Product Selector Guide

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2H 2016

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CPU Core (Controllers)

Maximum Operating Input Voltage < 55V

Part Number	VCC (Min) (V)	VCC (Max) (V)	IQ (Typ) (mA)	Shutdown (Typ) (mA)	FSW (MHz)	Soft Start	Reg. Output Phase	Package	Notes
MP2953B	4.75	5.25	18	1	0.2-1	Internal	6	QFN40 (5x5)	PMBus Interface, VR12.5
MP2930	4.75	5.25	18	14	0.08-1	External	4	QFN40 (6x6)	8 bit DAC Code, VR10, VR11
MP2932	4.75	5.25	18	14	0.08-1	External	6	QFN48 (6x6)	8 bit DAC Code, VR10, VR11
MP2935	4.5	5.25	8	0.05	0.2-2	Internal	4	QFN40 (6x6)	VR12.5
MP2939	3.2	3.4	8	0.05	0.3-3	Internal	4	QFN48 (6x6)	1+2+1 Phase, IMVP8

CPU Core Power (Intelli-Phase)

Part Number	VIN (Min) (V)	VIN (Max) (V)	IOUT (Max) (A)	ISW Limit (Typ) (A)	ISD (Typ) (mA)	FSW (MHz)	PWM Logic (V)	Package
MP86901A	4.5	26	12	25	0.03	0.1-2	3.5	TQFN13 (3x3)
MP86910B	4.5	26	20	35	0.03	0.1-2	3.5	TQFN21 (3x4)
MP86901C	4.5	26	25	60	0.03	0.1-2	3.5	TQFN21 (3x4)
MP86885	4.5	14	40	60	0.055	0.1-1	3.3	TQFN (4x6)
MP86905	4.5	16	50	75	0.08	0.1-2	3.3	QFN23 (4x4)

Step-Down Converters (Buck)

Maximum Operating Input Voltage 1.5V ≤ VIN ≤ 6V

	Part Number	VIN (Min) (V)	VIN (Max) (V)	IOUT (Max) (A)	IQ (Typ) (µA)	VFB (Typ) (V)	FSW (MHz)	Power Good	Light-Load Efficiency	Constant-On-Time (COT)	100% Duty Cycle	Package	Notes
New	MP2141N	2.3	5.5	1	11	0.6	2.2	✓	✓	✓	✓	SOT563 (1.6x1.6)	Output Discharge
	MP2148	2.3	5.5	1	10	0.6	2.2	✓	✓	✓	✓	QFN6 (1x1.5)	High Switching Frequency, Ultra-Small Package
	MP21148	2.3	5.5	1	500	0.6	2.4	✓		✓	✓	QFN6 (1x1.5)	Forced CCM Mode, Low Ripple Across Entire Load Range
	MP2149	2.7	6	1 (2x)	45	0.608	1		✓			TSOT23-8	Dual Channel
	MP2160	2.7	6	1.2	20	0.6	3.5	✓	✓	✓	✓	QFN8 (2x1.5)	3.5MHz Switching Frequency
	MP2161A	2.5	6	2	20	0.6	1.5	✓	✓	✓	✓	TSOT23-8	1.5% VFB Accuracy, Good Load Regulation
	MP2162A	2.5	6	2	20	0.6	1.5	✓	✓	✓	✓	QFN8 (2x1.5)	1.5% VFB Accuracy, Good Load Regulation
	MP2122	2.7	6	2 (2x)	45	0.608	1		✓		✓	TSOT23-8	Dual Channel, Industrial Grade

Step-Down Converters (Buck)

Maximum Operating Input Voltage 1.5V ≤ VIN ≤ 6V

Part Number	VIN (Min) (V)	VIN (Max) (V)	IOUT (Max) (A)	IQ (Typ) (µA)	VFB (Typ) (V)	FSW (MHz)	Power Good	External Soft Start	Light-Load Efficiency	Constant-On-Time (COT)	100% Duty Cycle	Industrial	Package	Notes
MP2143	2.5	5.5	3	40	0.6	1.2	✓		✓	✓	✓	✓	TSOT23-8	Output Discharge
MP2143H	2.5	5.5	3		0.6	2	✓			✓	✓	✓	QFN10 (2x3)	Forced CCM, Output Discharge
MP2187	2.5	5.5	3 (2x)	80	0.6	1.2	✓		✓	✓	✓		QFN16 (2.2x2.6)	Input Voltage Failure Indicator, Dual Output, Output Discharge
MP2188	2.5	5.5	3 (2x)	80	0.6	1.2	✓		✓	✓	✓		QFN16 (2.2x2.6)	Dual Output, Output Discharge
MP2131	2.7	5.5	4	20	0.6	1.2	✓		✓	✓	✓		QFN12 (2x2)	Output Discharge
MP2147	2.8	5.5	4	40	0.6	1.2	✓		✓	✓	✓		QFN12 (2×3)	External Mode and VCON Control, Output Discharge
MP2145	2.8	5.5	6	40	0.6	1.2	✓		✓	✓			QFN12 (2x3)	Output Discharge, PWM/PFM Mode and Dynamic Voltage Scaling
MPQ8616-6	1.5	6	6	1050	0.61	Prog.	✓	✓		✓		✓	QFN14 (3x4)	CCM, Non-Latch OVP and OCP
MPQ8616-12	1.5	6	12	1050	0.61	Prog.	✓	✓		✓		✓	QFN14 (3x4)	CCM, Non-Latch OVP and OCP
MPQ8612-12	1.5	6	12	1100	0.608	Prog.	✓	✓	✓	✓		✓	QFN14 (3x4)	DCM, Non-Latch OVP and OCP
MPQ8612-16	1.5	6	16	1000	0.61	Prog.	✓	✓	✓	✓		✓	QFN17 (4x4)	DCM, Non-Latch OVP and OCP
MPQ8612-20	1.5	6	20	1000	0.61	Prog.	✓	✓	✓	✓		✓	QFN17 (4x4)	DCM, Non-Latch OVP and OCP

SWITCHING REGULATORS | DC/DC POWER CONVERSION

Step-Down Converters (Buck)

Maximum Operating Input Voltage ≤ 28V

	Part Number	VIN (Min) (V)	VIN (Max) (V)	IOUT (Max) (A)	IQ (Typ) (mA)	VFB (Typ) (V)	FSW (MHz)	Power Good	External Soft Start	Light-Load Efficiency	Constant-On-Time (COT)	100% Duty Cycle	Package	Notes
	MP2313	4.5	24	1	0.2	0.8	2			✓			TSOT23-8	High FSW, Light Load Mode (AAM Pin)
	MP2388	4.5	21	1	0.2	0.798	2			✓			QFN8 (1.5x2.5)	Small Package, Ultra-Thin Profile Option
	MP2317	7.5	26	1	0.15	0.791	0.6			✓			TSOT23-6	Low Current Limit Version of MP2314, Optimized EMI
	MP2228	6	16	2	0.55	0.807	0.8		✓	✓			TSOT23-8	External Light-Load Pin (AAM)
	MP1498	4.5	16	2	0.8	0.807	1.4		✓		✓		TSOT23-8	1.4MHz High FSW
New	MP1476	4.2	18	2	0.18	0.807	0.8			✓		✓	SOT563	Fast Load Transient Response, Over-Current Protection and Hiccup
	MP2318	4.5	24	2	0.2	0.8	2			✓			TSOT23-8	High FSW, Light-Load Mode (AAM Pin)
	MP2314S	4.5	24	2	0.12	0.791	0.5			✓			TSOT23-8	Next Gen Version of MP2314, OVP Function
	MPQ2314	4.5	24	2	0.18	0.791	0.5			✓	✓		TSOT23-8	AAM Power-Save Mode, Industrial Grade
	MP2321	4	19	2	0.04	0.6	Prog.	✓	✓	✓		✓	QFN14 (2x3)	Forced PWM or Auto PFM/PWM Mode Selectable
New	MP2319	4.5	18	3	0.27	0.8	0.65	✓		✓		✓	TSOT23-8	Output Discharge, Auto Retry OVP
New	MP1477	4.2	17	3	0.18	0.798	0.8			✓		✓	SOT563 (1.6x1.6)	Fast Load Transient Response, Over-Current Protection and Hiccup
	MP2240	6	16	3	0.75	0.807	0.8		✓	✓			TSOT23-8	Light-Load Mode (AAM Pin)
	MP2233	4.5	16	3	0.6	0.807	1.4		✓				TSOT23-8	1.4MHz High FSW
	MP2316	4	19	3	0.04	0.6	Prog.	✓	✓	✓	✓	✓	QFN14 (2x3)	High Efficiency
	MP2315	4.5	24	3	0.18	0.791	0.5			✓	✓		TSOT23-8	AAM (Light-Load Mode), Industrial Grade
	MP2326	3.9	19	4	0.04	0.6	Prog.	✓	✓	✓	✓	✓	QFN14 (2x3)	Selectable PFM/PWM Mode
	MP9151	4.5	20	4	0.7	0.795	Prog.	✓	✓	✓			QFN14 (2x3)	PG and Ext. SS

Step-Down Converters (Buck)

Maximum Operating Input Voltage ≤ 28V

	Part Number	VIN (Min) (V)	VIN (Max) (V)	IOUT (Max) (A)	IQ (Typ) (mA)	VFB (Typ) (V)	FSW (MHz)	Power Good	External Soft Start	Light-Load Efficiency	Constant-On-Time (COT)	Industrial	Package	Notes
	MP8715	4.5	21	4	0.66	0.805	0.5	✓	✓				QFN14 (3x4) SOIC8E	100% Duty Cycle, Ext. Frequency Sync
	MP1499	4.5	16	4	0.6	0.807	0.5		✓	✓			QFN10 (2x3)	Ext. Frequency Sync
	MP2225	4.5	18	5	0.32	0.6	0.5			✓			TSOT23-8	High-Efficiency, 5A Peak, Ext. Freq Sync
	MP8760D	4.5	18	6	0.86	0.611	Prog.	✓	✓	✓			QFN16 (3x4)	Output Discharge
	MPQ8632-6	2.5	18	6	0.86	0.611	Prog.	✓	✓	✓		✓	QFN16 (3x4)	DCM, Non-Latch OVP
	MP2229	4.5	21	6	0.4	0.6	Prog.		✓	✓			QFN14 (3x3)	Current Mode, Exteranl Freq. Sync
New	MP8756	4.5	26	6	0.117	0.6	0.7	✓		✓			QFN12 (2x3)	USM, PFM/PWM Selection, Hiccup Mode OCP and UVP, Output Discharge
New	MP8759	4.5	26	8	0.117	0.6	0.7	✓		✓			QFN12 (2x3)	USM, PFM/PWM Selection, Hiccup Mode OCP and UVP, Output Discharge
	MPQ8636H-10	4.5	18	10	0.86	0.611	Prog.	✓	✓		✓	✓	QFN16 (3x4)	CCM, Non-Latch OVP
	MPQ8636-10	4.5	18	10	0.86	0.611	Prog.	✓	✓		✓	✓	QFN16 (3x4)	CCM, Latch-Off OVP
	MPQ8636A-10	4.5	18	10	0.86	0.611	Prog.	✓	✓		✓	✓	QFN16 (3x4)	CCM, Latch-Off OVP/OCP
	MPQ8632H-10	2.5	18	10	0.86	0.611	Prog.	✓	✓	✓	✓	✓	QFN16 (3x4)	DCM, Latch-Off OVP
	MPQ8632-10	2.5	18	10	0.86	0.611	Prog.	✓	✓	✓	✓	✓	QFN16 (3x4)	DCM, Non-Latch OVP
	MP8758H	4.5	22	10	0.19	0.604	0.5	✓		✓	✓		QFN21 (3x4)	Thermal Auto-Retry, Hiccup Mode OCP and UVP, PFM/PWM Mode
New	MP8712	3	18	12	0.42	0.6	0.5	✓	✓	✓	✓		QFN14 (3x4)	15A Peak Output Current, Auto-Retry Input and Output Over-Voltage Protection
	MP8763D	4.5	18	12	0.86	0.611	Prog.	✓	✓	✓	✓		QFN16 (3x4)	High Efficiency, Output Discharge
	MPQ8632-12	2.5	18	12	0.86	0.611	Prog.	✓	✓	✓	✓		QFN16 (3x4)	DCM, Non-Latch OVP
	MPQ8632-15	2.5	18	15	0.86	0.611	Prog.	✓	✓	✓	✓	✓	QFN29 (5x4)	DCM, Non-Latch OVP
	MP38876	4.5	28	15	1	0.81	0.4	✓	✓				QFN20 (3x4)	Synchronous Gate Driver, OCP Latch-Off, External Freq. Sync
	MPQ8632-20	2.5	18	20	0.86	0.611	Prog.	✓	✓	✓	✓	✓	QFN29 (5x4)	DCM, Non-Latch OVP
	MPQ8636-20	4.5	18	20	1	0.611	Prog.	✓	✓		✓	✓	QFN29 (5x4)	CCM, Non-Latch OVP
	MPQ8636H-20	4.5	18	20	1	0.611	Prog.	✓	✓		✓	✓	QFN29 (5x4)	CCM, Hiccup OVP

SWITCHING REGULATORS | DC/DC POWER CONVERSION

Step-Down Converters (Buck)

