

Power Management Solutions

Selector Guide



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SWITCHING REGULATORS | DC/DC POWER CONVERSION

CPU Core (Controllers)

Maximum Operating Input Voltage < 55V

Part Number	V _{CC} (Min) (V)	V _{CC} (Max) (V)	I _Q (Typ) (mA)	Shutdown Current (Typ) (mA)	f _{sw} (MHz)	Soft Start	Regulated Output Phase	Package	Notes
MP2953B	4.75	5.25	18	1	0.2 to 1	Int	6	QFN-40 (5x5)	PMBus interface, VR12.5
MP2935	4.5	5.25	8	0.05	0.2 to 2	Int	4	QFN-40 (6x6)	VR12.5
N MP2965	3	3.6	30	0.15	0.2 to 3	Int	7	QFN-48 (6x6)	VR13.HC/AVSBUS
N MP2888A	3	3.6	30	0.15	0.2 to 5	Int	10	QFN-40 (5x5)	NVIDIA OpenVReg
N MP2853	3	3.6	34	0.11	0.2 to 3	Int	4	QFN-40 (5x5)	AMD SVI 2.0 compliant, supports 3-bit PVID mode, PMBus/I ² C compliant

CPU Core Power (Intelli-Phase™)

Part Number	V _{IN} (Min) (V)	V _{IN} (Max) (V)	I _{OUT} (Max) (A)	I _{sw} Limit (Typ) (A)	Shutdown Current (Typ) (mA)	f _{sw} (MHz)	PWM Logic (V)	Package
MP86905	4.5	16	50	75	0.08	0.1 to 2	3.3	QFN-23 (4x4)
N MP86945A	4.5	16	60	90	0.01	0.1 to 2	3.3	TQFN-25 (4x5)
N MP86934	4.5	16	25	60	0.03	0.1 to 2	3.3	TQFN-21 (3x4)
N MP86933	4.5	16	12	25	-	0.1 to 2	3.3	TQFN-13 (3x3)

SWITCHING REGULATORS | DC/DC POWER CONVERSION

Step-Down Converters (Buck)

Maximum Operating Input Voltage 1.5V ≤ V_{IN} ≤ 6V

Part Number	V _{IN} (Min) (V)	V _{IN} (Max) (V)	I _{OUT} (Max) (A)	I _Q (Typ) (µA)	V _{Fa} (Typ) (V)	f _{sw} (MHz)	Power Good	External Soft Start	Light-Load Efficiency	Constant-On-Time (COT)	100% Duty Cycle Industrial	Package	Notes
MP28200	2	5.5	0.2	0.5	-	1.5	✓	-	✓	✓	✓	QFN-12 (2x2)	Ultra-low I _Q
S MP28310	2	5.5	0.3	0.5	-	1.5	✓	-	✓	✓	✓	CSP-12 (1.2x1.6)	Ultra-low 500nA I _Q , ultra-small package, 300mA buck + 100mA LDO, prog. V _{OUT} by CTRL, COT, PG, functionally equivalent to TPS62743
MP21600	2.3	5.5	0.6	11	0.6	2.4	-	-	✓	✓	✓	QFN-6 (1x1.5)	High switching freq., ultra-small package
MP28301	2	5.5	0.7	0.5	0.6	1.5	✓	-	✓	✓	✓	QFN-12 (2x2)	Ultra-low 500nA I _Q , 700mA buck + 100mA LDO, prog. V _{OUT} by CTRL, COT, PG
S MP28210	2	5.5	1	0.5	-	1.5	✓	-	✓	✓	✓	CSP-12 (1.2x1.6)	Ultra-low 500nA I _Q , ultra-small package, prog. V _{OUT} by CTRL, COT, PG
MP2141N	2.3	5.5	1	11	0.6	2.2	✓	-	✓	✓	✓	SOT563 (1.6x1.6)	Output discharge, power good only for fixed V _{OUT} version
MP2148	2.3	5.5	1	10	0.6	2.2	✓	-	✓	✓	✓	QFN-6 (1x1.5)	High switching freq., ultra-small package

SWITCHING REGULATORS | DC/DC POWER CONVERSION

Step-Down Converters (Buck)

