7	6.5	150	0.001	70	1.22	150 (I _O :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 (I _O :150mA)	Adj., 2.5V, 2.85V & 3.3V	Low Cost, Small QFN 2x2 Option	QFN8 (2x2), TSOT23-5
MP2004	2.7	6.5	200	0.005	69	-	90 (I _O : 100mA) 180 (I _O : 200mA)	1.2 – 3.3	Dual LDO Adjustable	TSOT23-6
MP8802	2.7	6.5	250	0.001	70	1.22	230 (I _O : 250mA)	Adj., 2.5V, 2.85V & 3.3V	Excellent for RF Applications	TSOT23-5
MP8904	2.5	6.5	500	0.001	26	0.5	290 (I _O : 500mA)	0.5 – 5.0	Power Good	QFN8 (2x3)
MP2002	1.35	6.5	500	0.001	26	0.5	290 (I _O : 500mA)	0.5 – 5.0	Low Voltage Input, Power Good	QFN8 (2x3)
MP2007	1.3	6	3000	N/A	N/A	N/A	N/A	V _{TR} /V _{TR} -Ref	DDR2/3 Termination Regulator	MSOP8E
MP2030	1.1	5	3000	0.001	32	0.5	150 (I _O : 3000mA)	Adj., 0.9-3.8	Fast Transient, Ultra-Low Dropout with Bias Supply	QFN10 (3x3), QFN (5x5)

High-Performance, Low-Dropout Linear Regulators

MP2016	4.0	42	30	0.003	50	1.23	700 (I _O :30mA)	1.2 – 20	Ideal for Automotive	QFN8 (2x3), TSOT23-5
MP20041	2.7	6.5	300 (x2)	0.003	65	-	75 (I _O : 100mA) 220 (I _O : 300mA)	1.2 – 3.3	Dual Fixed Output, 300mA/CH LDO	QFN8 (2x2)
MP20042	2.7	6.5	200	0.005	73	-	73 (I _O : 100mA) 145 (I _O : 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 (I _O : 800mA)	0.5 – 4.0	Ultra Low Dropout, Fast Transient 48dB PSRR @ 1MHz	QFN8 (2x3)
MP2009	2.0	6	200	0.005	78		172 (I _O : 120mA)	1.5-4.5		SC70-5

STEP-UP (BOOST) CONVERTERS

Part Number	V _{IN} (Min) (V)	V _{IN} (Max) (V)	V _{OUT} (V)	I _{SW} Limit (Typ) (A)	I _O (Typ) (mA)	Feedback Voltage (V)	Switching Freq (kHz)	Sync	Notes	Package
MP3209	2.5	6.0	22	0.35	0.64	1.25	1400			TSOT23-5, UTQFN8 (2x2)
MP1522	2.7	25	25	0.45	0.65	1.23	Variable		UVLO, Variable Frequency	SOT23-5
MP3208	2.7	25	25	0.45	0.65	0.30	Variable			TSOT23-5
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
MP3115	2.5	4.0	3.3	1.3	0.2	1.23	1300	✓	All Internal FETs	SOT23-6
MP3410	1.8	6.0	6.0	1.3	0.36	1.19	550	✓	Output Disconnect	TSOT23-5
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)

Controllers

MP3900	8.6	12	10V Gate Driver	0.2V/Rsense	0.18	0.82	330		(Boost Controller) 10V Gate Driver	MSOP8
MP3908	4.75	12	10V Gate Driver	0.19V/Rsense	0.27	0.82	260	✓	Sync Boost Controller, Lossless Current Sense, Forward, Flyback, Septic Apps, External Soft Start	MSOP10