Maximum Operating Input Voltage < 55V

	Part Number	VIN (Min) (V)	VIN (Max) (V)	IOUT (Max) (A)	IQ (Typ) (mA)	VFB (Typ) (V)	FSW (kHz)	Power Good	Ext. Soft Start	Light-Load Eff.	Sync Rect.	Industrial	Package	Notes
	MP4410	4.5	36	0.1	0.02	1	Prog.	✓			✓		QFN10 (3x3)	Low IQ
	MP4568	4.5	45	0.1	0.02	1	Prog.		✓		✓	✓	QFN10 (3x3)	Programmable Peak Current Limit
	MP4569	4.5	75	0.3	0.02	1	1000	✓	✓		✓	✓	QFN10 (3x3) SOIC8E	Integrated High-Side/Low-Side
	MP2420	4.5	75	0.3	0.02	1	Prog.	✓	✓		✓	✓	TSSOP-16	Watchdog + Step-Down
	MPQ2459	4.5	55	0.5	0.73	0.812	480					✓	TSOT23-6	Built-In Power MOSFET
	MPQ2456	4.5	50	0.5	0.73	0.85	1200			✓		✓	TSOT23-6	OCP
	MP4566	4.5	36	0.6	0.035	1	1000			✓			QFN8 (2x3)	High Light-Load Efficiency
	MPQ2451	3.3	36	0.6	0.13	0.794	2000			✓		✓	SOT23-6L QFN-6L	Light-Efficiency
	MP2454	3.3	36	0.6	0.06	0.8	2300	✓	✓			✓	QFN10 (3x3)	External Frequency Sync
Sampling	MP2269	3.3	30	1	0.012	0.8	Prog.	✓	✓	✓	✓		QFN15 (2x3)	Low IQ, Low Input Voltage, Small Package
	MPQ4458	3.8	36	1	0.12	0.8	Prog.			✓			TQFN10 (3x3)	Integrated High-Side MOSFET
	MPQ4558	3.8	55	1	0.14	0.8	Prog.			✓		✓	QFN10 (3x3) SOIC8E	Current Mode Control
	MPQ4459	3.8	36	1.5	0.12	0.8	Prog.			✓		✓	TQFN10 (3x3)	Current Mode Control
	MPQ2490	4.5	36	1.5	0.5	0.805	700	✓	✓			✓	SOIC8	Programmable Output-Current Limit
	MPQ4561	3.8	55	1.5	0.14	0.795	Prog.		✓	✓			QFN10 (3x3)	Internal High-Side MOSFET
New	MP4425M	4	36	1.5	0.5	0.2	2200					✓	QFN13 (2.5x3)	PWM Dimming and OCP/SCP Protection, External Frequency Sync
	MP9942/A	4	30	2	0.5	0.792	410	✓		✓	✓		TSOT23-8	Forced CCM, Consumer Grade, External Frequency Sync
	MP4420H	4	36	2	0.5	0.792	410	✓			✓	✓	TSOT23-8	External Frequency Sync
	MPQ4560	3.8	55	2	0.14	0.797	Prog.			✓		✓	QFN10 (3x3) SOIC8E	AEC-Q
	MP2499	4.5	55	2	0.5	0.8	100		✓				SOIC16	Programmable Output Current
	MPQ4460	3.8	36	2.5	0.12	0.8	Prog.			✓			QFN10 (3x3)	Programmable Output Current
	MP2560	4.5	42	2.5	0.12	0.8	Prog.			✓			QFN10 (3x3) SOIC8E	Current Mode Control
	MP2565	4.5	50	2.5	0.12	0.8	Prog.			✓			QFN10 (3x3) SOIC8E	Integrated Internal High-Side
	MP2496M	7	36	2.5	1.6		Selec.						QFN26 (4x4)	Integrated Smart USB Charging Port, Auto Detect, Cable Compensation
	MP9943/A	4	30	3	0.5	0.79	410	✓		✓	✓		QFN8 (3x3)	Consumer Grade, 36V Max, External Frequency Sync
	MP4423H	4	36	3	0.5	0.79	410	✓			✓	✓	QFN8 (3x3)	External Frequency Sync
	MP4570	4.5	55	3	0.45	1	Prog.	✓	✓	✓	✓	✓	TSSOP-20 EP	External Frequency Sync
Sampling	MP2263	3.3	30	3	0.012	0.8	Prog.	✓	✓	✓	✓		QFN15 (2x3)	Low IQ, Low Input Voltage, Small Package
	MPQ4462	3.8	36	3.5	0.12	0.792	Prog.				✓	✓	QFN10 (3x3) SOIC8E	AEC-Q
	MP4473	4.5	36	3.5	0.5	0.815	Prog.	✓	✓	✓	✓	✓	QFN20 (3x4)	High Frequency
	MP28490	4.5	30	5	0.9	0.808	420	✓					SOIC8E	External Frequency Sync
	MP8675	4.5	42	6	0.9	0.808	420				✓		SOIC8E	Synchronizable Gate Driver, External Frequency Sync

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Step-Down Controllers

Part Number	VIN (Min) (V)	VIN (Max) (V)	IQ (Typ) (mA)	VFB (V)	FSW (kHz)	Soft Start	Package	Notes
MP2910	5	12	0.6	0.8	300	Internal	SOIC14 SOIC8E	Synchronous PWM DC/DC Linear, Specific Power Good Indicator for Intel, Grantsdale FSB_VTT Power Sequence
MP2905	3	28	0.6	0.6	Adj. 200 to 500	External	MSOP10	Ideal for Applications Greater than 15A
MP2908A	4	60	0.75	0.8	Adj. 100 to 1000	External	TSSOP-20 EP QFN20 (3x4)	Industrial Grade, PG, Programmable CCM, AAM, Pulse-Skipping Mode

Step-Up Charge Pump

Part Number	VIN (Min) (V)	VIN (Max) (V)	IOUT (A)	IQ (Typ) (mA)	FSW (kHz)	Industrial	Package	Notes
MP9361	2.8	5	0.11	2	1350	✔	TSOT23-6	Fixed 5VOUT, High-Performance, Regulated, Internal Soft Start, OCP, SCP, In-Rush Current Limit
MP9218	2.8	5	0.11	2	1350		QFN6 (2x2)	Fixed 5VOUT, High-Performance, Regulated, Small QFN2x2 Package

Step-Up Controllers

Part Number	VIN (Min) (V)	VIN (Max) (V)	IOUT (A)	FSW (kHz)	IQ (Typ) (mA)	VFB (Typ) (V)	Soft Start	Package	Notes
MP3910	5	35	1	Adj. 30 to 400	0.288	1.237	External	MSOP10	Supports Pulse-Skipping Mode at Light Load, 0.95 Max Duty Cycle
MP3910A	9	14	1	Adj. 30 to 400	0.288	1.237	External	SOIC8E	Supports Pulse-Skipping Mode at Light Load, 0.95 Max Duty Cycle
MP6002	10	100	3	550	1	1.21	Internal	SOIC8E	Flyback/Forward DC/DC Converter, 30W, Integrated 150V Power Switch
MP6001	10	100	2	550	1	1.21	Internal	SOIC8E	Flyback/Forward DC/DC Converter, 15W, Integrated 150V Power Switch
MP6003	10	100		550	1	1.21	Internal	SOIC8E	Monolithic Flyback/SEPIC DC/DC Converter

Step-Up Converters (Boost)

Part Number	VIN (Min) (V)	VIN (Max) (V)	ISW Limit (Typ) (A)	IQ (Typ) (mA)	VOUT Range (V)	FSW (kHz)	Package	Notes
MP3209	2.5	6	0.35	0.64	3 to 22	1400	TSOT23-5 UTQFN8 (2x2)	Internal Comp, Tiny Inductors and Capacitors Can be Used
MP3416	0.8	5.5	1	0.0085	1.8 to 5.5	1500	TSOT23-8 QFN8 (1.5x2.2)	Output Disconnect, Down Mode, Sync
MP3217	2.5	6	0.5	0.46	Vin to 36	670	TSOT23-6	Cycle-by-Cycle Over-Current Protection, UVLO, Thermal Shutdown, P2P with MAX5025-5028
MP1400	2.7	7	0.6	0.2	-0.9 to -6	1500	CSP8 (0.8x1.6)	Output Adjustable from -0.9V to -6V, Very Small Size
MP3120	0.8	5	1.2	0.47	2.5 to 5	1100	TSOT23-6	Output Disconnect, LDO Mode, Sync
MP3430	2.7	5.5	1.2	0.3	2.7 to 90	1300	QFN16 (3x3)	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
MP3410	1.8	6	1.3	0.36	2.5 to 6	550	TSOT23-5	Output Disconnect, Sync
MP3415	1.8	5.5	4.2	0.022	1.98 to 5.5	1000	QFN12 (2x2)	Output Disconnect, Sync
MP3414	0.6	4	1.8	0.035	1.8 to 4	1000	TSOT23-8	Output Disconnect, Sync
MP1541	2.5	6	1.9	0.64	3 to 22	1300	TSOT23-5	Internal Current Limit

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Step-Up Converters (Boost)

Part Number	VIN (Min) (V)	VIN (Max) (V)	ISW Limit (Typ) (A)	IQ (Typ) (mA)	VOUT Range (V)	FSW (kHz)	Package	Notes
MP1542	2.5	22	2.6	0.7	3 to 22	700/1300	MSOP8	Programmable Soft Start
MP3414A	1.8	5.5	3	0.022	1.908 to 5.5	1000	TSOT23-8	Wider Input Version of MP3414, Sync
MP3213	2.5	22	3.5	0.7	3 to 22	700/1300	MSOP8E	Programmable Soft Start
MP1530	2.7	5.5	3.6	1.3	2.7 to 22	1400	QFN16 (3x3) TSSOP16	Triple Output Charge Pump, LDO for TFT Bias
MPQ1530	2.7	5.5	3.6	1.3	2.7 to 22	1400	QFN16 (3x3)	Triple Output Charge Pump, LDO for TFT Bias, Industrial Grade
MPQ1530	2.7	5.5	3.6	1.3	2.7 to 22	1400	QFN16 (3x3)	Triple Output Charge Pump, LDO for TFT Bias, Industrial Grade
MPQ1530	2.7	5.5	3.6	1.3	2.7 to 22	1400	QFN16 (3x3)	Triple Output Charge Pump, LDO for TFT Bias, Industrial Grade
MP3425	3.1	22	5	0.65	3.1 to 55	Prog. 300 to 2000	QFN14 (3x4)	Programmable UVLO and EN Hysteresis, Industrial Grade
MP3422	1.9	5.5	6.5	0.043	2.5 to5.5	600	QFN14 (3x4)	Output Disconnect, Sync
MP3421	1.9	5.5	5.5	0.043	2.5 to 5.5	600	QFN14 (2x2)	Small Size, Output Disconnect, Sync
MP3426	3.2	22	8.5	0.65	3.2 to 35	Prog. 300 to 2000	QFN14 (3x4)	Programmable UVLO, Soft Start, UVLO Hysteresis, Industrial Grade
MP3423	1.9	5.5	9	0.043	2.5 to 5.5	600	QFN14 (2x2)	Small Size, Output Disconnect, Sync
MP3428A	3	20	22	0.6	3 to 22	600	QFN22 (3x4)	Input Disconnect Function, External Soft Start, Programmable UVLO and Hysteresis, Sync

Step-Up Energy Storage (Dying GASP) / Power Back-Up Manager PMICs

	Part Number	VIN (Min) (V)	VIN (Max) (V)	Vstrg (Max) (V)	I Limit Charging (A)	I Limit Dumping (A)	IQ (Typ) (mA)	VFB (V)	Package	Notes
	MP5505A	2.7	7	30	0.5	5	2 (Max)	0.79	QFN20 (3x4)	Programmable Storage, Release Voltage, Hot-Swap Management Unit for SATA/M.2 PCIe
New	MP5507E	2.7	7	30	0.5	5	2	0.79	QFN16 (2.5x3.2)	Bus Power Good Indicator, Adj. dv/dt Slew Rate for VB Start-Up, 1.2MHz Buck Release Mode Switching Frequency. Smaller Package Version of MP5505A
	MP5512	4	18	40	0.96	5	1	0.8	QFN28 (4x5)	Programmable Storage and Release Voltage, Hot-Swap Management Unit for PCIe

Step-Up LNB

Part Number	VIN (Min) (V)	VIN (Max) (V)	Standard	IOUT (Max) (A)	22kHz Tone Signal Generated	Package	Notes
MP8124	8	14	DiSEqC™ 1.x	0.5	Internal	QFN14 (2x3)	Boost Converter with Internal Switch, Low-Noise LDO Output, Line-Drop Compensation, Selectable VOUT Compensation, Adj. Output SS

SWITCHING REGULATORS | DC/DC POWER CONVERSION

Buck/Boost

	Part Number	VIN (Min) (V)	VIN (Max) (V)	ISW Limit (Typ) (A)	IQ (Typ) (mA)	VFB (V)	FSW (kHz)	Sync	Package	Notes
	MP2155	2	5.5	2.2	0.08	0.496	1000	✓	QFN10 (3x3)	Power-Save Mode, Load Disconnect
	MP28163	2	5.5	2.9	0.07	0.496	1100	✓	QFN10 (3x3)	Power-Save Mode, Load Disconnect
New	MP28164	1.2	5.5	4.2	0.025	0.5	2000	✓	QFN11 (2x3)	Power-Save Mode, Load Disconnect

LDO

	Part Number	VIN (Min) (V)	VIN (Max) (V)	IOUT (mA)	IQ (Typ) (µA)	Load Reg. (%/mA)	PSRR @ 1kHz (dB)	VFB (V)	Dropout Voltage (mV)	Package	Notes
	MP2000	1.35	6	150	65	0.001	50	0.5	250 (IO: 100mA) 300 (IO: 150mA)	TSOT23-5	Low Voltage Input (1.35V to 6V)
	MP8801	2.7	6.5	150	125	0.001	70	1.22	150 (IO: 150mA)	TSOT23-5	Low Noise, Excellent for RF App, Lower Cost
	MP8802	2.7	6.5	250	125	0.001	70	1.22	230 (IO: 250mA)	TSOT23-5	Excellent for RF Applications, Lower Cost
	MP20041	2.5	6	300 (2x)	114	0.003	65		75 (IO: 100mA) 220 (IO: 300mA)	QFN8 (2x2)	Dual Fixed Output, P2P RT9012
	MP20043	2.5	5.5	300 (2x)	150		75		60 (IO: 100mA) 180 (IO: 300mA)	TQNF8 (2x2)	Dual Outputs, Programmable with 2-Pin Control Input
	MP2002	1.35	6.5	500	100	0.001	26	0.5	290 (IO: 500mA)	QFN8 (2x3)	Low-Voltage Input, Power Good
	MP8904	2.5	6.5	500	100	0.001	26	0.496	300 (IO: 500mA)	QFN8 (2x3)	Power Good Output, Industrial Grade
	MP20045	2.5	5.5	1000	110	0.0003	56	1.5	140 (IO: 1000mA)	QFN8 (3x3) SOIC8E	High Input/Output Current with Fast Response, Fixed and Adjustable +O252 Output Voltages
	MP20051	2.5	5.5	1000	110	0.0003	63	0.8	140 (IO: 1000mA)	QFN8 (3x3)	Industrial Grade
	MP20046	2.7	5.5	2000	75	0.0003	70		210 (IO: 2000mA)	SOIC8E QFN10 (3x3)	High Input/Output Current with Fast Response
	MP20073	1.3	6	2000						MSOP8E	DDR2/3 Termination Regulator
	MP20075	1.3	3.6	3000						MSOP8E	DDR2/3/3L/4 Termination Regulator, VDRV=3.3V