Maximum Operating Input Voltage $1.5V \leq V_{IN} \leq 6V$

Part Number	V_{IN} (Min) (V)	V_{IN} (Max) (V)	I_{OUT} (Max) (A)	I_Q (Typ) (μ A)	V_{FB} (Typ) (V)	f_{SW} (MHz)	Power Good	External Soft Start	Light-Load Efficiency	Constant-On-Time (COT)	100% Duty Cycle Industrial	Package	Notes
MP21148	2.3	5.5	1	500	0.6	2.4	✓	-	✓	✓	-	QFN-6 (1x1.5)	Forced CCM, low ripple across entire load range
MP2149	2.7	6	1 (2x)	45	0.608	1	-	-	✓	-	-	TSOT23-8	Dual-channel
MP2151	2.5	5.5	1	25	0.6	1.1	✓	-	✓	✓	✓	SOT563 (1.6x1.6), UTQFN (1.2x1.6)	1% V_{FB} accuracy, output discharge, adjustable and fixed V_{OUT} versions
N MP2181	2.5	5.5	1	21	0.6	1.2	✓	-	✓	✓	✓	SOT583 (1.6x2.1)	1% V_{FB} accuracy, output discharge, ext. soft start
MP2141Q	2.3	5.5	1.5	20	-	2.2	-	-	✓	✓	✓	SOT563 (1.6x1.6)	Fixed 0.61V/1.8V output voltage, output discharge, VSEL for PFM/PWM
MP2152	2.5	5.5	2	25	0.6	1.1	✓	-	✓	✓	✓	SOT563 (1.6x1.6), UTQFN (1.2x1.6)	1% V_{FB} accuracy, output discharge, adjustable and fixed V_{OUT} versions
N MP2172C	2.38	5.5	2	450	0.6	1.1	-	-	-	✓	✓	UTQFN (1.2x1.6)	Forced CCM, 1% V_{FB} accuracy, output discharge
N MP2182	2.5	5.5	2	21	0.6	1.2	✓	-	✓	✓	✓	SOT583 (1.6x2.1)	1% V_{FB} accuracy, output discharge, ext. soft start
S MP2192C	2.5	5.5	2	25	0.6	1.1	-	-	-	✓	✓	WLCSP-6 (1.23x0.86)	Forced CCM, 1% V_{FB} accuracy, fast output discharge, P2P with the MP2193
MP2122	2.7	6	2 (2x)	45	0.608	1	-	-	✓	-	✓	TSOT23-8	Dual-channel
MP2166 MPQ2166	2.7	6	2 (2x)	60	0.6	3	✓	-	✓	-	✓	QFN-18 (2x3), QFN-18 (2.5x3.5)	Dual-channel, external soft start
MP2153	2.5	5.5	3	25	0.6	1.1	✓	-	✓	✓	✓	SOT563 (1.6x1.6), UTQFN (1.2x1.6)	1% V_{FB} accuracy, output discharge, adjustable and fixed V_{OUT} versions
S MP2193	2.5	5.5	3	25	0.6	1.1	✓	-	✓	✓	✓	WLCSP-6 (1.23x0.86)	
N MP2164	2.5	5.5	3	50	0.6	2.3	✓	-	✓	✓	✓	QFN-12 (2x2)	Forced PWM and auto-PFM option, stable with low-ESR output ceramic capacitors
MP8843	2.6	6	3	60	0.6	1 to 2	✓	-	✓	✓	-	QFN-12 (2x2)	I ² C interface, prog. V_{OUT} , power-save mode
N MP2183	2.5	5.5	3	21	0.6	1.2	✓	✓	✓	✓	✓	SOT583 (1.6x2.1)	1% V_{FB} accuracy, output discharge
MP2188	2.5	5.5	3 (2x)	80	0.6	1.2	✓	-	✓	✓	✓	QFN-16 (2.2x2.6)	Dual-output, output discharge
MP2131	2.7	5.5	4	19	0.6	1.2	✓	-	✓	✓	✓	QFN-12 (2x2)	Output discharge, high efficiency
N MP2184	2.5	5.5	4	21	0.6	1.2	✓	✓	✓	✓	✓	SOT583 (1.6x2.1)	1% V_{FB} accuracy, output discharge
MP2145	2.8	5.5	6	40	0.6	1.2	✓	-	✓	✓	-	QFN-12 (2x3)	Output discharge, PWM/PFM mode, and dynamic voltage scaling
MPQ8616-6	1.5	6	6	1050	0.61	Prog	✓	✓	-	✓	-	QFN-14 (3x4)	CCM, non-latch OVP, and OCP
MP8847	2.7	6	6	300	0.6	0.85 to 2.2	✓	-	✓	-	-	QFN-14 (2x3)	I ² C interface, prog. V_{OUT} , power-save mode
N MP8770C	3	17	8	100	0.6	0.7	✓	✓	-	✓	-	QFN-16 (3x3)	Forced CCM, wide V_{IN} range, fast load transient response
MP8771	3	17	10	100	0.6	0.7	✓	✓	✓	✓	-	QFN-16 (3x3)	Fast load transient response, SCP, UVP, OCP, and hiccup mode

SWITCHING REGULATORS | DC/DC POWER CONVERSION

Step-Down Converters (Buck)

Maximum Operating Input Voltage $1.5V \leq V_{IN} \leq 6V$

Part Number	V_{IN} (Min) (V)	V_{IN} (Max) (V)	I_{OUT} (Max) (A)	I_Q (Typ) (μ A)	V_{FB} (Typ) (V)	f_{SW} (MHz)	Power Good	External Soft Start	Light-Load Efficiency	Constant-On-Time (COT)	100% Duty Cycle	Industrial	Package	Notes
MPQ8616-12	1.5	6	12	1050	0.61	Prog	✓	✓	-	✓	-	✓	QFN-14 (3x4)	CCM, non-latch OVP, OCP
MP8774	3	18	12	100	0.6	0.7	✓	✓	✓	✓	-	-	QFN-16 (3x3)	Wide V_{IN} range, fast load transient response, SCP, UVP, OCP, hiccup
N MP8774H	3	18	12	100	0.6	1.4	✓	✓	✓	✓	-	-	QFN-16 (3x3)	
MPQ8612-16	1.5	6	16	1000	0.61	Prog	✓	✓	✓	✓	-	✓	QFN-17 (4x4)	DCM, non-latch OVP, OCP
MPQ8612-20	1.5	6	20	1000	0.61	Prog	✓	✓	✓	✓	-	✓	QFN-17 (4x4)	

Step-Down Converters (Buck)