USB & POWER DISTRIBUTION / CURRENT LIMIT SWITCHES

Part Number	V _{IN} (Min) (V)	V _{IN} (Max) (V)	Max Continuous Current (A)	Short Circuit Current Max (A)	Channels	Enable Logic	Fault Flag	Output Slew Rate Control	Prog Current Limit	Note	Package
MP6205	2.7	5.5	0.5	1	Single	Active High	Over-Current, Active Low	No	No	Active High Single 500mA Current-Limit Switch	QFN8 (2x3)
MP6232	2.7	5.5	0.5	1.1	Dual	Active Low	Over-Current, Active Low	No	No	Active Low Dual 500 mA/ch Current-Limit Switch	SOIC8E, MSOP8E
MP6231	2.7	5.5	0.5	1.1	Dual	Active High	Over-Current, Active High	No	No	Active High Dual 500 mA/ch Current-Limit Switch	SOIC8E, MSOP8E
MP62055	2.7	5.5	0.5	1.1	Single	Active High	Over-Current, Active High	No	No	Small Package, Industry Standard Pin Out	TSOT23-5
NEW MP62061	2.7	5.5	0.7	1	Single	Active High	Over-Current, Active High	No	No	Active High Single 700mA Current-Limit Switch	MSOP8E
NEW MP62071	2.7	5.5	0.8	1.1	Single	Active High	Over-Current, Active High	No	No	Active High Single 800mA Current-Limit Switch	MSOP8E
MP6211	2.7	5.5	1	2.2	Single	Active High	Over-Current, Active High	No	No	Active High Single 1A Current-Limit Switch	SOIC8E, MSOP8E
MP6212	2.7	5.5	1	2.2	Single	Active Low	Over-Current, Active Low	No	No	Active Low Single 1A Current-Limit Switch	SOIC8E, MSOP8E
MP6219	2.7	5.5	2	Prog	Single	Active High	Thermal Fault = Tri-State	No	Yes	1-2A Programmable Current-Limit, 1.4ms Turn-On Time	SOIC8E
NEW MP62160	2.7	5.5	2	2.8	Single	Active Low	Over-Current, Active Low	No	No	Output Discharge	QFN8E, MSOP8E, SOIC8E
NEW MP62150	2.7	5.5	1.5	2.3	Single	Active Low	Over-Current, Active Low	No	No	Output Discharge	MSOP8
NEW MP62151	2.7	5.5	1.5	2.3	Single	Active Low	Over-Current, Active Low	No	No	1.5 Current Limit Switch	MSOP8
MP6233	2.7	5.5	1.5	2.6	Dual	Active High	Over-Current, Active Low	No	No	1.5 Current Limit Switch	MSOP8E
MP5001	4	10	4.2	Prog	Single	Active High	Thermal Fault = Tri-State	Yes	Yes	1-5A Programmable Current-Limit & Slew Rate Control	QFN10 (3x3)
MP5000	10	18	4.2	Prog	Single	Active High	Thermal Fault = Tri-State	Yes	Yes	1-5A Programmable Current-Limit & Slew Rate Control	QFN10 (3x3)

POWER DRIVERS

Part Number	V _{IN} (Min) (V)	V _{IN} (Max) (V)	I _{SW} Limit (Typ) (A)	Frequency (kHz)	Output Current (A)	I _O (Typ) (mA)	Notes	Package
MP8040	7.5	24	9.0	1200	9A Peak, 4.25A Continuous	1.5	High Current Half Bridge	SOIC8E
MP8042	7.5	24	5.0	600	5A Peak, 4A Continuous	2.1	Dual Channel Half Bridge, Optimized For Audio	TSSOP20E
MP8044	7.5	22	4.0	600	4A Peak, 3A Continuous	2.1	Dual Channel Half Bridge, Optimized For Audio	TSSOP20F

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
NEW 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)
NEW MP7740	9.5	36	15	90	0.018 @ 1W	60	Mono	Single-Ended	SOIC8
NEW MP7742	9.5	28	15 (2x)	90	0.018 @ 1W	60	Stereo	Single-Ended	TSSOP20F
MP7720	9.5	24	20	93	0.04 @ 1W	60	Mono	Single-Ended	PDIP8, SOIC8
MP7722	9.5	24	20 (2x)	93	0.06 @ 1W	60	Stereo	Single-Ended	TSSOP20F
NEW MP7745	9.5	26	20	93	0.05 @ 1W	59	Stereo	Single-Ended	TSSOP20
MP8044	7.5	22	25	94	0.09 @ 1W	-	Stereo	Single-Ended	TSSOP20F
MP7731	9.5	18	30	90	0.10 @ 1W	60	Mono	BTL	TSSOP20F
MP7782	9.5	24	50	90	0.06 @ 1W	60	Mono	Full-Bridge BTL Output	TSSOP20F



BACKLIGHT

WHITE LED DRIVERS (INDUCTORS AND CHARGE PUMPS)