High-Performance Low-Dropout Linear Regulators

	MP2016	4	42	30	12	0.003	50	1.23	700 (IO:30mA)	QFN8 (2x3) TSOT23-5	Ideal for Automotive
New	MP2015A	2.5	24	150	3.3	0.005	41	1.215	700 (IO:150mA)	TSOT23-4 QFN6 (2x2) QFN8 (3x3)	EN Pin
	MP2019	3	40	300	10	0.04	45	1.25	420(IO:300mA)	SOIC-8 EP	Industrial Grade
	MP2014	3	40	500	10	0.03	45		750 (IO:500mA)	TO252-5	Low Quiescent Current
	MP2005	1	5.5	800	100	0.0005	65	0.5	70 (IO:800mA)	QFN8 (2x3)	Fast Transient, 48dB PSRR @1MHz
	MP2030	1.1	5	3000	220	0.001	32	0.5	150 (IO:3000mA)	QFN10 (3x3) QFN32 (5x5)	Dual Supply, Fast Transient, Bias Supply, Power Good, Current Limit, Internal Thermal Protection

SUPERVISORY | DC/DC POWER CONVERSION

Part Number	VIN (Min) (V)	VIN (Max) (V)	IQ (Typ) (µA)	Threshold Acc (%)	Re-set Threshold Accuracy (%)	Delay Time (ms)	Package	Notes
MP6400	1.8	6	1.6	0.4	1	2.1 to 10000	QFN10 (3x3)	Power-Save Mode, Load Disconnect
MPQ6411	4.8	5.2	N/A	N/A	N/A	N/A	QFN10 (3x3)	Power-Save Mode, Load Disconnect

MOSFET DRIVERS

Half-Bridge Gate Drivers

Part Number	VIN (Min) (V)	VIN (Max) (V)	Bootstrap Supply (Max) (V)	Peak Pull-Up Current (A)	Peak Pull-Down Current (A)	Rise Time (ns)	Fall Time (ns)	Turn-On Delay (ns)	Turn-Off Delay (ns)	Package	Notes
MP18024	9	16	100	3	4.5	15	9	20	20	SOIC8E	4A, High Frequency
MP1906	10	16	80	0.35	1	50	30	80	80	SOIC8	High Performance
MP1907	4.5	18	100	1.5	2.5	12	9	18	20	QFN10 (3x3)	2.5A, High Frequency
MP18021A	9	18	100	1.5	2.5	12	9	16	16	SOIC8E QFN8 (3x3)	2.5A, High Frequency, Industrial Grade
MP18021	9	18	100	1.5	2.5	12	9	16	16	SOIC8EP QFN8 (3x3)	High Frequency, N-MOSFET, with 1ns Matching Delay

PMIC & MULTIPLE OUTPUTS

Part Number	VIN (Min) (V)	VIN (Max) (V)	VOUT (V)	VFB (V)	ISW Limit (Typ) (A)	FSW (kHz)	Package	Notes
MP5408M	6	36	6	1		Prog.	QFN26 (5x5)	Integrated Smart Dual USB Charging Ports, Auto Detect, Supports USB Type-C 5V at 3A DFP Mode
MP5410	1.8	5.5	10	1.23	10	Variable	QFN16 (3x3)	Low Start-Up Voltage Boost Converter with 4 SPDT Switches

FLYBACKS

Part Number	VIN (Min) (V)	VIN (Max) (V)	ISW Limit (Typ) (A)	IQ (Typ) (mA)	VFB (V)	FSW (kHz)	Package	Notes
MP6004	14	80	2.05	0.38	1.99	10 to 200	QFN14 (3x3)	13W, Integrated 180V Power Switch

PoE PD CONTROLLERS | DC/DC POWER CONVERSION

Part Number	VIN (Min) (V)	VIN (Max) (V)	ISW Limit (Typ) (A)	IQ (Typ) (mA)	VFB (V)	FSW (kHz)	Package	Notes
MP3900	8.6	12	0.2V/Rsense	0.18	0.816	330	MSOP8	Boost Controller 10V Gate Driver
MP6001	4.5	100	2			55 to 550	SOIC8E	15W, Integrated 150V Power Switch
MP6002	10	100	4	1	1.21	55 to 550	SOIC8E	30W, Integrated 150V Power Switch

PoE PD IDENTITY

Part Number	Pass Device	Current Limit (mA)	Thermal Protection	IEEE Detection & Classification	Package	Notes
MP8007	100V, 0.48Ω DMOS	840	Yes	802.3af	QFN28 (4x5)	13W Primary-Side Regulated Flyback without Optocoupler Feedback
MP8004	100V, 1Ω DMOS	420	Yes	802.3af	QFN20 (4x6)	13W PoE PD Interface and PWM Converter
MP8001	100V, 0.8Ω DMOS	420	Yes	802.3af	SOIC8	15W PoE PD Controller

DIGITAL REGULATORS

Synchronous Step-Down Converter with I2C Interface

	Part Number	VIN (Min) (V)	VIN (Max) (V)	IOUT (Max) (A)	IQ (Typ) (mA)	VFB (Typ) (V)	FSW (kHz)	Power Good	External Soft Start	Light-Load Efficiency	Sync. Rectification	Constant-On-Time (COT)	Package	Notes
New	MP8843	2.6	6	3	0.06	0.6	1000 to 2000	✓		✓	✓	✓	QFN12 (2x2)	Prog. VOUT, Power Save Mode
	MP8864	4.5	21	4	0.5	0.6	1600	✓	✓	✓	✓		QFN15 (3x3)	Prog. VOUT, Power Save Mode
	MP8845	2.8	6	5	18	0.6	2200			✓	✓		WLCSP (1.6x2)	Slew Rate, Select. Power Save Mode
	MP8846	4.5	8	6	0.5	0.6	1600	✓	✓	✓	✓		QFN15 (3x3)	Prog. VOUT, Power Save Mode
	MP8865	4.5	21	6	0.5	0.6	1600	✓	✓	✓	✓		QFN15 (3x3)	Prog. VOUT, Power Save Mode
	MP8867	4.5	17	8	0.56	0.6	1500	✓	✓	✓	✓		QFN14 (3x4)	Prog. VOUT, Power Save Mode
	MP8868	4.5	17	10	0.56	0.6	1500	✓	✓	✓	✓		QFN14 (3x4)	Prog. VOUT, Power Save Mode
New	MP8869W	3	18	12	0.42	0.6	500 to 1250	✓	✓	✓	✓	✓	QFN14 (3x4)	Integrated Telemetry, Accuracy Output Voltage/Current, Readback via I²C

STEP-DOWN REGULATORS | AUTOMOTIVE

Synchronous Step-Down (6V)

	Part Number	VIN (Min) (V)	VIN (Max) (V)	IOUT (A)	ISW Limit (Typ) (A)	IQ (Typ) (mA)	VFB (V)	FSW (kHz)	Soft Start	External Sync	Package	Notes	Status
	MPQ2171-AEC1	2.5	5.5	1.0			0.6	2200	Int	✓	TSOT23-8	Output Discharge,100% Duty Cycle, Constant On Time	Sampling
	MPQ2172-AEC1	2.5	5.5	2.0			0.6	2200	Int	✓	TSOT23-8	Output Discharge,100% Duty Cycle, Constant On Time	Sampling
New	MPQ2143-AEC1	2.5	5.5	3.0	4.8	0.04	0.6	1200	Int		TSOT23-8	Output Discharge,100% Duty Cycle, Constant On Time	Production
	MPQ2167-AEC1	2.7	6.0	4.0		0.05	0.6	2200 Adj.	Ext	✓	QFN11 (2x3)	100% Duty Cycle Operation	Sampling
	MPQ2166-AEC1	2.7	6.0	4.0		0.06	0.6	3000 Adj.	Ext	✓	QFN18 (2x3) +WF+	Dual Outputs of 2A/2A or 1A/3A, 100% Duty Cycle Operation, Select. Forced CCM or AAM, Spread Spectrum	Sampling

Synchronous Step-Down (36V)

	Part Number	VIN (Min) (V)	VIN (Max) (V)	IOUT (A)	ISW Limit (Typ) (A)	IQ (Typ) (mA)	VFB (V)	FSW (kHz)	Soft Start	External Sync	Package	Notes	Status
	MPQ4431-AEC1	3.3	36	1.0	2.5	0.01	0.80	2500 Adj.	Ext	✓	QFN16 (3x4) +WF+	Low Iq, Select. Forced CCM or AAM, Prog. Soft-Start Time, Good EMI, Low Dropout Mode	Sampling
New	MPQ4415M-AEC1	4.0	36	1.5	4.0	0.6	0.81	2200	Int	✓	QFN13 (2.5x3)	Forced CCM Mode	Production
	MPQ4420H-AEC1	4	36	2.0	4.2	0.5	0.79	410	Int	✓	TSOT23-8	A Version: Forced CCM Mode	Production
	MPQ4420A-AEC1	4	36	2.0	5.6	0.6	0.79	410	Int	✓	TSOT23-8	A Version: Forced CCM Mode	Production
New	MPQ4432-AEC1	3.3	36	2.2	5.2	0.01	0.80	2500 Adj.	Ext	✓	QFN16 (3x4) +WF+	Low Iq, Select. Forced CCM or AAM, Prog. Soft-Start Time, Good EMI, Low Dropout Mode	Production
New	MPQ4433-AEC1	3.3	36	3.0	5.8	0.01	0.80	2500 Adj.	Ext	✓	QFN16 (3x4) +WF+	Low Iq, Select. Forced CCM or AAM, Prog. Soft-Start Time, Good EMI, Low Dropout Mode	Production
	MPQ4423H-AEC1	4	36	3.0	4.4	0.5	0.79	410	Int	✓	QFN8 (3x3)	A Version: Forced CCM Mode	Production
	MPQ4423A-AEC1	4	36	3.0	5.7	0.6	0.79	410	Int	✓	QFN8 (3x3)	A Version: Forced CCM Mode	Production
	MPQ4473-AEC1	4.5	36	3.5	6.6	0.5	0.82	Adj. 200 - 1000	Ext		QFN20 (3x4)	Programmable Soft-Start Time SCP, OCP, No OVP Latch	Production
New	MPQ4430-AEC1	3.3	36	3.5	5.8	0.01	0.80	2500 Adj.	Ext	✓	QFN16 (3x4) +WF+	Low Iq, Select. Forced CCM or AAM, Prog. Soft-Start Time, Good EMI, Low Dropout Mode	Production
	MPQ4470-AEC1 MPQ4470A-AEC1	4.5	36	5.0	8.0	0.5	0.82	Adj. 100 - 1000	Ext		QFN20 (3x4)	Programmable Soft-Start Time SCP, OCP. A Version: No OVP Latch; Non-A: OVP Latch	Production

Note: +WF+ Available with Wettable Flank

STEP-DOWN REGULATORS | AUTOMOTIVE

Synchronous Step-Down (55-75V)

Part Number	VIN (Min) (V)	VIN (Max) (V)	IOUT (A)	ISW Limit (Typ) (A)	IQ (Typ) (mA)	VFB (V)	FSW (kHz)	Soft Start	External Sync	Package	Notes	Status
MPQ4570-AEC1	4.5	55	3.0	5.7	0.45	1.00	Adj.	Ext	✓	TSSOP-20 EP		Production
MPQ4569-AEC1	4.5	75	0.3	0.7	0.02	1	Adj.	Ext		QFN10 (3x3) SOIC8E	Wide VIN, Programmable Soft Start	Production
MPQ2420-AEC1	4.5	75	0.3	0.7	0.02	1	Adj.	Ext		TSSOP-16 EP	Windowed Watchdog Function	Production

Step-Down Controllers

Part Number	VIN (Min) (V)	VIN (Max) (V)	IQ (Typ) (mA)	ISD (Typ) (µA)	VFB (V)	FSW (kHz)	Soft Start	External Sync	Package	Notes	Status
MPQ2908A-AEC1	4	60	0.8	0.50	0.8	1000 (Adj.)	Ext	✓	TSSOP-20 EP QFN20 (3x4)	PG, Programmable CCM, AAM, Pulse-Skipping Mode, High Max Duty Cycle (99.5%)	Sampling
MPQ2918-AEC1	4	40	0.8	0.50	0.8	1000 (Adj.)	Ext	✓	TSSOP-20 EP QFN20 (3x4)	PG, Programmable CCM, AAM, Pulse-Skipping Mode, High Max Duty Cycle (99.5%)	Sampling

Step-Down Modules

	Part Number	VIN (Min) (V)	VIN (Max) (V)	IOUT (A)	ISW Limit (Typ) (A)	IQ (Typ) (mA)	VFB (V)	FSW (kHz)	Package	Notes	Status
New	MPM3515-AEC1	4	36	1.5	4	0.60	0.8	2200	QFN17 (3x5x1.6) +WF+	Complete SMPS, Integrated OCP, Frequency Foldback at High Voltage, Forced CCM	Production

Multi-Output Synchronous Step-Down and PMIC

Part Number	VIN (Min) (V)	VIN (Max) (V)	IOUT (A)	# of Rails	IQ (Typ) (mA)	VFB (V)	FSW (kHz)	Soft Start	External Sync	Package	Notes	Status
MPQ2166-AEC1	2.7	6	4.0	2	0.06	0.6	3000 (Adj.)	Ext	✓	QFN18 (2x3) +WF+	Dual Outputs of 2A/2A or 1A/3A, 100% Duty Cycle Operation, Select Forced CCM or AAM, Spread Spectrum	Sampling