Maximum Operating Input Voltage $\leq 28V$

Part Number	V_{IN} (Min) (V)	V_{IN} (Max) (V)	I_{OUT} (Max) (A)	I_Q (Typ) (mA)	V_{FB} (Typ) (V)	f_{SW} (MHz)	Power Good	External Soft Start	Light-Load Efficiency	Constant-On-Time (COT)	Package	Notes
MP1479	4.2	18	1	0.19	0.805	0.8	-	-	✓	✓	SOT563 (1.6x1.6)	Low UVLO
MP2313	4.5	24	1	0.2	0.8	2	-	-	✓	-	TSOT23-8	High frequency, light-load mode (AAM pin)
MP2388	4.5	21	1	0.2	0.798	2	-	-	✓	-	QFN-8 (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
MP2322	3	22	1	0.005	0.6	1.25	✓	-	✓	✓	QFN-8 (1.5x2)	Ultra-low I_Q , small package, output discharge
MP1476	4.2	18	2	0.19	0.805	0.8	-	-	✓	✓	SOT563 (1.6x1.6)	Fast load transient response, OCP, and hiccup
MP2318	4.5	24	2	0.2	0.8	2	-	-	✓	-	TSOT23-8	High frequency, light-load mode (AAM pin)
MPQ2314	4.5	24	2	0.18	0.791	0.5	-	-	✓	✓	TSOT23-8	AAM power-save mode, industrial grade
N MP2332H	4.2	18	2	0.2	0.805	1.2	✓	✓	-	✓	SOT583 (1.6x2.1)	High frequency, forced CCM, good regulation, SCP/OVP/UVP function
MP2321	4	19	2	0.04	0.6	Prog	✓	✓	✓	-	QFN-14 (2x3)	Forced PWM or auto-PFM/PWM mode selectable, 100% duty cycle
MP2392	4.2	24	2	0.2	0.805	0.65	✓	✓	✓	✓	SOT583 (1.6x2.1)	Good regulation, SCP/OVP/UVP function
N MP2331H	4.2	24	2	0.2	0.805	1.2	✓	✓	-	✓	SOT583 (1.6x2.1)	High frequency, forced CCM, good regulation, SCP/OVP/UVP function
N MP2344	7.5	26	2	0.17	0.791	0.6	-	-	✓	-	TSOT23-6	P2P with MP2317/MP2345, optimized EMI
N MP2345	7.5	26	2.5	0.17	0.791	0.6	-	-	✓	-	TSOT23-6	P2P with MP2317/MP2344, optimized EMI
MP2393	4.2	24	3	0.2	0.805	0.65	✓	✓	✓	✓	SOT583 (1.6x2.1)	Good regulation, SCP/OVP/UVP function
N MP2333H	4.2	18	3	0.2	0.805	1.2	✓	✓	-	✓	SOT583 (1.6x2.1)	High frequency, forced CCM, good regulation, SCP/OVP/UVP function
MP2330H	4.2	24	3	0.2	0.805	1.2	✓	✓	✓	✓	SOT583 (1.6x2.1)	High frequency, good regulation, SCP/OVP/UVP function
MP1477	4.2	17	3	0.2	0.805	0.8	-	-	✓	✓	SOT-563 (1.6x1.6)	Fast load transient response, OCP, and hiccup
MP1477H	4.2	17	3	0.2	0.805	1.2	-	-	✓	✓	SOT563 (1.6x1.6)	High frequency

SWITCHING REGULATORS | DC/DC POWER CONVERSION

Step-Down Converters (Buck)

Maximum Operating Input Voltage $\leq 28V$

Part Number	V _{IN} (Min) (V)	V _{IN} (Max) (V)	I _{OUT} (Max) (A)	I _D (Typ) (mA)	V _{FB} (Typ) (V)	f _{SW} (MHz)	Power Good	External Soft Start	Light-Load Efficiency	Constant-On-Time (COT)	Package	Notes
MP2223	4.5	18	3/2	1	0.8	0.54	-	-	✓	-	TSOT23-8	Dual 3A/2A buck, 180° out-of-phase operation
N MP2348	4.2	24	4	0.2	0.802	0.65	-	✓	✓	✓	SOT583 (1.6x2.1)	Forced PWM, auto-PFM/PWM and ultrasonic mode selectable
N MP8854	2.85	18	4	0.42	0.72	0.5 to 1.25	✓	✓	✓	✓	QFN-14 (3x4)	I ² C prog. FB range, integrated telemetry, accurate output voltage/current, readback via I ² C
MP8864	4.5	21	4	0.5	0.6	1.6	✓	✓	✓	-	QFN-15 (3x3)	I ² C interface, prog. V _{OUT} , power-save mode
N MPQ8626	4	16	6	0.65	0.6	0.6/1.1/2.2	✓	-	✓	✓	QFN-14 (2x3)	Prog. current limit, proprietary switching loss reduction, pre-biased start-up, stable with zero-ESR output capacitor, excellent load regulation
S MP2349	4.5	24	6.5	0.105	0.6	0.7	-	-	✓	✓	QFN-11 (2X2)	7.5A peak, DC auto-tune loop, proprietary switching loss reduction technique, forced PWM, auto-PFM/PWM and ultrasonic mode selectable
N MPQ8633A	4	16	16	0.65	0.6	0.6/0.8/1	✓	-	✓	✓	QFN-21 (3x 4)	
N MPQ8633B	4	16	20	0.65	0.6	0.6/0.8/1	✓	-	✓	✓	QFN-21 (3x 4)	Prog. current limit, programmable frequency, voltage tracking, proprietary switching loss reduction, pre-biased start-up, stable with zero-ESR output capacitor, excellent load regulation
N MPQ8634A	4	16	12	0.65	0.9	0.6/0.8/1	✓	-	✓	✓	QFN-21 (3x 4)	
N MPQ8634B	4	16	20	0.65	0.9	0.6/0.8/1	✓	-	✓	✓	QFN-21 (3x 4)	
N MPQ8645P	4	16	30	2.5	0.6	0.4/0.6/0.8/1	✓	-	✓	✓	TQFN-25 (4x5)	Scalable multi-phase operation, output voltage, true remote sense, programmable output voltage, programmable current limit, programmable frequency, PMBus interface
S MP2328	4.2	28	2	0.16	0.5	0.43	✓	✓	✓	✓	SOT583 (1.6x2.1)	High-efficiency, for white goods
S MP2338	4.2	28	3	0.16	0.5	0.43	✓	✓	✓	✓	SOT583 (1.6x2.1)	
MP2316	4	19	3	0.04	0.6	Prog	✓	✓	✓	✓	QFN-14 (2x3)	High efficiency, 100% duty cycle
MP2326	3.9	19	4	0.04	0.6	Prog	✓	✓	✓	✓	QFN-14 (2x3)	Selectable PFM/PWM mode, 100% duty cycle
MP8715	4.5	21	4	0.66	0.805	0.5	✓	✓	-	-	QFN-14 (3x4), SOIC-8E	100% duty cycle, ext. frequency sync
MP1499	4.5	16	4	0.6	0.807	0.5	-	✓	✓	-	QFN-10 (2x3)	Ext. frequency sync
MP2384	4.5	24	4	0.105	0.6	0.7	✓	-	✓	✓	QFN-11 (2x2)	Output discharge, OCP, OVP, UVP, ther. shutdown with auto-retry, P2P with MP2329/MP2386
MP2225	4.5	18	5	0.32	0.6	0.5	-	-	✓	-	TSOT23-8	High-efficiency, 5A peak, ext. frequency sync
MPQ8623	4	16	6	0.65	0.9	0.6/1.1/2.2	✓	-	✓	✓	QFN-14 (2x3)	Prog. current limit, prop switching loss reduction, pre-biased start-up, stable w/ zero-ESR output cap, excellent load regulation
MP8861	2.85	18	6	0.42	0.72	0.5 to 1.25	✓	✓	✓	✓	QFN-14 (3x4)	I ² C prog. FB range, integrated telemetry, accurate output voltage/current, readback via I ² C
MP2236	3	18	6	0.15	0.6	0.6	-	-	✓	✓	TSOT23-8	Pin-to-pin with MP2225
MP2229	4.5	21	6	0.4	0.6	Prog	-	✓	✓	-	QFN-14 (3x3)	Current mode, external frequency sync
MP8865	4.5	21	6	0.5	0.6	1.6	✓	✓	✓	-	QFN-15 (3x3)	I ² C interface, prog. V _{OUT} , power-save mode
MP2329	4.5	24	6.5	0.105	0.6	0.7	✓	-	✓	✓	QFN-11 (2x2)	Output dis., OCP, OVP, UVP, thermal shutdown with auto-retry, P2P with MP2384/MP2386