	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 Frequency (kHz)	Open LED Protection	Type	Notes	Package
	MP2370	4.5	24	15	3	1	1.8	0.155	1400		Buck	High Voltage Input, High Efficiency	TSOT23-6
	MP2481	4.5	36	-	27-36	3-9	2.0	0.203	1400	✓	Buck-Boost	Buck-Boost WLED Halogen Replacement up to 5W	MSOP8
	MP3204	2.5	6.0	21	5	1	0.35	0.104	1300	✓	Boost	UVLO, Low EMI, Thermal Shutdown	TSOT23-6
	MP3205	2.5	6.0	21	5	1	0.35	0.104	1300		Boost	Internal Open LED Protection	TSOT23-5
	MP1518	2.5	6.0	25	6	1	0.35	0.104	1300		Boost		QFN8 (2x2), TSOT23-6
	MP1528	2.7	36	-	9	3	0.95	0.4	Variable	✓	Boost		MSOP8, QFN6 (3x3)
	MP1529	2.7	5.5	25	16	3	1.2	-	1200	✓	Boost	Integrated Flash	QFN16 (4x4)
	MP1517	2.6	25	25	18	3	4.0	0.7	1100	✓	Boost	UVLO, External Comp	QFN16 (4x4)
	MP3302	2.5	6.0	36	27	9	1.3	0.2	1300	✓	Boost	Large Panel Drive, High Voltage Output	QFN8 (2x3), TSOT23-5
	MP3202	2.5	6.0	25	39	13	1.3	0.104	1300	✓	Boost	1.3A Current Limit, UVLO, Low EMI, Thermal Shutdown	QFN8 (2x3), TSOT23-5
NEW	MP3388	4.5	28	50	80	8	2.5	0.6	600/1200	✓	Boost	8-CH, Notebook Backlight Solution, LED Short Protection, Thermal Shutdown	QFN24 (4x4)
NEW	MP3386	4.5	28	50	60	6	2.5	0.6	600/1200	✓	Boost	6-CH, Notebook Backlight Solution, LED Short Protection, Thermal Shutdown	QFN24 (4x4)
	MP3801	2.5	5.5	95 AC (190Vpp)	EL	-	-	-	240 EL Lamp		EL Lamp Driver	190Vpp AC Output EL	MSOP8
	MP3802	1.8	5.5	120V AC (240Vpp)	EL	-	-	-	240 EL Lamp		EL Lamp Driver	240Vpp AC Output EL	MSOP8, QFN8 (3x3)
	MP1519L	2.5	5.5	-	3	3	-	-	1300	✓	Charge Pump	Common Cathode	QFN16 (3x3), TQFN16 (3x3)
	MP1519	2.5	5.5	-	4	4	-	-	1300		Charge Pump	Common Cathode	QFN16 (3x3)
	MP3000	2.5	5.5	-	4	4	-	-	1300		Charge Pump	Single Wire Brightness Control, Common Cathode Charge Pump	QFN16 (3x3)
	MP3021	2.7	5.5	-	4	4	-	-	1250		Charge Pump	Single Wire Brightness Control, Common Anode	QFN16 (3x3)
	MP3001	2.7	5.5	-	5	5	-	-	1200		Charge Pump	Single Wire Brightness Control, Common Anode with Flash	QFN16 (3x3)
NEW	MP3304	2.5	6.0	40	10	10	1.3	0.2	2200	✓	Boost	Single-Cell Input, 40V Out	QFN8 (2X3)
NEW	MP3305	2.5	6.0	36	10	10	1.33	0.2	2200	✓	Boost	Single-Celled Input, Program OVP	QFN8 (2X3)
	MP9361	2.8	5.0	5.0	1	3	-	-	1350		Regulated Charge Pump	Internal Soft Start	TSOT23-6

CCFL DRIVERS

Part Number	# of Lamps	V _{IN} (Min) (V)	V _{IN} (Max) (V)	I _{OUT} Tolerance	I _{SUPPLY} (mA)	Integrated Switches	Notes	Package
MP1010B	1	6.0	23	2%	1.8	✓	Resonant Frequency	TSSOP20E
MP1026	1	4.5	14	3%	1.2	✓	Resonant Frequency	TSSOP20E
MP1039	1	10	28	3%	1.4			TSSOP28
MP1048	Up to 6	10	22	3%	2.2			SOIC28, TSSOP28

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
MP3351	Xenon Flash	3	6	60	300	2	0.3	60V, 2A Integrated Photo Flash Charger With IGBT Driver	QFN16-3
MP3352	Xenon Flash	3	6	60	300	2.5	0.3	60V, 2.5A Integrated Photo Flash Charger with IGBT Driver and Quench	QFN16-3

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)	Feedback Voltage (V)	Switching Frequency (kHz)	Notes	Package
	MP6001	4.5	100	15W (Max)	2.0	Flyback / Forward	-	-	55-550	15 W, Integrated 150V Power Switch	SOIC8E
NEW	MP6002	10	100	30 W	4.0	Flyback / Forward	1	1.21	55-550	30 W Integrated 150 V Power Switch	SOIC8E
	MP3900	8.6	12	60W (Max)	0.2V/Rsense	Flyback / Forward	0.18	0.82	330	Boost Controller 10V Gate Driver	MSOP8
	MP3908	4.75	12	60W (Max)	0.19V/Rsense	Flyback / Forward	0.27	0.82	260	Lossless Current Sense, Septic Apps	MSOP10