Note: +WF+ Available with Wettable Flank

STEP-DOWN REGULATORS | AUTOMOTIVE

Non-Synchronous Step-Down

Part Number	VIN (Min) (V)	VIN (Max) (V)	IOUT (A)	ISW Limit (Typ) (A)	IQ (Typ) (mA)	VFB (V)	FSW (kHz)	Soft Start	External Sync	Package	Notes	Status
MPQ2362-AEC1	4.75	23	Dual 2	3.4	2.00	1.2	380	Int	✓	TSSOP-20F	Superior Light-Load Efficiency	Production
MPQ2459-AEC1	4.5	55	0.5	1.25	0.73	0.8	480	Int		TSOT23-6	Superior Light-Load Efficiency	Production
MPQ2451-AEC1	3.3	36	0.6	0.85	0.23	0.8	2000	Int		SOT23-6L	Internal Comp & SS, Prog.	Production
MPQ2454-AEC1	3.3	36	0.6	1.80	0.06	0.8	2200 (Adj.)	Ext	✓	QFN10 (3x3)	Superior Light-Load Efficiency	Production
MPQ4558-AEC1	4.5	55	1.0	3.2	0.12	0.8	2002 (Adj.)	Int		QFN10 (3x3)	Superior Light-Load Efficiency	Production
MPQ4559-AEC1	4.5	55	1.5	3.2	0.12	0.8	2002 (Adj.)	Int		QFN10 (3x3)	Superior Light-Load Efficiency	Production
MPQ4561-AEC1	4.5	55	1.5	2.5	0.12	0.8	2002 (Adj.)	Ext		QFN10 (3x3)	Superior Light-Load Efficiency	Production
MPQ4560-AEC1	4.5	55	2.0	3.2	0.12	0.8	2002 (Adj.)	Int		QFN10 (3x3) SOIC8E	Superior Light-Load Efficiency	Production
MPQ4462-AEC1	4.5	36	3.5	4.7	0.10	0.8	4002 (Adj.)	Int		QFN10 (3x3) SOIC8E	Superior Light-Load Efficiency	Production

STEP-UP REGULATORS

Synchronous Step-Up

Part Number	VIN (Min) (V)	VIN (Max) (V)	VOUT (V)	ISW Limit (Typ) (A)	IQ (Typ) (mA)	VFB (V)	FSW (kHz)	Sync	Package	Notes	Status
MPQ3410-AEC1	1.8	3.2	6.0	1.3	0.36	1.2	550	✓	TSOT23-5	Output Disconnect	Production

Step-Up Controllers

Part Number	VIN (Min) (V)	VIN (Max) (V)	IQ (Typ) (mA)	ISD (Typ) (µA)	VFB (V)	FSW (kHz)	Soft Start	Package	Notes	Status
MPQ3910-AEC1	5	35	0.3	1.00	1.2	30 to 400	Ext	MSOP10	Peak Current Mode, Light Load Operation, Supports >10A, OVP, SCP, OTP	Sampling

Note: +WF+ Available with Wettable Flank

STEP-UP REGULATORS | AUTOMOTIVE

Non-Synchronous Step-Up

	Part Number	VIN (Min) (V)	VIN (Max) (V)	VOUT (V)	ISW Limit (Typ) (A)	IQ (Typ) (mA)	VFB (V)	FSW (kHz)	Package	Notes	Status
New	MPQ3425-AEC1	3.1	22	55	5.0	0.65	1.25	2000 (Adj.)	QFN14 (3x4)	Programmable UVLO and EN Hysteresis	Production
New	MPQ3426-AEC1	3.2	22	35	8.5	0.65	1.25	2000 (Adj.)	QFN14 (3x4)	Programmable UVLO and EN Hysteresis	Production

USB CHARGERS

Part Number	VIN (Min) (V)	VIN (Max) (V)	IOUT (A)	IQ (Typ) (mA)	FSW (kHz)	Package	Notes	Status
MPQ4491M-AEC1	7	36	2.5	1.60	Selec.	QFN25 (4x4) QFN26 (4x4)	Integrated Smart USB Charging Port, Auto Detect, Cable Compensation	Sampling
MPQ4475M-AEC1	7	36	2.5	1.60	Selec.	QFN25 (4x4)	P2P of MPQ4491M, Short Recovery Time <1s	Sampling

LINEAR REGULATORS

	Part Number	VIN (Min) (V)	VIN (Max) (V)	IOUT (mA)	Load Reg (%/mA)	PSRR @ 1kHz (dB)	VFB (V)	Dropout Voltage at Max IOUT (mV)	VOUT (V)	Package	Notes	Status
	MPQ20051-AEC1	2.5	5.5	1000	0.001	63	0.8	140 (IO: 1000mA)	Adj. 0.8V to 5.0V	QFN8 (3x3)	Enable Pin, High Output Current	Production
	MPQ8904-AEC1	2.7	6.5	500	0.001	26	0.496	300 (IO: 150mA)	Adj. 0.5V to 5.0V	QFN8 (2x3)	Enable Pin, Power Good Output	Production
New	MPQ2019-AEC1	3	40	300	0.004	45	1.25	420 (IO: 300mA)	Fixed 3.3V and Adj. 1.2 to 15V	SOIC-8 EP	10µA Low IQ, Enable Pin, Power Good Output, Delay	Production
	MPQ20056-AEC1	2.5	5.5	250	0.003	63	0.8	100 (IO: 250mA)	Fixed 1.8V 2.5V 3.3V Adj. 0.8V to 5V	QFN8 (2x2) TSOT23-5		Production
New	MPQ2013A-AEC1	2.5	40	150	0.005	41	1.215	620 (IO: 500mA)	Fixed 2.5V 3.3V 5V and Adj.1.215V to 15V	QFN6 (2x2) QFN8 (3x3)	Low IQ (3.2µA), Enable Pin (default on)	Production
New	MPQ2013AGJE -C672-AEC1	2.5	40	100	0.005	41	1.215	385 (IO: 100mA)	Adj. 1.215V to 15V	TSOT23-4	Package Spin of MPQ2013A	Production
	MPQ2016-AEC1	4	42	30	0.003	50	1.23	700 (IO: 30mA)	Adj. 1.2V to 20V	QFN8 (2x3)		Production

Note: +WF+ Available with Wettable Flank

LED LIGHTING | AUTOMOTIVE

WLED Backlighting

	Part Number	VIN (Min) (V)	VIN (Max) (V)	Type	# of Channels	IOUT (A)	Current Limit (Typ) (A)	VFB (V)	FSW (kHz)	Open LED Protection	Package	Notes	Status
	MPQ3386-AEC1	4.5	25	Boost	6	0.030 ea.	2.5	0.6	625 or 1250	✓	QFN24 (4x4)	6 String White LED Driver for Backlighting	Production
New	MPQ3387L-AEC1	3	25	Boost	6	0.045 ea.	2.5	0.5	625 or 1250	✓	TQFN24 (4x4)	6 String White LED Driver for Backlighting	Production
New	MPQ3387A-AEC1	3	25	Boost	6	0.060 ea.			500 or 1250	✓	TQFN24 (4x4)	6 String White LED Driver for Backlighting	Sampling

Illumination and Signaling

	Part Number	VIN (Min) (V)	VIN (Max) (V)	Type	# of Channels	IOUT (A)	Current Limit (Typ) (A)	VFB (V)	FSW (kHz)	Open LED Protection	Package	Notes	Status
New	MPQ2489-AEC1	6	55	Low-Side Buck	1	1		0.2	300 to 600	✓	QFN6 (3x3) SOIC8E	Hysteric, Low-Side Buck, Minimal Ext. Comp., Fast Transient Response	Production
New	MPQ4425M-AEC1	4	36	Buck	1	1.5	4	0.2	2200	✓	QFN13 (2.5x3)	1.5A LED Driver	Production
New	MPQ2483A-AEC1	4.5	55	Buck, Buck-Boost	1	2.5	3	0.198	1350 (Adj.)	✓	QFN10 (3x3) SOIC14	2.5A LED Driver	Production

LED Modules

	Part Number	VIN (Min) (V)	VIN (Max) (V)	Type	# of Channels	Output Current (A)	Current Limit (Typ) (A)	VFB (V)	FSW (kHz)	Open LED Protection	Package	Notes	Status
New	MPM6010-AEC1	4	36	Buck	1	1.5	4	0.2	2200	Yes	QFN (3x5) +WF+	1.5A LED Driver, Inductor, VCC & BST Capacitors	Production

SUPERVISORY CIRCUITS

	Part Number	VIN (Min) (V)	VIN (Max) (V)	Reset Thres (V)	Threshold Acc (%)	Reset Delay Time (ms)	IQ (Typ) (µA)	Package	Notes	Status
New	MPQ6400-AEC1	1.8	6	93% V_{SENSE}	±1.0	Adjustable: 2.1 to 10001	1.6	QFN6 (2x2)	Fix 3.3V, Low IQ, Prog. Delay Supervisor	Production
New	MPQ6411-AEC1	4.8	5	4.5			16	SOIC8	Windowed Watchdog, Power-On Reset	Production

MOTOR DRIVERS | AUTOMOTIVE

Part Number	VIN (Min) (V)	VIN (Max) (V)	Boot Strap Supp. (Max) (V)	Peak Pull-Up Current (A)	Peak Pull-Down Current (A)	Rise Time	Fall Time	Turn Off/On Delay	Package	Notes	Status
MPQ8039-AEC1	7.5	24	6	9	9	20ns	20ns	70ns	SOIC8E	Integrated Half-Bridge and Driver	Production
MPQ6523-AEC1	7	28		0.9	0.9	20µs	20µs	60µs	QFN24 (4x4)	Triple Half-Bridge, Serial Interface, Prog. Slew Rate, Open Load Detect, 1A Output, Independent H-Bridge Control	Sampling
MPQ6526-AEC1	7	40		0.9	0.9	20µs	20µs	60µs	QFN24 (4x4) QFN24 (5x5)	Hex Half-Bridge, Serial Interface, Prog. Slew Rate, Open Load Detect, 1A Output, Independent H-Bridge Control	Sampling

ANALOG SWITCH

	Part Number	VIN (Min) (V)	VIN (Max) (V)	Ton (ns)	Toff (ns)	Power Supply Current (µA)	Bandwidth (MHz)	RDS(ON) (Ω)	Package	Notes	Status
New	MPQ2735-AEC1	1.65	5.5	29.0	23	1	50	0.18	QFN10 (2x2)	Low-Voltage 0.45Ω Dual SPDT Analog Switches, Separate Control Inputs	Production

Note: +WF+ Available with Wettable Flank

EasyPower™ | AC/DC POWER CONVERSION

AC Buck

	Part Number	Power (W)	VIN (Min) (V)	VIN (Max) (V)	Control Method	RDS(ON) (Ω)	Breakdown Volt. (V)	No-Load Power (mW)	Package	Notes
	MP100	Up to 0.5	85AC	305AC	Smart LDO	9.5	700	100	SOIC8E	Inductor-Less Regulator for Low-Power Applications. Not Recommended for New Design / Recommend MP100L
	MP100L	Up to 0.5	85AC	305AC	Smart LDO	9.5	700	100	SOIC8E	Inductor-Less Regulator for Low-Power Applications, up to 0.5W
	MP103	Up to 1	85AC	305AC	Smart LDO		700	100	SOIC8E	Inductor-Less Controller for Low-Power Applications, up to 1W
	MP153	Up to 6	20 (AC/DC)	265 (AC/DC)	Non-Isolated	15	500	150	TSOT23-5 SOIC8	Off-Line Regulator, up to 360mA Output Current
	MP156	Up to 3	20 (AC/DC)	265 (AC/DC)	Non-Isolated	20	500	30	TSOT23-5 SOIC8	Off-Line Regulator, up to 220mA Output Current
	MP157	Up to 6	20 (AC/DC)	265 (AC/DC)	Non-Isolated	10	500	100	TSOT23-5 SOIC8	Off-Line Regulator, up to 360mA Output Current
	MP158	Up to 2	20 (AC/DC)	265 (AC/DC)	Non-Isolated	20	500	100	TSOT23-5 SOIC8	Off-Line Regulator, up to 70mA Output Current
New	MP171	Up to 2	20 (AC/DC)	305 (AC/DC)	Non-Isolated	20	700	30	TSOT23-5 SOIC8	Off-Line Regulator, up to 60mA Output Current
New	MP172	Up to 3	20 (AC/DC)	305 (AC/DC)	Non-Isolated	16	700	30	TSOT23-5 SOIC8	Off-Line Regulator, up to 120mA Output Current
New	MP173	Up to 4	20 (AC/DC)	305 (AC/DC)	Non-Isolated	14	700	30	TSOT23-5 SOIC8	Off-Line Regulator, up to 280mA Output Current
New	MP174	Up to 5	20 (AC/DC)	305 (AC/DC)	Non-Isolated	13.5	700	30	TSOT23-5 SOIC8	Off-Line Regulator, up to 400mA Output Current

FLYBACK

Secondary-Side Regulation

	Part Number	Typ Max Power (W)	VIN (Min) (V)	VIN (Max) (V)	Type	FSW (Max) (kHz)	Control Method	Breakdown Volt. (V)	RDS(ON) (Ω)	Package	Notes
	HFC0100	120	85AC	305AC	Controller		Quasi-Resonant	700		SOIC8	Quasi-Resonant
	HFC0300	120	85AC	305AC	Controller		Variable Freq	700		SOIC-7	Variable Off-Time
	HFC0310	120	85AC	305AC	Controller	600	Fixed Freq			SOIC8	Programmable Fixed-Frequency
	HFC0400	120	85AC	305AC	Controller	65	Fixed Freq	700		SOIC8-7A	Fixed-Frequency Flyback Controller Not Recommended for New Design / Recommend HFC0500
New	HFC0500	120	85AC	305AC	Controller	65	Fixed Freq	700		SOIC8-7A	HV Start-Up, X-Cap Discharge, Brown In/Out
New	HF900	8	85AC	440AC	Regulator	300	Peak Current	900	13	PDIP8-7EP SOIC14-11	Integrated 900V MOSFET
New	HF500-15	15	85AC	305AC	Regulator	65	Fixed Freq	700	4.5	SOIC8-7B	Integrated 700V MOSFET

FLYBACK | AC/DC POWER CONVERSION

Primary-Side Regulation

	Part Number	Typ Max Power (W)	VIN (Min) (V)	VIN (Max) (V)	Type	Breakdown Volt. (V)	RDS(ON) (Ω)	Package	Notes
	MP020-5	7	85AC	305AC	Regulator	700	10	SOIC8-7A	CV/CC Control, up to 7W
New	MP023		85AC	305AC	Controller	700		SOIC8-7A	CV/CC Control

LLC WITH 600V HALF-BRIDGE DRIVERS

	Part Number	Rsrc/Rsink (Ω)	Control Method	Topology	High-Voltage Start-Up	Package	Notes
	HR1000	4 / 2	Resonant	LLC	No	SOIC16	Controller, Variable Frequency, High-Power Applications. Not Recommended for New Design / Recommend HR1000A
	HR1000A	4 / 2	Resonant	LLC	No	SOIC16	Controller, Variable Frequency, High-Power Applications
New	HR1001B	4 / 2	Resonant	LLC	No	SOIC16	Controller, Variable Frequency, Noise-Proof Enhanced Version of HR100, Two Level OCP, 1st level Auto Restart, 2nd Level Latch
New	HR1001A	4 / 2	Resonant	LLC	No	SOIC16	Two Level OCP via Frequency Shift and Auto-Restart. Other features same as HR1001B.
New	HR1001L	4 / 2	Resonant	LLC	No	SOIC16	Two Level OCP via Frequency Shift and Latch. Other features same as HR1001B.