SWITCHING REGULATORS | DC/DC POWER CONVERSION

Step-Down Converters (Buck)

Maximum Operating Input Voltage $\leq 28V$

Part Number	V_{IN} (Min) (V)	V_{IN} (Max) (V)	I_{OUT} (Max) (A)	I_Q (Typ) (mA)	V_{FB} (Typ) (V)	f_{SW} (MHz)	Power Good	External Soft Start	Light-Load Efficiency	Constant-On-Time (COT)	Industrial	Package	Notes
MPQ8636-4	4.5	18	4	0.86	0.611	Prog	✓	✓	-	✓	✓	QFN-16 (3x4)	CCM, non-latch OVP, prop. switching loss red., pre-biased start-up, stable w/ zero-ESR output capacitor
MP2329C	4.5	24	6.5	0.105	0.6	0.7	✓	-	✓	-	-	QFN-11 (2x2)	Forced CCM version of MP2329
MP2386	4.5	24	8	0.105	0.6	0.7	✓	-	✓	✓	-	QFN-11 (2x2)	Output dis., OCP, OVP, UVP, thermal shutdown with auto-retry, P2P with MP2384/MP2329
MP2276	2.7	16	8	0.6	0.8	0.6/1.1/2	✓	✓	✓	✓	-	QFN-14 (2x3)	Prog. current limit, selectable mode of op. forced CCM or pulse-skip op. at light load
MP8770	4.5	17	8	0.1	0.6	0.7	✓	✓	✓	✓	-	QFN-16 (3x3)	Fast load transient response, SCP, UVP, OCP, and hiccup
N MP8770C	3	17	8	0.1	0.6	0.7	✓	✓	-	✓	-	QFN-16 (3x3)	Forced CCM, wide V_{IN} range, fast load transient response
MP8867	4.5	17	8	0.56	0.6	1.5	✓	✓	✓	-	-	QFN-14 (3x4)	I ² C interface, prog. V_{OUT} , power-save mode
MP8759	4.5	26	8	0.117	0.6	0.7	✓	-	✓	✓	-	QFN-12 (2x3)	USM, PFM/PWM selection, hiccup mode OCP and UVP, output discharge
N MP2238	4.2	18	8	0.15	0.6	0.6	-	-	✓	✓	-	QFN-12 (2x3)	1% V_{FB} accuracy, hiccup OCP
MP8771	4.5	17	10	0.1	0.6	0.7	✓	✓	✓	✓	-	QFN-16 (3x3)	Fast load transient response, SCP, UVP, OCP, and hiccup
MPQ8636A-10	4.5	18	10	0.86	0.611	Prog	✓	✓	-	✓	✓	QFN-16 (3x4)	CCM, latch-off OVP/OCP
MP8758H	4.5	22	10	0.19	0.604	0.5	✓	-	✓	✓	-	QFN-21 (3x4)	Thermal auto-retry, hiccup mode OCP and UVP, PFM/PWM mode
MP8714	4.5	17	10	0.56	0.6	Prog	✓	✓	✓	-	-	QFN-14 (3x4)	External frequency sync, current mode
MP8868	4.5	17	10	0.56	0.6	1.5	✓	✓	✓	-	-	QFN-14 (3x4)	I ² C interface, prog. V_{OUT} , power-save mode
MP8720	4.5	26	10	0.14	0.6	0.7	✓	-	✓	✓	-	QFN-16 (3x3)	Output discharge, adjustable current limit, forced CCM or PSM selection, over-current limit, latch-off reset
MP8774	3	18	12	0.1	0.6	0.7	✓	✓	✓	✓	-	QFN-16 (3x3)	Wide VIN range, fast load transient response, SCP, UVP, OCP, and hiccup
N MP8774H	3	18	12	0.1	0.6	1.4	✓	✓	✓	✓	-	QFN-16 (3x3)	
MP8869S	2.85	18	12	0.42	0.72	0.5 to 1.25	✓	✓	✓	✓	-	QFN-14 (3x4)	V_{OUT} adjustable up to 5.5V with FB pin, integrated telemetry, accurate output voltage/current, readback via I ² C
MP8719	4.5	26	12	0.85	0.6	0.5/0.7	✓	-	-	✓	-	QFN-16 (3x3)	Output discharge, USM, buck converter with $\pm 1A$ LDO and buffered reference
MPQ8636H-20	4.5	18	20	1	0.611	Prog	✓	✓	-	-	✓	QFN-29 (5x4)	CCM, hiccup OVP
S MP8796	4	16	30	0.7	0.6	Prog	✓	✓	✓	✓	-	TQFN-25 (4x5)	Prog. current limit, scalable multi-phase operation, remote sense, selection of hiccup or latch-off for OCP, OVP, and OTP
S MP8796B	4	16	30	2.5	0.6	Prog	✓	-	-	✓	-	TQFN-25 (4x5)	Digital with PMBus