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PoE

PD IDENTITY

Part Number	Pass Device	Current Limit (mA)	Thermal Protection	IEEE Detection & Classification	Notes	Package
MP8001	100V, 0.8Ω DMOS	450	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 _O (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		15 W, Integrated 150V Power Switch	SOIC8E
MP6002	10	100	5V	4.0	1	1.21	55-550		30 W Integrated 150 V Power Switch	SOIC8E

BATTERY CHARGERS/PROTECTION

Part Number	V _{IN} (Min) (V)	V _{IN} (Max) (V)	# of Cells	I _{CHARGE} (A)	Trickle Charge	Charge Status	Charge Type	Description	Package
MP2607	4.5	12	1	Up to 60	✓	✓	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)
MP2608	3.5	24	1	Up to 1.0	✓	✓	CV/CC Linear	Dual Input USB & AC-Adapter	QFN10 (3x3)
MP2601	4.75	25	1	Up to .30	✓	✓	CV/CC Linear	Simple System Charger 50mA 300mA Prog Charge No NTC	TSOT23-5
MP2603	4.75	25	1	Up to .15	✓	✓	CV/CC Linear	Simple System Charger 50mA 150mA Prog Charge No NTC	TSOT23-5
MP2631	3	28	1	Up to 60	✓	✓	CV/CC Linear	Li-Ion, Linear Battery Charger with 10mA High Voltage LDO	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 60	✓	✓	CV/CC Linear	Li + Linear Battery Charger with 10% Battery-Full Threshold and Flexible NTC Interface	QFN10 (3x3)

Protections

MP2670	4.3	30	1	-			Battery Protection	Li-Ion Battery Charger Protection Circuit	QFN10 (3x3)
MP2671	2.6	30	1	-			Battery Protection	Li-Ion Battery Charger Protection Circuit	QFN12 (3x4)

PRECISION ANALOG

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		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
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 _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

VOLTAGE REFERENCE

Part Number	V _{IN} (Min) (V)	V _{IN} (Max) (V)	Output Voltage (V)	Initial Accuracy (%)	Operating Current (mA)	Zout (Ω)	Description	Notes	Package
MP8200	1.0	12	1.00	1.0	100uA to 10mA	0.5	1.0V Shunt Reference	Precision Shunt Reference	SOT23

INTELLIGENT RECTIFIERS

Part Number	V _{IN} (Min) (V)	V _{IN} (Max) (V)	Switching Frequency (kHz)	Forward Voltage (mV)	Operating Current (mA)	Quiescent Current (mA)	Min Turn-On Time	Description	Notes	Package
MP6900	8.0	24	400	70	8	3	200ns	Fast Turn-Off Intelligent Rectifier	Ultra-Fast Turnoff Transient Response (20 ns)	SOIC8, TSOT23-5
MP6901	8.0	24	400	70	8	3	1600ns	Fast Turn-Off Intelligent Rectifier	Ultra-Fast Turnoff Transient Response (20 ns) with a Longer Blanking Time (1600ns)	SOIC8, TSOT23-5



PART NUMBERING NOMENCLATURE

PART NUMBERING EXAMPLE: MP1521EK-LF-Z

MP	1521	E		K				-LF	-Z
Monolithic Power	Part Number	Temperature Grade		Package				Lead Free	Tape & Reel
MP#### MP#####		C	0 to +70°C	G	QFN (2x2)	K	MSOP	-LF	-Z
		E	- 20°C to +85°C	D	QFN (2x3)	H	MSOP w/EXPOSED PAD	-LF	-Z
		D	- 40°C to +85°C	Q	QFN (3x3)	P	PDIP (300 mil)		
		H	- 40°C to +125°C	L	QFN (3x4)	E	SC70		
		K	- 55°C to +125°C	R	QFN (4x4)	S	SOIC		
				V	QFN (4x5)	W	SOIC - WB w/EXPOSED PAD		
				U	QFN (5x5)	N	SOIC w/EXPOSED PAD		
				QJ	QFN (5x6)	Y	SOIC-WB (Wide-Body)		
				QK	QFN (6x6)	X	Sorted Wafer		
				QM	QFN (6x7)	T	SOT23 (1.1mm height)		
				QN	QFN (7x7)	Z	TO220		
				QP	QFN (7x8)	J	TSOT23 (0.9mm height)		
				QQ	QFN (8x8)	M	TSSOP		
						F	TSSOP w/EXPOSED PAD		
						XN	Unsorted Wafer		
						C	WLCSP		

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