PFC + LLC COMBO CONTROLLER

	Part Number	VCC (Max) (V)	LLC Control Method	PFC Control Method	Topology	High-Voltage Start-Up	Package	Notes
New	HR1200	30	Resonant	DCM/CC	PFC+LLC	Yes	TSSOP28 SOIC28	Digital PFC + Analog LLC, with Graphic User Interface

PFC

	Part Number	VIN (Min) (V)	VIN (Max) (V)	IGATE SRC/ IGATE SINK (mA)	Control Method	Topology	High-Voltage Start-Up	Package	Notes
	MP44010	85AC	305AC	-350 / 600	Boundary Mode	Boost/ Buck-Boost	No	SOIC8 DIP8	Controller, Ultra-Low Start-Up Current (15μA)
	MP44011	85AC	305AC	-350 / 600	Boundary Mode	Boost/ Buck-Boost	No	SOIC8	Harmonic Injection Function (Reduced Capacitor Value and Inductor Size Compared with MP44010)
New	MP44014	85AC	305AC	-750 / 800	Boundary Mode	Boost/ Buck-Boost	No	SOIC8	Controller (BOM to BOM with L6562)
New	MP44014A	85AC	305AC	-750 / 800	Boundary Mode	Boost/ Buck-Boost	No	SOIC8	Controller (BOM to BOM with L6562A)

SYNCHRONOUS RECTIFIERS | AC/DC POWER CONVERSION

Flyback Technology (Fast Turn-Off, Intelligent)

	Part Number	Type	VDD (Min) (V)	VDD (Max) (V)	FSW (Max) (kHz)	Drain Rating (V)	Operating Current (mA)	Regulation Voltage (mV)	RDS(ON) (mΩ)	Package	Notes
	MP6900	Controller	6	27	400	180	8	70	Ext. FET	QFN6 (3x3)	Works with both Standard and Logic Level FETS
	MP6902	Controller	6	27	400	180	8	70	Ext. FET	SOIC8	Light-Load Management, Not Recommended for New Design / Recommend MP6907
	MP6905	Controller	8	24	400	180	8	30	Ext. FET	SOIC8	Light-Load Management, Not Recommended for New Design / Recommend MP6906
New	MP6906	Controller	4.2	35	400	180	8	30	Ext. FET	SOIC8 TSOT23-6	VCC down to 4.5V, Light-Load Management, Turn-Off Blanking and SYNC Feature
New	MP6907	Controller	4.2	35	400	180	8	50	Ext. FET	SOIC8 TSOT23-6	VCC down to 4.5V, Light-Load Management, Turn-Off Blanking and SYNC Feature, Better Efficiency than MP6902
	MP6960	Regulator	8	24	400	180	8	70	Ext. FET	SOIC8	Integrated CC/CV Controller
	MP6910	Regulator	6	27	400	180	8		10	T0220-3	100V FET, VOUT up to 19V
	MP6920	Regulator	8	24	400	60	5		10	SOIC8E	Integrated FET, VOUT up to 12V

LLC Topology (Fast Turn-Off, Intelligent)

	Part Number	Type	FSW (Max) (kHz)	Drain Rating (V)	Operating Current (mA)	Regulation Voltage (mV)	IQ (mA)	Single/Dual	Package	Notes
	MP6903	Controller	300	180	8	70	0.25	Single	SOIC8E	High Noise Immunity, Light-Load Management
	MP6922	Controller	300	180	16	70	0.5	Dual	SOIC8E SOIC14	Vfwd 70mV for LLC, Shorten LL Mode Entry Ton Threshold, Disable Light-Load Entry when No Gate Pulse
	MP6922A	Controller	300	180	16	30	0.5	Dual	SOIC8E SOIC14	High Efficiency, Vfwd 30mV for LLC, Light-Load Management
New	MP6922L	Controller	300	180	16	70	0.6	Dual	SOIC8	Vfwd 70mV for LLC, Shorten LL Mode Entry Ton Threshold, Disable Light-Load Entry when No Gate Pulse
New	MP6923	Controller	300	180	16	15	0.6	Dual	SOIC14	High Efficiency, Vfwd 15mV for LLC

AC/DC ISOLATED | LED LIGHTING

Controllers

Part Number	VIN (Min) (V)	VIN (Max) (V)	Power (W)	Control Method	Package	Notes
MP4026	85AC	305AC	Ext. FET	Flyback	SOT23-6	Primary-Side Control Offline, Active PFC
MP4027	85AC	305AC	Ext. FET	Flyback	SOT23-8	Primary-Side Control Offline, PFC, NTC, and PWM Dimming
MP4030A	85AC	305AC	Ext. FET	Flyback	SOIC8	TRIAC Dimmable, Primary-Side Control, Offline, Active PFC Recommend MP4033 for Trailing Edge Dimmers
MP4031	85AC	305AC	Ext. FET	Flyback	SOIC8	TRIAC and Analog Dimmable, Deep Dimming, Primary-Side Control, Offline, Active PFC
MP4033	85AC	305AC	Ext. FET	Flyback	SOIC8 MSOP10 SOIC14	Enhanced TRIAC-Dimmable, Primary-Side Control, Offline, Active PFC
HR1001A	85AC	305AC	Ext. FET	Resonant	SOIC16	Resonant Half-Bridge, Variable Frequency, High-Power Application, Auto-Restart at Over-Current, for Street Lighting Application
HR1001B	85AC	305AC	Ext. FET	Resonant	SOIC16	Resonant Half-Bridge, Variable Frequency, Noise-Proof Enhanced, High-Power Application, Two Level OCP
MP44010	85AC	305AC	Ext. FET	Boost/ Buck-Boost	SOIC8 DIP8	Offline PFC, Boundary Conduction, Ultra-Low Start-Up Current (15µA)
MP44011	85AC	305AC	Ext. FET	Boost/ Buck-Boost	SOIC8	Offline PFC, Boundary Conduction, Harmonic Injection Function (Reduced Capacitor Value and Inductor Size Compared with MP44010)
MP44014	85AC	305AC	Ext. FET	Boost/ Buck-Boost	SOIC8	Offline PFC, Boundary Conduction (BOM to BOM with L6562A)

Regulators

Part Number	VIN (Min) (V)	VIN (Max) (V)	Power (W)	Control Method	Package	Notes
MP4032-1	85AC	265AC	7	Flyback	SOIC8-7A	Integrated 500V FET, TRIAC Dimmable, Deep Dimming, Primary-Side Control, Offline, Active PFC
MP4034	85AC	305AC	7	Flyback	SOIC8 MSOP10 SOIC14	Integrated 700V FET, Primary-Side Control, Offline, No Dimming or PFC

AC/DC NON-ISOLATED | LED LIGHTING

Controllers

	Part Number	VIN (Min) (V)	VIN (Max) (V)	Power (W)	Control Method	Package	Notes
	MP4000	85AC	305AC	Ext. FET	Low-Side Buck	SOIC8	WLED Driver Controller for Low Cost LED Lamps, Analog and PWM Dimming
	MP4001	85AC	305AC	Ext. FET	Low-Side Buck	SOIC8	Offline LED Controller, Integrated High-Voltage LDO, Analog and PWM Dimming
	MP4054	85AC	305AC	Ext. FET	Buck-Boost	SOT23-8	Offline LED Controller, Active PFC
	MP4054A	85AC	305AC	Ext. FET	Buck-Boost	SOT23-8	Offline LED Controller, Active PFC, NTC, PWM Dimming
New	MP4056	85AC	305AC	Ext. FET	Buck-Boost	SOIC8 MSOP10 SOIC14	TRIAC Dimmable, Offline LED Controller, Active PFC
New	MP4060	85AC	305AC	Ext. FET	Buck-Boost	SOIC8 MSOP10 SOIC14	Improved Trailing Edge Dimmer Performance at High Line than MP4056

Regulators

	Part Number	VIN (Min) (V)	VIN (Max) (V)	Power (W)	Control Method	Package	Notes
	MP4050A	85AC	265AC	8	Buck	SOIC8 SOT23-5	Integrated 500V FET, Offline Driver, Enhanced Thermal, No PFC or Dimming, Low Cost
New	MP4068	85AC	305AC (recommend low line only)	10	Buck/Buck-Boost	SOIC8-7A SOIC8EP	Integrated 700V FET, PFC Driver with TRIAC Dimming
New	MP4088	85AC (recommend high line only)	305AC	8.5	Buck/Buck-Boost	SOIC8-7A SOIC8EP TSOT23-5	Integrated 700V FET, PFC Driver with TRIAC Dimming

DC/DC LIGHTING | LED LIGHTING

Regulators

	Part Number	VIN (Min) (V)	VIN (Max) (V)	Control Method	IOUT (Typ) (Max) (A)	Max Efficiency (%)	Typ. Frequency	Package	Notes
	MP3412	0.8	4.4	Boost	1.1	96	1MHz	TSOT23-6	Synchronous Boost, No Dimming
	MP2480	5	36	Buck	3	95	2MHz	SOIC8E	Hysteretic Control, PWM Dimming
	MP2481	4.5	36	Buck/Buck-Boost	1.2	95	1.4MHz	MSOP8	Analog and PWM Dimming
	MP24892	6	45	Low-Side Buck	1	95	600kHz	TSOT23-5	Hysteretic Control, Analog and PWM Dimming, Lower Cost Version of MP2489
	MP24893	6	36	Low-Side Buck	1	95	600kHz	QFN6 (3x3) TSOT23-5	Hysteretic Control, Analog and PWM Dimming, Lower Cost Version of MP2489
	MP2483	4.5	55	Buck/Buck-Boost	2.5	95	1.35MHz	QFN10 (3x3) SOIC14	Analog and PWM Dimming, Consumer Grade
	MP24183	4.5	55	Buck/Buck-Boost	1	95	1.35MHz	QFN10 (3x3)	Analog and PWM Dimming
	MP2488	4.5	55	Buck	2	97.5	200kHz	QFN10 (3x3) SOIC8E	PWM Dimming
	MP2487	4.5	55	Buck	1	97.5	200kHz	SOIC8E	PWM Dimming
New	MP24833A	4.5	55	Buck/Buck-Boost	3	90	210kHz	SOIC8E	Analog and PWM Dimming
	MP24895	6	36	Low-Side Buck	1	95	600kHz	TSOT23-5 QFN6	Hysteretic Control, PWM and Analog Dimming
	MP24895A	6	36	Low-Side Buck				MSOP8-EP	MP24895 in MSOP8- EP Package, PWM and Analog Dimming
	MP4688	4.5	80	Buck	1	95	2MHz	SOIC8E	Hysteretic Control, PWM Dimming
	MP4689	4.5	95	Buck	1	95	1MHz	SOIC8E	Hysteretic Control, PWM Dimming
New	MP2410	4.2	24	Buck	2	97	1MHz	TSOT23-6 TSOT23-8	Synchronous Buck, Analog Dimming Only
New	MP2410A	4.2	24	Buck	2	97	1MHz	TSOT23-6 TSOT23-8	Synchronous Buck, Analog and PWM Dimming
	MP2489	6	60	Low-Side Buck	1	95	600kHz	QFN6 (3x3) TSOT23-5 SOIC8E	Hysteretic Control

DC/DC LIGHTING | LED LIGHTING

Controllers

Part Number	VIN (Min) (V)	VIN (Max) (V)	Power (W)	Control Method	Max Efficiency (%)	Package	Notes
MP4012	8	55	Ext. FET	Buck/Boost/ Buck-Boost/Sepic		SOIC16	HV9912 Pin Comp, for Backlight (Ex: VOUT >200V) and Lighting (High-Output Power)
MP24894	6	60	Ext. FET	Low-Side Buck	95	TSOT6	Buck Controller, Hysteresis Control

PHOTO FLASH

Part Number	Charge Type	VIN (Min) (V)	VIN (Max) (V)	VSW (Max) (V)	IOUT (Max) (A)	IOUT (Min) (A)	Package	Notes
MP3331	WLED	2.7	5.5	6	2		WLCSP (1.7x1.7)	Single Channel Boost WLED Driver for Smart Phone Camera Flash
MP3361	Xenon Flash	2.5	6	60	1.2	1.0 (Typ)	MSOP10	Highly Integrated Xenon Photo Flash Charger and IGBT Driver
MP3360	Xenon Flash	2.5	6	60	1.7	0.4	QFN10 (2x2)	Programmable Peak Current, Highly Integrated Xenon Photo Flash Charger and IGBT Driver for Mobile Phones
MP3356	Xenon Flash	2.8	6	50	1.7	1.5	QFN10 (2x2)	Highly Integrated Xenon Photo Flash Charger and IGBT Driver for DSC
MP3351	Xenon Flash	3	6	60	2	0.3	QFN16 (3x3)	Integrated Photo Flash Charger with IGBT Driver
MP3352	Xenon Flash	3	6	60	2.5	0.3	QFN16 (3x3)	Integrated Photo Flash Charger with IGBT Driver and Quench