SWITCHING REGULATORS | DC/DC POWER CONVERSION

Step-Down Converters (Buck) Maximum Operating Input Voltage < 55V

Part Number	V _{IN} (Min) (V)	V _{IN} (Max) (V)	I _{OUT} (Max) (A)	I _O (Typ) (mA)	V _{FB} (Typ) (V)	f _{SW} (MHz)	Power Good	External Soft Start	Light-Load Efficiency	Sync Rectifier	Industrial	Package	Notes
MP4410	4.5	36	0.1	0.02	1	Prog	✓	-	-	✓	-	QFN-10 (3x3)	Low I _O
MP4568	4.5	45	0.1	0.02	1	Prog	-	✓	-	✓	✓	QFN-10 (3x3)	Programmable peak-current limit
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	-	-	✓	-	-	QFN-8 (2x3)	-
MPQ2451	3.3	36	0.6	0.13	0.794	2000	-	-	✓	-	✓	TSOT23-6L, QFN-6L	-
MP2454	3.3	36	0.6	0.06	0.8	2300	✓	✓	-	-	✓	QFN-10 (3x3)	Ext. frequency sync
N MP2457	5	36	0.6	0.065	0.8	2000	-	-	✓	-	✓	TSOT23-6	Power meters only
MPQ4458	3.8	36	1	0.12	0.8	Prog	-	-	✓	-	-	TQFN-10 (3x3)	Integrated high-side MOSFET
MPQ4558	3.8	55	1	0.14	0.8	Prog	-	✓	-	✓	-	QFN-10 (3x3), SOIC-8E	Current-mode control
N MP4431 MPQ4431	3.3	36	1	0.01	0.8	Prog	✓	✓	✓	✓	✓	QFN-16 (3x4)	Selectable forced CCM or AAM, prog. soft-start time, good EMI, and low-dropout mode
MP2269	3.3	30	1	0.012	0.8	Prog	✓	✓	✓	✓	-	QFN-15 (2x3)	Current-mode control, low I _O , forced PWM and auto-PFM/PWM selection, low-dropout mode
MPQ4459	3.8	36	1.5	0.12	0.8	Prog	-	-	✓	-	✓	TQFN-10 (3x3)	Current-mode control
MPQ2490	4.5	36	1.5	0.5	0.805	700	✓	✓	-	-	✓	SOIC-8	Prog. output-current limit
MPQ4561	3.8	55	1.5	0.14	0.795	Prog	-	✓	✓	-	-	QFN-10 (3x3)	Internal high-side MOSFET
N MP4425M MPQ4425M	4	36	1.5	0.6	0.2	2200	-	-	-	-	✓	QFN-13 (2.5x3)	PWM dimming and OCP/SCP protection, external frequency sync
MP9942 MP9942A	4	36	2	0.5	0.792	410	✓	-	✓	✓	-	TSOT23-8	Forced CCM, consumer grade, external frequency sync
MP4420H MPQ4420H	4	36	2	0.5	0.792	410	✓	-	-	✓	✓	TSOT23-8	External frequency sync
MPQ4560	3.8	55	2	0.14	0.797	Prog	-	-	✓	-	✓	QFN-10 (3x3), SOIC-8E	AEC-Q100 qualified
MP2499	4.5	55	2	0.5	0.8	100	-	✓	-	-	-	SOIC-16	Programmable output current
N MP4432 MPQ4432	3.3	36	2.2	0.01	0.8	Prog	✓	✓	✓	✓	✓	QFN-16 (3x4)	Selectable forced CCM or AAM, prog. soft-start time, good EMI, and low-dropout mode
MPQ4460	3.8	36	2.5	0.12	0.8	Prog	-	-	✓	-	-	QFN-10 (3x3)	Prog. output current
MP2560	4.5	42	2.5	0.12	0.8	Prog	-	-	✓	-	-	QFN-10 (3x3), SOIC-8E	Current-mode control
MP2565	4.5	50	2.5	0.12	0.8	Prog	-	-	✓	-	-	QFN-10 (3x3), SOIC-8E	Integrated internal high-side
MP2496	7	36	2.5	1.6	-	350/250/ 150	-	-	-	-	-	QFN-26 (4x4)	Integrated smart USB charging port, auto-detect, cable compensation
MP2499A	5	36	3	0.7	0.792	Prog	-	-	✓	✓	-	QFN-13 (2.5x3)	Current-mode control, ext. frequency sync, output line drop compensation