PROTECTION

Part Number	Power (W)	Control Method	Package	Notes
MP4690	0	Shunt	SOD123	Smart Bypass for LED Protection, 6V Threshold Voltage Protects One LED

STEP-DOWN CONVERTERS WITH INTEGRATED INDUCTOR | POWER MODULES

Synchronous

	Part Number	IOUT (A)	VIN (V)	IQ (µA)	Light-Load Efficiency	Power Good	Soft Start	Protection Features (OCP/SCP/UL VO/OTP)	Package	Solution Size	Notes
	MPM3805	0.6	2.5 to 6	17	✓	✓	Internal	✓	QFN12 (3x2.5x0.9)	3.81x5.97mm	Adjustable VOUT
	MPM3805-1.2V	0.6	2.5 to 6	17	✓	✓	Internal	✓	QFN12 (3x2.5x0.9)	3.81x5.97mm	1.2V Fixed VOUT
	MP3805-1.8V	0.6	2.5 to 6	17	✓	✓	Internal	✓	QFN12 (3x2.5x0.9)	3.81x5.97mm	1.8V Fixed VOUT
	MPM3805-2.5V	0.6	2.5 to 6	17	✓	✓	Internal	✓	QFN12 (3x2.5x0.9)	3.81x5.97mm	2.5V Fixed VOUT
	MPM3805-3.3V	0.6	2.5 to 6	17	✓	✓	Internal	✓	QFN12 (3x2.5x0.9)	3.81x5.97mm	3.3V Fixed VOUT
New	MPM3606	0.6	4.5 to 21	200	✓		Internal	✓	QFN20 (3x5x1.6)	6.7x6.3mm	Integrated Inductor
New	MPM3606A	0.6	4.5 to 21	300	✓	✓	Internal	✓	QFN20 (3x5x1.6)	6.7x6.3mm	Power Good
New	MPM3506A	0.6	4.5 to 36	580		✓	Internal	✓	QFN19 (3x5x1.6)	6.7x6.3mm	High Voltage
	MPM3810	1.2	2.5 to 6	17	✓	✓	Internal	✓	QFN12 (3x2.5x0.9)	3.81x5.97mm	Adjustable VOUT
	MPM3810-1.2V	1.2	2.5 to 6	17	✓	✓	Internal	✓	QFN12 (3x2.5x0.9)	3.81x5.97mm	1.2V Fixed VOUT
	MPM3810-1.8V	1.2	2.5 to 6	17	✓	✓	Internal	✓	QFN12 (3x2.5x0.9)	3.81x5.97mm	1.8V Fixed VOUT
	MPM3810-2.5V	1.2	2.5 to 6	17	✓	✓	Internal	✓	QFN12 (3x2.5x0.9)	3.81x5.97mm	2.5V Fixed VOUT
	MPM3810-3.3V	1.2	2.5 to 6	17	✓	✓	Internal	✓	QFN12 (3x2.5x0.9)	3.81x5.97mm	3.3V Fixed VOUT
New	MPM3610	1.2	4.5 to 21	200	✓		Internal	✓	QFN20 (3x5x1.6)	6.7x6.3mm	Low IQ
New	MPM3610A	1.2	4.5 to 21	200	✓	✓	Internal	✓	QFN20 (3x5x1.6)	6.7x6.3mm	With PG
New	MPM3510A	1.2	4.5 to 36	580		✓	Internal	✓	QFN19 (3x5x1.6)	6.7x6.3mm	High Voltage
New	MPM3620	2	4.5 to 24	200	✓		Internal	✓	QFN20 (3x5x1.6)	6.7x6.3mm	Adjustable Output
New	MPM3620A	2	4.5 to 24	200	✓	✓	Internal	✓	QFN20 (3x5x1.6)	6.7x6.3mm	With PG
	MPM3830	3	2.7 to 6	40	✓	✓	Internal	✓	QFN20 (3x5x1.6)	8.5x4.5mm	High Light-Load Eff.
New	MPM3680	6	2.5 to 18	860	✓	✓	Internal/External	✓	QFN57 (12x12x4)		18V, 6A
New	MPM3682	10	2.5 to 18	860	✓	✓	Internal/External	✓	QFN57 (12x12x4)		18V, 10A
New	MPM3684	15	2.5 to 18	860	✓	✓	Internal/External	✓	QFN65 (12x15x4)		18V, 15A
New	MPM3686	20	2.5 to 18	860	✓	✓	Internal/External	✓	QFN65 (12x15x4)		18V, 20A

TABLETS/SMART PHONES | BATTERY MANAGEMENT

Single-Cell NVDC Switching Chargers

Part Number	VIN (Min) (V)	VIN (Max) (V)	Charge Current Max) (A)	Discharge Current (A)	Output Current Boost Mode (A)	FSW (kHz)	Battery Charge Voltage (V)	Battery Type	Package	Notes
MP2617H	4	14	3	5		1600	4.2	Li-Ion Li-Polymer	QFN20 (3x4)	Power-Path Management
MP2617A	4	10	3	3		1600	4.35	Li-Ion Li-Polymer	QFN20 (3x4)	Power-Path Management
MP2617B	4	10	3	5		1600	4.2	Li-Ion Li-Polymer	QFN20 (3x4)	Power-Path Management
MP2625B	4	10	2	5		1600	4.2	Li-Ion Li-Polymer	QFN20 (3x4)	Power-Path Management
MP2624	3.9	12	4.5	11	1.3	1700	3.48-4.425	Li-Ion Li-Polymer / LiFePO4	QFN22 (3x4)	Power-Path Management, Boost OTG, Shipping Mode
MP2624A	3.9	12	4.5	11	1.3	1700	3.48-4.425	Li-Ion Li-Polymer / LiFePO4	QFN22 (3x4)	Power-Path Management, Boost OTG, Reset Mode
MP2626	4.5	6	2		1.5	1200/600	4.2/4.35	Li-Ion Li-Polymer	QFN24 (4x4)	Power-Path Management, Boost OTG

CRADLE CHARGERS

Part Number	VIN (Min) (V)	VIN (Max) (V)	Charge Current Max) (A)	Discharge Current (A)	Output Current Boost Mode (A)	Charge Status	Charge Type	Battery Charge Voltage (V)	Package	Notes
MP26085	7	20	20				CV/CC Controller	Prog.	SOT23-8	CC/CV Controller with 1.223V Voltage Reference
MP26075	2.2	28	1	1	✓	✓	CV/CC Linear	4.2V	QFN10 (3x3)	Pre-Charge Function, Thermal Foldback, Voltage Control Function for Flyback Controller
MP2681	4.5	30	3-5	4			CV/CC Controller	4.15V	SOIC16	Full Protection and Indication, One Chip Solution for Power Tool Applications
MP2681B	5	30	3-5	Up to 4	✓	✓	CV/CC Controller		SOIC16	Full Protection and Indication, One Chip Solution for Power Tool Applications

LINEAR CHARGERS | BATTERY MANAGEMENT

Single-Cell CV/CC Linear Chargers

	Part Number	VIN (Min) (V)	VIN (Max) (V)	ICHARGE (A)	Trickle Charge	Charge Status	Package	Notes
New	MP2660	4.5	5	0.50	✓	✓	CSP(6)	Li-Ion Charger with I²C Control Interface
	MP2607	4.5	12	Up to 1.5	✓	✓	QFN14 (3x4)	Li-Ion Charger with System Power-Path Management
	MP26028	3.5	20	Up to 1	✓	✓	QFN10 (3x3)	Includes Battery Temp Monitor, Trickle Charge
	MP26060	3.5	24	Up to 1	✓	✓	QFN10 (3x3)	4.15V Output Safe Charge
	MP2603	4.75	25	Up to 0.15	✓	✓	TSOT23-5	Simple System Charger, 50mA to 150mA Programmable Charger, No NTC
	MP2631	3	28	Up to 1	✓	✓	QFN10 (3x3)	Li-Ion Charger with 10mA High-Voltage LDO
	MP2608	3.5	28	Up to 1	✓	✓	QFN10 (3x3)	Dual Input USB & AC Adapter
	MP2604	3.5	28	Up to 1		✓	QFN10 (3x3)	Includes NTC, Battery Temp Monitor
	MP2602	3.5	28	Up to 1	✓	✓	QFN10 (3x3)	Includes NTC, Battery Temp Monitor, Trickle Charge
	MP2606	3.5	28	Up to 1		✓	QFN10 (3x3)	Wide IBF Hysteresis, NTC
	MP26056	3.5	28	Up to 1	✓	✓	QFN10 (3x3)	Dual-Mode USB & AC Adapter
	MP2605	3.5	28	Up to 1	✓	✓	QFN10 (3x3)	Auto-Charge Term & Recharge, Timer
	MP26053	3.5	28	Up to 1	✓	✓	QFN10 (3x3)	Ichg=10% of Iset, Auto-Charge Term & Recharge, Timer
	MP26058	3.5	28	Up to 1		✓	QFN10 (3x3)	Includes LDO Mode & Timer
	MP26057	3.5	28	Up to 1	✓	✓	QFN10 (3x3)	Travel Charger
New	MPQ5480	3.6	28	0.30	✓	✓	WLCSP16 (1.7x1.7)	Integrated Charger with 5V/100mA DC/DC, Synchronous Regulator
	MP26121	3.5	28	Up to 1	✓	✓	QFN10 (3x3)	Li-Ion Charger with 10% Battery Full Threshold, Flexible NTC Interface

GENERAL PURPOSE | BATTERY MANAGEMENT

Switching Chargers

Part Number	VIN (Min) (V)	VIN (Max) (V)	Charge Current (Max) (A)	FSW (kHz)	# of Cells	Battery Charge Voltage (V)	Battery Type	Package	Notes
MP2612	9	24	2	600	2-3	4.2	Li-Ion Li-Polymer	QFN16 (4x4)	Non-Synchronous
MP2610	5	24	2	1100	1-2	4.2	Li-Ion Li-Polymer	QFN16 (4x4)	Non-Synchronous
MP26101	5	24	2	1100	1-2	4.1	Li-Ion Li-Polymer	QFN16 (4x4)	Non-Synchronous
MP26123	9	24	2	600	2-3	4.2	Li-Ion Li-Polymer	QFN16 (4x4)	Non-Synchronous
MP2619	5.5	24	2	600	2-3	4.2	Li-Ion Li-Polymer	QFN28 (4x5)	Non Synchronous, Power Path Management
MP2623	5	24	2	1100	1-2	3.6	LiFePO4	QFN16 (4x4)	Non-Synchronous
MP2615	4.5	18	2	600	1-2	4.1/4.2	Li-Ion Li-Polymer	QFN16 (3x3)	Synchronous
MP2615A	4.5	18	2	600	1-2	4.2/4.35	Li-Ion Li-Polymer	QFN16 (3x3)	Synchronous
MP2615B	4.5	18	2	600	1	3.99/4.03	Li-Ion Li-Polymer	QFN16 (3x3)	Synchronous
MP2611	4.5	6	2	1500	1	4.2	Li-Ion Li-Polymer	QFN14 (3x4)	For USB and Adapter Power

POWER BANK MANAGEMENT | BATTERY MANAGEMENT

Single-Cell Switching Chargers

	Part Number	VIN (Min) (V)	VIN (Max) (V)	Charge Current (Max) (A)	Output Current Boost Mode (A)	FSW (kHz)	Battery Charge Voltage (V)	Battery Type	Package	Notes
	MP2633	4.5	6	1.5	1.5	1200/600	4.2/3.6	Li-Ion Li-Polymer / LiFePO4	QFN24 (4x4)	Power-Path Management and 1A Boost OTG
	MP2635	4.5	6	2	1.5	1200/600	4.2/3.6	Li-Ion Li-Polymer / LiFePO4	QFN24 (4x4)	Power-Path Management and 1A Boost OTG
	MP2635B	4.5	6	2	1.5	1200/600	4.2/4.35	Li-Ion Li-Polymer	QFN24 (4x4)	Power-Path Management and 1A Boost OTG
	MP2636	4.5	6	3	3	600	4.2/4.3/4.35	Li-Ion Li-Polymer	QFN30 (4x4)	Power-Path Management and 3A Boost OTG
New	MP2632	4.65	6	3	3	600	4.2/4.35/4.45	Li-Ion Li-Polymer	QFN26 (4x4)	All-in-One 3A Battery Charger with 3A Boost Current
New	MP2690	4.65	6	2.5	2.1	600	4.2/4.35/4.45	Li-Ion Li-Polymer	QFN26 (4x4)	All-in-One 2.5A Battery Charger with 2.1A Boost Current
	MP2637	4.5	6	2.5	2.4	600	4.2/4.35	Li-Ion Li-Polymer	QFN24 (4x4)	Power-Path Management and 2.4A System Boost Current

PROTECTION

Single-Cell

Part Number	VIN (Min) (V)	VIN (Max) (V)	Charge Type	Package	Notes
MP2671	2.6	30	Battery Protect	QFN12 (3x4)	Li-Ion Battery Charger, Protection Circuit
MP2670	4.3	30	Battery Protect	QFN10 (3x3)	Li-Ion Battery Charger, Protection Circuit
MP2674	4.3	30	Battery Protect	QFN8 (2x2)	Li-Ion Charger, Protection Circuit, Tolerates Input Surge up to 30V, Small Pkg