SWITCHING REGULATORS | DC/DC POWER CONVERSION

Step-Down Converters (Buck)

Maximum Operating Input Voltage < 55V

Part Number	V_{in} (Min) (V)	V_{in} (Max) (V)	I_{out} (Max) (A)	I_o (Typ) (mA)	V_{FB} (Typ) (V)	f_{sw} (kHz)	Power Good	External Soft Start	Light-Load Efficiency	Sync-Rectifier	Industrial	Package	Notes
MP4423H MPQ4423H	4	36	3	0.5	0.79	410	✓	-	✓	✓	✓	QFN-8 (3x3)	External frequency sync
MP9943/A	4	36	3	0.5	0.79	410	✓	-	✓	✓	-	QFN-8 (3x3)	Consumer grade, 36V max, ext. frequency sync
N MP4433 MPQ4433	3.3	36	3	0.01	0.8	Prog	✓	✓	✓	✓	✓	QFN-16 (3x4)	Sel. forced CCM or AAM, prog. soft-start time, good EMI, and low-dropout mode
MP4570 MPQ4570	4.5	55	3	0.45	1	Prog	✓	✓	✓	✓	✓	TSSOP-20EP	External frequency sync
MP2263	3.3	30	3	0.012	0.8	Prog	✓	✓	✓	✓	-	QFN-15 (2x3)	Current mode control, low I_o , forced PWM & auto-PFM/PWM selection, low-dropout mode
S MP8883 MPQ8883	3.5	45	3	0.6	-	Prog	✓	-	✓	✓	✓	QFN-16 (3x3)	Current mode, I ² C interface, OTP, external frequency sync
MP4462 MPQ4462	3.8	36	3.5	0.12	0.792	Prog	-	-	-	✓	✓	QFN-10 (3x3), SOIC-8E	AEC-Q100 qualified
MP4473	4.5	36	3.5	0.5	0.815	Prog	✓	✓	✓	✓	✓	QFN-20 (3x4)	High frequency
MP4430 MPQ4430	3.3	36	3.5	0.01	0.8	Prog	✓	✓	✓	✓	✓	QFN-16 (3x4)	Selectable forced CCM or AAM, programmable soft-start time, good EMI, low-dropout mode
N MP2491C	4	32	6	0.45	0.5	490	✓	-	✓	✓	-	QFN-13 (2.5x3)	Adjustable current limit, V_{out} scaling control
MP8675	4.5	42	6	0.9	0.808	420	-	-	-	✓	-	SOIC-8E	Synchronizable gate driver, ext. frequency sync
S MPQ8886 MP8886	4	45	3 x 2	0.012	0.6	600	✓	-	-	✓	-	QFN-26 (5x5)	Dual 3A/single 6A digital prog. synchronous buck regulator, AEC-Q100 qualified

Step-Down Converters (Buck)

Maximum Operating Input Voltage < 100V

Part Number	V_{in} (Min) (V)	V_{in} (Max) (V)	I_{out} (Max) (A)	I_o (Typ) (mA)	V_{FB} (Typ) (V)	f_{sw} (kHz)	Power Good	External Soft Start	Light-Load Efficiency	Sync-Rectifier	Industrial	Package	Notes
MP4569	4.5	75	0.3	0.02	1	1000	✓	✓	-	✓	✓	QFN-10 (3x3), SOIC-8E	Integrated high-side/low-side
MP2420	4.5	75	0.3	0.02	1	Prog	✓	✓	-	✓	✓	TSSOP-16	Watchdog
S MP4541	10	80	0.8	0.015	1	Prog	-	-	✓	✓	-	SOIC8-EP	High efficiency at light load
S MP5423	25	100	0.3	-	-	200	-	-	✓	✓	-	SOIC8-EP	650mA current limit, 5V LDO, 3.3V LDO
S MP4581	10	100	0.8	0.015	1	Prog	-	-	✓	✓	-	SOIC-8EP	High efficiency at light load
S MPQ8880 MP8880	3.5	60	4	-	-	200 to 2500	✓	-	-	✓	-	QFN (4x5)	Digital prog. sync, AEC-Q100 qualified

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Step-Down Controllers

Part Number	V_{IN} (Min) (V)	V_{IN} (Max) (V)	I_O (Typ) (mA)	V_{FB} (V)	f_{SW} (kHz)	Soft Start	Package	Notes
MP2910	5	12	0.6	0.8	300	Int	SOIC-14, SOIC-8E	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	Ext	MSOP-10	Ideal for applications greater than 15A
MP2908A	4	60	0.75	0.8	Adj 100 to 1000	Ext	TSSOP-20EP, QFN-20 (3x4)	Industrial grade, power good, programmable CCM, AAM, pulse-skipping mode

Step-Up Charge Pumps

Part Number	V_{IN} (Min) (V)	V_{IN} (Max) (V)	I_{OUT} (A)	I_O (Typ) (mA)	f_{SW} (kHz)	Industrial	Package	Notes
MP9361	2.8	5	0.11	2	1350	✓	TSOT23-6	Fixed 5V _{OUT} , high performance, regulated, internal soft start, OCP, SCP, inrush current limit
MP9218	2.8	5	0.11	2	1350	-	QFN-6 (2x2)	Fixed 5V _{OUT} , high performance, regulated

Step-Up Controllers

Part Number	V_{IN} (Min) (V)	V_{IN} (Max) (V)	I_{OUT} (A)	f_{SW} (kHz)	I_O (Typ) (mA)	V_{FB} (Typ) (V)	Soft Start	Package	Notes
MP3910	5	35	1	Adj 30 to 400	0.288	1.237	Ext	MSOP-10	Supports pulse-skipping mode at light-load, 0.95 max duty cycle
MP3910A	9	14	1	Adj 30 to 400	0.288	1.237	Ext	SOIC-8E	
MP6002	10	100	3	550	1	1.21	Int	SOIC-8E	Flyback/forward DC/DC converter, 30W, integrated 150V power switch
MP6001	10	100	2	550	1	1.21	Int	SOIC-8E	Flyback/forward DC/DC converter, 15W, integrated 150V power switch
MP6003	10	100	-	550	1	1.21	Int	SOIC-8E	Monolithic flyback/sepic DC/DC converter

Step-Up Converters (Boost)

Part Number	V_{IN} (Min) (V)	V_{IN} (Max) (V)	I_{SW} Limit (Typ) (A)	I_O (Typ) (mA)	V_{OUT} Range (V)	f_{SW} (kHz)	Package	Notes
MP3209	2.5	6	0.35	0.64	3 to 22	1400	TSOT23-5, UTQFN-8 (2x2)	Int. compensation, tiny inductors and capacitors (+J168:J192) can be used
MP3217	2.5	6	0.5	0.46	V_{IN} to 36	670	TSOT23-6	Cycle-by-cycle OCP, UVLO, thermal shutdown, P2P with MAX5025-5028
MP1400	2.7	7	0.6	0.2	-0.9 to -6	1500	CSP-8 (0.8x1.6)	Output adj. from -0.9V to -6V, very small size
MP5418	2.3	5	0.2	0.22	0V to $-V_{IN}$	30 to 550	QFN-10 (1.8x1.4)	Dual output, negative charge pump, adjustable regulator
MP3416	0.8	5.5	1	0.009	1.8 to 5.5	1500	TSOT23-8, QFN-8 (1.5x2.2)	Output disconnect, down mode, sync
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	QFN-16 (3x3)	APD current monitoring (1:10 or 1:2 ratio) with 5% accuracy and 50ns response time, prog. APD current limit and protection, int. comp. and soft start

SWITCHING REGULATORS | DC/DC POWER CONVERSION

Step-Up Converters (Boost)

Part Number	V_{IN} (Min) (V)	V_{IN} (Max) (V)	I_{SW} Limit (Typ) (A)	I_L (Typ) (mA)	V_{OUT} Range (V)	f_{SW} (kHz)	Package	Notes
MP3410	1.8	6	1.3	0.36	2.5 to 6	550	TSOT23-5	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
MP1542	2.5	22	2.6	0.7	3 to 22	700/1300	MSOP-8	Prog. 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	MSOP-8E	Prog. soft start
MP1530	2.7	5.5	3.6	1.3	2.7 to 22	1400	QFN-16 (3x3), TSSOP-16	Triple output charge pump, LDO for TFT bias
MPQ1530	2.7	5.5	3.6	1.3	2.7 to 22	1400	QFN-16 (3x3)	Triple output charge pump, LDO for TFT bias, industrial grade
MP3415	1.8	5.5	4.2	0.022	1.98 to 5.5	1000	QFN-12 (2x2)	Output disconnect, sync
MP3425	3.1	22	5	0.65	3.1 to 55	Prog 300 to 2000	QFN-14 (3x4)	Prog. UVLO and EN hysteresis, industrial grade
MP3421	1.9	5.5	5.5	0.043	2.5 to 5.5	600	QFN-14 (2x2)	Output disconnect, sync
MP3422	1.9	5.5	6.5	0.043	2.5 to 5.5	600	QFN-14 (3x4)	Output disconnect, sync
MP3426	3.2	22	8.5	0.65	3.2 to 35	Prog 300 to 2000	QFN-14 (3x4)	Prog. UVLO, soft start, UVLO hysteresis, industrial grade
MP3423	1.9	5.5	9	0.043	2.5 to 5.5	600	QFN-14 (2x2)	Output disconnect, sync
MP3424	2	5.5	9.5	0.32	3 to 5.5	580	QFN-14 (2x2)	Current prog., output disconnect, sync
S MP3437	2.7	16	9.5	0.38	V_{IN} to 16	600	TSOT23-8, QFN-10 (2x2.5)	Selectable PSCM/USM/FCCM, prog. UVLO and hysteresis, auto pass-through mode in PSM
S MP3434	0.8	22	3	0.15	V_{IN} to 22V	1200	SOT583	High efficiency, fully integrated sync boost, prog. UVLO and hysteresis
N MP3432	2.7	13	10	0.51	V_{IN} to 16	600	QFN-13 (3x4)	Selectable PSM/USM/FCCM, prog. switch peak current limit, auto pass-through mode in PSM when $V_{IN} > V_{OUT}$, sync
MP3429	0.8	13	21.5	0.45	1 to 16	600	QFN-13 (3x4)	Selectable PSM/USM/FCCM, prog. UVLO and hysteresis, sync
MP3431	2.7	13	21.5	0.45	1 to 16	600	QFN-13 (3x4)	Selectable PSM/USM/FCCM, prog. input current limit, prog. UVLO and hysteresis, sync
MP3428A	3	20	25	0.65	3 to 22	600	QFN-22 (3x4)	Input disconnect function, ext. soft start, prog. UVLO and hysteresis, sync