WHITE LED DRIVERS | DISPLAY BACKLIGHTING POWER

Inductors & Charge Pumps

	Part Number	VIN (Min) (V)	VIN (Max) (V)	VOUT (Max) (V)	# of Channels	Current Limit (Typ) (A)	VFB (V)	FSW (kHz)	Open LED Protection	Type	Package	Notes
	MP3412	0.8	4.4	5	1	1.1	0.2	1000	✓	Boost	TSOT23-6	High Efficiency
	MP9361	2.8	5	5	1			1350	✓	Reg.Charge Pump	TSOT23-6	Internal SS
	MPQ9361	2.8	5	5	1			1350		Reg.Charge Pump	TSOT23-6	Internal SS, Industrial Grade
New	MP3312	2.7	5.5	36	2	1.8	0.24	1200	✓	Boost	WLCSP9 (1.3x1.3)	P2P Compatible with TPS61163 for Smart Phones LCD Backlight
	MP3309	2.7	5.5	35	1	1.5	0.2	300 to 2200 Prog.	✓	Boost	QFN10 (1.4x1.8)	Synchronous Boost for Tablet and Smart Phones
	MP3309C	2.7	5.5	35	1	1.5	0.2	300 to 2200 Prog.	✓	Boost	QFN10 (1.4x1.8)	Synchronous Boost, I²C Interface for Tablet and Smart Phone
New	MP3307	2.7	5.5	35	1	1.6 (Min)	0.2	300 to 2200 Prog.	✓	Boost	TSOT23-8	Up to 2.2MHz Boost WLED Driver, Automotive Infortainment LCD
	MP1519	2.5	5.5	10	4			1300		Charge Pump	QFN16 (3x3)	Common Cathode
	MP1529	2.7	5.5	25	3	1.2		1200	✓	Boost	QFN16 (4x4)	Integrated Flash
	MP3021	2.7	5.5	4	4			1250		Charge Pump	QFN16 (3x3)	Single-Wire Brightness Control, Common Anode
	MP3204	2.5	6	21	1	0.35	0.104	1300	✓	Boost	TSOT23-6	UVLO, Low EMI, Thermal Shutdown
	MP3205	2.5	6	21	1	0.35	0.104	1300		Boost	TSOT23-5	MP3204 without OV Pin
	MP3304 (A/B/C)	3	6	36/24/18	1	1.33	0.2	2200	✓	Boost	QFN8 (2x3)	High Efficiency, True PWM Dimming
	MP3305	3	6	36	1	1.33	0.2	2200	✓	Boost	QFN8 (2x3)	High Efficiency, True PWM Dimming, Adjustable OVP Threshold
	MP3308	3	6	36	1	1.3	0.2	2200	✓	Boost	QFN14 (3x4)	Boost WLED Driver Supporting CABC Dimming for Tablet PC or Smart Phone
	MP1518	2.5	6	25	1	0.35	0.104	1300		Boost	QFN8 (2x2) TSOT23-6	Boost WLED Driver
	MP3202	2.5	6	25	1	1.3	0.104	1300	✓	Boost	QFN8 (2x2) TSOT23-5	UVLO, Low EMI, Thermal Shutdown

WHITE LED DRIVERS | DISPLAY BACKLIGHTING POWER

Inductors & Charge Pumps

	Part Number	VIN (Min) (V)	VIN (Max) (V)	VOUT (Max) (V)	# of Channels	Current Limit (Typ) (A)	VFB (V)	FSW (kHz)	Open LED Protection	Type	Package	Notes
	MP3302	2.5	6	36	1	1.3	0.2	1300	✓	Boost	QFN8 (2x3) TSOT23-5	Large Panel Drive, High-Voltage Output
	MP3306	3	12	30	1	1.8	0.2	700	✓	Boost	QFN12 (2x2)	Synchronous Boost LED Driver, Integrated Disconnect FET for Small Size LCD
	MP3378	5	24	55	4			300 to 500	✓	Boost	SOIC28 TSSOP-28 EP	Integrated LED Boost Controller, DC/DC Buck Converter for Monitor and TV
	MP1517	2.6	25	25	1	4	0.7	1100	✓	Boost	QFN16 (4x4)	UVLO, External Comp
	MP3388S	4.5	25	50	8	2	0.6	625 or 1250	✓	Boost	QFN24 (4x4) SOIC28	PWM/DC Input Burst PWM Dimming
	MP3387L	3	25	50	6	2.5	0.6	500 to 1250	✓	Boost	TQFN24 (4x4)	6-Channel, 50VOUT, Boost, Smart Dimming
	MP3301	2.5	6	36	1	1		1300	✓	Boost	TSOT23-5	Boost WLED Driver for up to 10 Series LED, Smart Phone
	MP3366	3	25	50	6	2.5	0.5	600	✓	Boost	WLCSP18 (1.3x2.5)	Small CSP Package, Smart Dimming, Tablet PC
	MP3310	4.5	25	50	1	1.3	0.5	1200 Prog.	✓	Boost	QFN10 (3x3)	Wide 4.5V to 25V Input Range
	MP3384L	3	25	50	4	1.3	0.6	1250 or 625	✓	Boost	QFN16 (3x3)	4-Channel Balanced Current Source
New	MPQ3386	4.5	25	50	6	2.5	0.6	1250	✓	Boost	QFN24 (4x4)	6 String White LED Driver, Industrial and AECQ-Grade
New	MP4013B	8	26	Ext. FET	1	Ext. FET	0.6	100 to 600	✓	Boost	SOIC16	More Features, Better Protection, Cost Effective, Replacing MP4012 & MP4013 in New Designs
	MP3389	5	28	Ext. FET	12	Ext. FET	0.6	100 to 500	✓	Boost	TSSOP-28 EP SOIC28	External MOSFET, PWM or DC Input Burst PWM Dimming
	MP3398A	5	28	Ext. FET	4	Ext. FET	0.6	100 to 500	✓	Boost	TSSOP-16 EP SOIC16 SOIC20	Inductor-Short Protection, Separate ADIM Pin
	MP3398L	4.5	28	Ext. FET	4	Ext. FET	0.6	100 to 500	✓	Boost	SOIC16	Lower VIN (Min) of MP3398A, USB Powered Applications
	MP3394S	5	28	55	4	Ext. FET	0.3	150-500	✓	Boost	TSSOP-16 EP SOIC16	P2P Compatible with MP3394, New Designs Recommend MP3394S
New	MP3385	4.5	33	Ext. FET	4	Ext. FET	0.6	100-900	✓	Boost	QFN20	I^2C Digital Interface, ABS 80V LED Feedback Voltage Rating, Max 300mA/Channel

WHITE LED DRIVERS | DISPLAY BACKLIGHTING POWER

Inductors & Charge Pumps

Part Number	VIN (Min) (V)	VIN (Max) (V)	VOUT (Max) (V)	# of Channels	Current Limit (Typ) (A)	VFB (V)	FSW (kHz)	Open LED Protection	Type	Package	Notes
MP3391	9	35	Ext. FET	8	Ext. FET	0.45	150 to 500	✓	Boost	SOIC28 TSSOP-28 EP	8-Channel, 80mA/Channel for 18-24" LCD Panel/TV
MP1528	2.7	36	36	1	0.95	0.4	Variable	✓	Boost	MSOP8 QFN6 (3x3) QFN8 (2x2)	Drives up to 9 Series White LED Drivers
MP3373	9	40	Ext. FET	8	Ext. FET	0.2	100 to 1000	✓	Boost	SOIC28 TSSOP28	Phase-Shift, Inductor-Short Protection; Cost Eff., Replacing MP3393 in New Designs
MP4601	4.5	75	75	1	2.5	0.2	200 to 2000 Prog.	✓	Buck-Boost	TSSOP-16 EP SOIC16	Novel Power-Leverage Technology for 60+" TV, Regulates LED String up to 350V
MP4700	Offline	Offline	Ext. FET	1	Ext. FET	0.3	Up to 160	Ext. Comps.	Buck	SOIC8E	BCM Zero Current & Valley Voltage Switching >97% Efficiency, Low BOM, Low-Power Stress
MP24830 -C470	Offline	Offline	Ext. FET	1	Ext. FET	0.2	50 to 365	✓	Buck-Boost	SOIC14 QFN14	Power Leverage in 2.5 Power Stage, Low BOM Cost & High Efficiency for Large TV
MP4653	Offline	Offline	Ext. FET	1	Ext. FET	0.2	20 to 250	✓	LLC	SOIC20	LIPS CC/CV Mode, for Large TV, 2-Power Stage, Low BOM Cost, High Efficiency
MP4655	Offline	Offline	Ext. FET	1	Ext. FET	0.2	40 to 130	✓	LLC	SOIC28	Single Stage Current and System Voltage Regulator

ANALOG INPUT | CLASS-D AUDIO

Mono

Part Number	VIN (Min) (V)	VIN (Max) (V)	POUT (W)	Efficiency (%)	THD+N (%)	PSRR (dB)	Package	Notes
MP1720	2.5	5.5	2.7	90	0.11 @ 1W	60	QFN10 (3x3) MSOP-10E	BTL, Low EMI, High-Efficiency, Flexible Switching Frequency Setting
MP1740	2.5	5.5	3	90	0.11 @ 1W	62	9-Ball WLCSP (1.5x1.5)	BTL, Ultra Small for Portable and Mobile Phones
MP7731	9.5	18	30	90	0.10 @ 1W	60	TSSOP20F	30W Amplifier, Exposed Pad
MPQ7731	9.5	18	30	90	0.10 @ 1W	60	TSSOP20F	30W Amplifier, Exposed Pad, Industrial Grade
MP7741	9.5	36	10	94	0.02 @ 1W	58	QFN10 (3x3)	Single-Ended, Fully Integrated Audio Amplifier
MP7740	9.5	36	15	90	0.018 @ 1W	60	SOIC8	15W, Single-Ended Amplifier
MP7747	9.5	36	20	91	0.02 @ 1W	59	QFN10 (3x3)	Single-Ended, Fully Integrated Audio Amplifier

Stereo

	Part Number	VIN (Min) (V)	VIN (Max) (V)	POUT (W)	Efficiency (%)	THD+N (%)	PSRR (dB)	Package	Notes
	MP7722	9.5	24	20 (2x)	93	0.06 @ 1W	60	TSSOP20F	Single-Ended Audio Amplifier, Exposed Pad
	MP7745	9.5	26	20 (2x)	93	0.05 @ 1W	59	TSSOP20F	Single-Ended, Fully Integrated Audio Amplifier, P2P with MP7722, Exposed Pad
	MP7742	9.5	28	15 (2x)	90	0.018 @ 1W	60	TSSOP20F	Single-Ended, Fully Integrated Audio Amplifier, P2P with MP7722, Exposed Pad
	MP7748S	9.5	36	30 (2x)	94	0.02 @ 1W	59	TSSOP-28 EP	2x30W SE or 1x60W BTL Audio Amplifier
New	MP7751	5	26	20 (2x)	92	0.06 @ 1W	60	TSSOP-28 EP	5-26VDD, 2 x 20W BTL Audio Amplifier
New	MP7752	5	18	15 (2x)	90	0.06 @ 1W	60	TSSOP-28 EP	5-18VDD, 2 x 15W Filterless BTL Audio Amplifier
	MP7770	9.5	36	45 (2x)	95	0.03 @ 1W	60	TSSOP28F	2x45W SE or 1x90W BTL Audio Amplifier, 8.5A Peak, Exposed Pad

USB LOAD SWITCHES | E-FUSE & LOAD SWITCHES

Single Channel

Part Number	VIN (Min) (V)	VIN (Max) (V)	Cont. Current (Max) (A)	Short-Circuit Current (Max) (A)	Enable Logic	Fault Flag	Output Discharge	Package	Notes
MP62055	2.7	5.5	0.5	1.1	Active High	Over-Current, Active High	No	TSOT23-5	Small Package, P2P TPS2051B
MP6211	2.7	5.5	1	2.2	Active High	Over-Current, Active Low	No	SOIC8E MSOP8E	P2P TPS2051B
MP6212	2.7	5.5	1	2.2	Active Low	Over-Current, Active Low	No	SOIC8E MSOP8E	With 90µA IQ & 1.5A Current Limit
MP6212-3	2.7	5.5	1	2.2	Active Low	Over-Current, Active Low	No	MSOP8E	FLAG Output Remains Low after a Short Circuit or Thermal Current-Limit Event
MP6215	2.7	5.5	1.5	2.3	Active High	Over-Current, Active Low	No	MSOP8E	Power Distribution Switch
MP62550 MP62551	2.5	5.5	1.5	1.7	Active Low Active High	Over-Current, Active Low	No	TQFN6 (2x2) TSOT23-6	Precision Adjustable Current-Limited Power Distribution Switch 60mA, 1.7A, 88/100mΩ @100mA, 1.5µA Max Shutdown Current
MP62040	1.7	5.5	2		Active Low		No	UTQFN4	Ultra-Small Package
MP62041-1	1.7	5.5	2		Active High		Yes	UTQFN4	Ultra-Small Package
MP62161	2.7	5.5	2	2.8	Active High	Over-Current, Active Low	Yes	QFN8E MSOP8E SOIC8	Power Distribution Switch

Dual Channel

Part Number	VIN (Min) (V)	VIN (Max) (V)	Cont. Current (Max) (A)	Short-Circuit Current (Max) (A)	Enable Logic	Fault Flag	Output Discharge	Package	Notes
MP62351	2.7	5.5	0.5	0.75	Active High	Over-Current, Active Low	Yes	SOIC8 MSOP8	500mA/ch Current-Limit Switch, P2P LM3526
MP6231 MP6232	2.7	5.5	0.5	1.1	Active High Active Low	Over-Current, Active High	No	SOIC8 SOIC8E MSOP8E	500mA/ch Current-Limit Switch, P2P TPS2052B and P2P TPS2042B
MP62340 MP62341	2.7	5.5	1	1.5	Active Low Active High	Over-Current, Active Low	No	MSOP8E SOIC8	3.3V/5V, Current-Limit Switch, P2P TPS2066/2
MP62340-1	2.7	5.5	1	1.5	Active Low	Over-Current, Active Low	Yes	MSOP8E SOIC8	3.3V/5V,Current-Limit Switch with Output Discharge, P2P TPS 2066/2
MP6233	2.7	5.5	1.5	2.6	Active High	Over-Current, Active Low	No	MSOP8E	Current-Limit Switch

ELECTRONIC FUSES (INTEGRATED HOT-SWAP SWITCHES)

Active High Enable Logic

Part Number	VIN (Min) (V)	VIN (Max) (V)	Cont. Current (Max) (A)	Short-Circuit Current (Max) (A)	Fault Flag	Output Discharge	Package	Notes
MP5073	0.5	5.5	2	2		Yes	QFN12 (2x2)	Programmable Current Limit, PG, Slew Rate Control
MP5083	0.5	5.5	2	2		Yes	QFN12 (2x2)	5% Current Monitoring (From 0.6A-Full Load), PG, Slew Rate Control
MP6219	2.7	5.5	2	Prog.	Thermal Fault = Tri-State	No	SOIC8E	1A-2A Programmable Current Limit, 1.4ms Turn-On Time
MP5010B	3	18	4.2	Prog.	Thermal Fault = Tri-State	No	QFN10 (3x3)	1A-5A, 40mΩ RDS(ON), Prog. Current-Limit & Slew-Rate Control, 2.58ms Soft-Start Time
MP5013A	3	18	4.2	Prog.	Short/Over Current, Under Voltage, Over Voltage, Thermal Shutdown	No	TSOT23-8	5V, 1A-5A, 36mΩ RDS(ON), Prog. Current-Limit & Slew-Rate Control, 5A/2.8ATrip / Hold Current
MP5000A	10	18	4.2	Prog.	Thermal Fault = Tri-State	No	QFN10 (3x3)	Inrush Current Performance Improved Version of MP5000S, P2P NIS5132
MP5014A	10	13.8	5	Prog.	Short/Over Current, Under Voltage, Over Voltage, Thermal Shutdown	No	TSOT23-8	12V, 1A-5A, 36mΩ RDS(ON), Prog. Current Limit, Over-Voltage Clamp, Slew-Rate Control
MP5018	4.5	5.5	5	Prog.	Thermal Fault = Tri-State	No	QFN12 (2x3)	Reverse Current Blocking, 1A-5A, 45mΩ RDS(ON), Prog. Current Limit, OTP Latch-Off
MP5017	3	5.5	5	Prog		Yes	QFN12 (2x3)	1A-5A Current Limit Switch, Over Voltage Clamp, Reverse Block, OTP Auto Retry
MP5077	0.5	5.5	7	7		Yes	TQFN12 (2x2)	Programmable Current Limit, Slew-Rate Control, Fast-Off Protection
MP5087	0.5	5.5	7	7		Yes	TQFN12 (2x2)	5% Current Monitoring (From 1.5A-Full Load), PG, Slew Rate Control, Fast-Off Protection
MP5087A	0.5	5.5	7	7		Yes	TQFN12 (2x2)	Programmable Current Limit, Slew Rate Control, Fast-Off Protection
MP5086	2.3	5.5	7	7		Yes	TQFN12 (2x2)	5% Current Monitoring (From 1.5A-Full Load), NTC Comparator, Open-Drain OTP Indicator,
MP5092	0.5	5.5	7.5 (x2)	7		Yes	TQFN18 (2x3)	Dual Channel, Programmable Current Limit, Slew-Rate Control, Fast-Off Protection
MP5021B	4.8	16	10	Prog.	Current Limit, Thermal Shutdown and Damaged MOSFET	Yes	QFN22 (3x5)	12V, 7mΩ RDS(ON) Hot-Swap Protection Device with Current Monitoring
MP5022A	8	16	15	Prog.	Current Limit, Thermal Shutdown and Damaged MOSFET	Yes	QFN22 (3x5)	12V, 3mΩ RDS(ON) Hot-Swap Protection Device with Current Monitoring and Controlled Ron Mode

BRUSHED DC SOLENOID DRIVERS | MOTOR DRIVERS

Part Number	VIN (Min) (V)	VIN (Max) (V)	# of Half-Bridges	Output Current (Max) (A)	Control Interface	Package	Notes
MP6508	2.7	18	4	1.2	PWM	TSSOP-16 EP QFN16 (4x4)	Bipolar Stepper
MP6513L	2.5	5.5	2	0.6	PWM	TSOT23-6	H-Bridge
MP6513	2.5	21	2	0.8	PWM	TSOT23-6	H-Bridge
MP8049S	5	26	4	5.5	PWM	QFN40 (5x5)	Dual Full-Bridge Driver
MP6507	2.7	15	4	0.7	PWM	TSSOP-16 EP QFN16 (3x3) QFN16 (4x4)	Bipolar Stepper
MP8046	7.5	28	2	5	PWM	TSSOP20F	Full-Bridge Driver, Exposed Pad
MP8044	7.5	22	2	5	PWM	TSSOP20F	Full-Bridge Driver, Exposed Pad
MP8042	7.5	24	2	5	PWM	TSSOP20F	Full-Bridge Driver, Exposed Pad
MP8040	7.5	24	1	9	PWM	SOIC8EP	Integrated Half-Bridge

BRUSHLESS DC PRE-DRIVERS

Part Number	Supply (Min) (V)	Supply (Max) (V)	VSW (Max) (V)	# of Half-Bridges	Sink / Source Current (A)	Hall Input	Package	Notes
MP6535	5	55	55	3	1 / 0.8	Yes	QFN40 (5x5)	3-Phase BLDC, Buck Regulator
MP6534	5	55	55	3	1 / 0.8	No	QFN41 (5x5)	3-Phase BLDC, Buck Regulator
MP6528	5	60		2	1 / 0.8		QFN28 (4x4)	H-Bridge
MP6532	5	60	60	3	1 / 0.8	Yes	QFN28 (4x4) TSSOP-28 EP	3-Phase BLDC
MP6530	5	60	60	3	1 / 0.8	No	QFN28 (4x4) TSSOP-28 EP	3-Phase BLDC

BRUSHLESS DC PRE-DRIVERS | MOTOR DRIVERS

Part Number	Supply (Min) (V)	Supply (Max) (V)	VSW (Max) (V)	# of Half-Bridges	Sink / Source Current (A)	Hall Input	Package	Notes
MP1921A	9	18	100	1	2.5 / 1.5	No	SOIC8EP QFN8 (3x3) QFN9 (3x3) QFN10 (4x4)	High Frequency Half-Bridge Gate Driver
MP1924A	8	15	100	1	4.5 / 2.6		QFN10 (4x4) SOIC8	High Frequency Half-Bridge Gate Driver, Lower VDD Threshold

STEPPER MOTOR DRIVERS

Part Number	VIN (Min) (V)	VIN (Max) (V)	Output Current (Max) (A)	Step Mode	Control Interface	Package	Notes
MP6509	2.7	18	1.2	(1) (1/2)	Parallel	TSSOP-20 EP	Bipolar, Current Attenuation
MP6508	2.7	18	1.2	(1) (1/2)	Parallel	TSSOP-16 EP QFN16 (4x4)	Bipolar Stepper
MP6501A	8.5	35	2.5	(1) (1/2) (1/4) (1/8)	Indexer	TSSOP-28 EP	Bipolar Stepper
MP6518	8.5	35	1.5	(1) (1/2) (1/4) (1/8)	Indexer	TSSOP-28 EP	Bipolar Stepper
MP6507	2.7	15	0.7	(1) (1/2)	Parallel	TSSOP-16 EP QFN16 (3x3) QFN16 (4x4) TSSOP16	700 mA Bipolar Stepper

INTEGRATED BLDC MOTOR DRIVERS

Part Number	VIN (Min) (V)	VIN (Max) (V)	# of Half-Bridges	Output Current (Max) (A)	Hall Input	Package	Notes
MP6536	5	26	3	5.5	No	QFN16 (5x5)	3-Channel Half-Bridge Driver
MP6505	4.5	16	2	0.4	Yes	QFN16 (3x3) TSSOP-16 EP	Single-Phase Brushless DC
MP6510	4.5	16	2	1.2	Yes	SOIC8EP QFN8 (3x3) QFN9 (3x3)	Single-Phase Brushless DC

MAGALPHA SERIES | POSITION SENSORS

Part Number	Resolution	Interface	Output	Supply Voltage (V)	Sensing Range	Temperature Range (°C)	Side-Shaft Mounting Capability	Package	Notes
MA100	8 bit	SPI	Digital, UVW	3-3.6	30mT - No Upper Limit	- 40-125	Yes	QFN16 (3x3)	Angular Sensor for 3-Phase Brushless Motor Commutation
MA120	8 bit	SPI	Digital, UVW	3-3.6	30mT - No Upper Limit	- 40-125	No	QFN16 (3x3)	Angular Sensor for 3-Phase Brushless Motor Commutation
MA300	12 bit	SPI	Digital, UVW, ABZ	3-3.6	30mT - No Upper Limit	- 40-125	Yes	QFN16 (3x3)	Angular Sensor for 3-Phase Brushless Motor Commutation, Position Control
MA700	12 bit	SPI	Digital, ABZ	3-3.6	30mT - No Upper Limit	- 40-125	Yes	QFN16 (3x3)	Angular Sensor for Position Control
MA750	12 bit	SPI	Digital, UVW	3-3.6	30mT - No Upper Limit	- 40-125	No	QFN16 (3x3)	Contactless Turning Knob Sensor

ANALOG SWITCH | PRECISION ANALOG

Part Number	VIN (Min) (V)	VIN (Max) (V)	Channels	TON (ns)	TOFF (ns)	RDS(ON) (Max) (Ω)	Package	Notes
MP2735	1.65	5.5	2	29	23	0.45	QFN10 (1.4x1.8)	Low-Voltage Dual SPDT
MP2736	1.65	5.5	2	29	23	0.45	QFN10 (1.4x1.8)	Low-Voltage Dual SPDT, EN Function

OPERATIONAL AMPLIFIERS

Part Number	VIN (Min) (V)	VIN (Max) (V)	GBW (kHz)	IQ (Typ) (μA)	PSRR (dB)	Slew Rate (V/μs)	Offset Voltage (mV)	Package	Notes
MP8102	1.8	5.5	200	7.5	80	0.1	1	TSOT23-5	Ultra-Low Power, 600kHz Op Amp
MP8101	1.8	5.5	400	11	80	0.2	1	TSOT23-5	Ultra-Low Power, 400kHz Op Amp
MP8103	1.8	5.5	200	14	80	0.1	1	MSOP8	Dual Ultra-Low Power, 600kHz Op Amp
MP8104	1.8	5.5	400	11	80	0.2	1	TSOT23-5	Ultra-Low Power, 400kHz, Industry Standard Pin Out
MP5120	3.2	18	14000	1600	85	45	2	TSOT5	Single-Channel, High-Speed, High-Voltage Rail-to-Rail Input-Output
MP5121	3.2	20	14000	1600	85	45	2	TSOT5	Single-Channel, High-Speed, High-Voltage Rail-to-Rail Input-Output
MP8130	2.7	36	100	10	80	0.1	1	TSOT23-5	Ultra-Low Power, 200kHz, High-Voltage Op Amp
MP8110	2.5	40	12	0.05	0.5			SOIC8 MSOP8	High-Side Current Sense

VOLTAGE REFERENCE

Part Number	VIN (Min) (V)	VIN (Max) (V)	VOUT (V)	Initial Accuracy (%)	Operating Current (mA)	ZOUT (Ω)	Package	Notes
MP8201	1.2	12	1.2-10	0.5	60μA to 20mA	1	SOT23	Precision Adj. Shunt Voltage Regulator, 1.0V Shunt Reference
MP8200	1	12	1	1	100μA to 10mA	0.5	SOT23	1.0V Precision Shunt Reference

Part Number 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	QFN (2x2)	Q W	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

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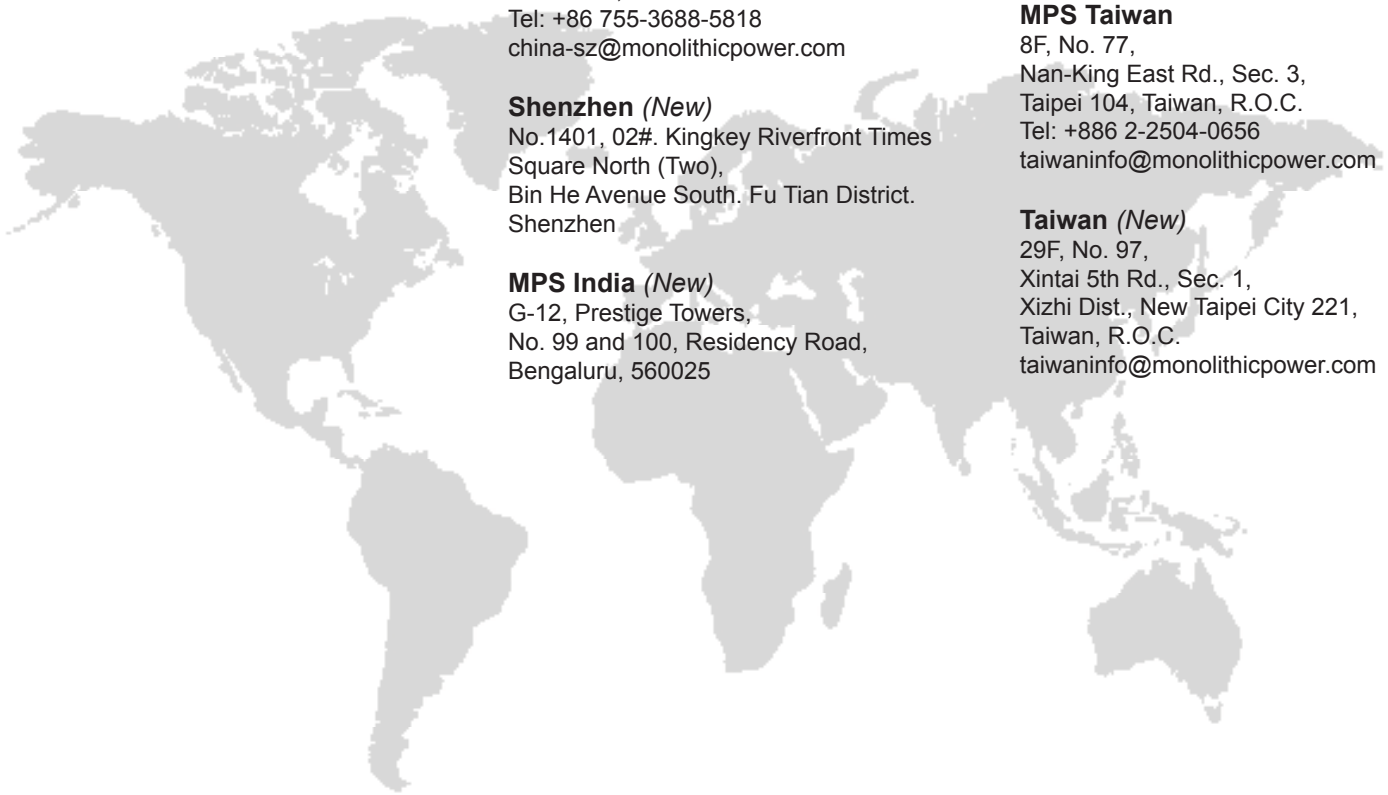

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