SWITCHING REGULATORS | DC/DC POWER CONVERSION

Step-Up Energy Storage (Dying Gasp)/Power Backup Manager PMICs

	Part Number	V_{IN} (Min) (V)	V_{IN} (Max) (V)	V_{STG} (Max) (V)	I_{LIMIT} Charging (A)	I_{LIMIT} Dumping (A)	I_Q (Typ) (mA)	V_{FB} (V)	Package	Notes
N	MP5505E	2.7	7	30	0.54	6	2 (Max)	0.801/0.795	QFN-20 (3x4)	Input current limit, adjustable dV/dt slew rate, reverse-current protection
	MP5455	2.7	7	30	0.5	5	2 (Max)	0.79	QFN-20 (3x4)	For USB Type-C HDMI interface reference design
	MP5507E	2.7	7	30	0.5	5	2 (Max)	0.79	QFN-16 (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	QFN-28 (4x5)	Prog. storage and release voltage, hot-swap management unit for PCIe
	MP5515	2.8	18	32	0.5 to 2	6.5	3 (Max)	0.8	QFN-30 (5x5)	Prog. high-efficiency, lossless energy storage and power backup management unit for SSD and HDD applications

Step-Up LNBs

	Part Number	V_{IN} (Min) (V)	V_{IN} (Max) (V)	Standard	I_{OUT} (Max) (A)	22kHz Tone Signal Generated	Package	Notes
	MP8124	8	14	DiSEqC 1.x	0.5	Int	QFN-14 (2x3)	Boost converter with internal switch, low-noise LDO output, line drop compensation, selectable V_{OUT} compensation, adjustable output SS
S	MP8128	8	14	DiSEqC 1.x and DiSEqC 2.x	1	Selectable Int or Ext	QFN-20 (3x3)	With I ² C interface, low-noise LDO output, selectable output voltage

Buck-Boost

	Part Number	V_{IN} (Min) (V)	V_{IN} (Max) (V)	I_{SW} Limit (Typ) (A)	I_Q (Typ) (mA)	V_{FB} (V)	f_{SW} (kHz)	Sync	Package	Notes
N	MP8860	2.8	22	1	1	-	500	✓	QFN-16 (3x3)	1A I_{OUT} , 4-switch buck-boost converter with I ² C interface
N	MP8862	2.8	22	2	1	-	500	✓	QFN-16 (3x3)	2A I_{OUT} , 4-switch buck-boost converter with I ² C interface
	MP2155	2	5.5	2.2	0.08	0.496	1000	✓	QFN-10 (3x3)	Power-save mode, load disconnect
N	MP28160	2.5	5.5	2.5	0.22	-	1800	✓	CSP-12 (1.4x1.8)	0.5A I_{OUT} , buck-boost converter, 3.3V fixed output voltage
	MP28163	2	5.5	2.9	0.07	0.496	1100	✓	QFN-10 (3x3)	Power-save mode, load disconnect
N	MP28167-A	2.8	22	3	1	1	Selectable: 500/750	✓	QFN-16 (3x3)	3A I_{OUT} , 4-switch, integrated buck-boost converter with FB pin, I ² C interface
N	MP28167	2.8	22	3	1	-	500	✓	QFN-16 (3x3)	3A I_{OUT} , 4-switch buck-boost converter, fixed output voltage options available
N	MP8859	2.8	22	3	1	-	500	✓	QFN-16 (3x3)	3A I_{OUT} , 4-switch buck-boost converter with I ² C interface
	MP28164	1.2	5.5	4.2	0.025	0.5	2000	✓	QFN-11 (2x3)	Power-save mode, load disconnect
S	MP4245	4	36	6	0.3	0.1/0.4/0.72/1.6	Selectable: 250/350/420	✓	QFN-21(4x5)	4-switch USB PD solution buck-boost converter, spread spec. sel., I ² C interface and 2-time prog. MTP
S	MP2980	5	36	Prog	0.07/0.055	Prog	Selectable: 200/300/400/600	✓	QFN-32 (4x4)	4-switch buck-boost controller with I ² C interface
S	MP2984	5	36	Prog	0.07/0.055	Prog	Selectable: 200/300/400/600	✓	QFN-32 (4x4)	USB Type-C PD buck-boost controller with I ² C int., <50mA steps cur. limit adj. through IPWM pin

LDO | DC/DC POWER CONVERSION

Part Number	V_{in} (Min) (V)	V_{in} (Max) (V)	I_{out} (mA)	I_q (Typ) (μ A)	Load Regulation (%)	PSRR @ 1kHz (dB)	V_{FB} (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
MP20056	2.5	5.5	250	150	0.003	63	0.8	100 (IO: 250mA)	QFN-8 (2x2), TSOT23-5	Fixed output, current limiting and thermal protection
MP20041	2.5	6	300 (2x)	114	0.003	65	-	75 (IO: 100mA) 220 (IO: 300mA)	QFN-8 (2x2)	Dual fixed output, P2P with RT9012
MP2002	1.35	6.5	500	100	0.001	26	0.5	290 (IO: 500mA)	QFN-8 (2x3)	Low-voltage input, power good
MP8904	2.5	6.5	500	100	0.001	26	0.496	300 (IO: 500mA)	QFN-8 (2x3)	Power good output, industrial grade
MP20045	2.5	5.5	1000	110	0.000	56	1.5	140 (IO: 1000mA)	QFN-8 (3x3), SOIC-8E	High input/output current with fast response, fixed and adj. +0252 output voltages
MP20051	2.5	5.5	1000	110	0.000	63	0.8	140 (IO: 1000mA)	QFN-8 (3x3)	Industrial grade
MP20046	2.7	5.5	2000	75	0.000	70	-	210 (IO: 2000mA)	SOIC-8E, QFN-10 (3x3)	High input/output current with fast response
MP20073	1.3	6	2000	-	-	-	-	-	MSOP-8E	DDR2/3 termination regulator
MP20075	1.3	3.6	3000	-	-	-	-	-	MSOP-8E	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)	QFN-8 (2x3), TSOT23-5	Ideal for automotive
MP2015A	2.5	24	150	3.3	0.005	41	1.215	700 (IO: 150mA)	TSOT23-4, QFN-6 (2x2), QFN-8 (3x3)	EN pin
MP2019	3	40	300	10	0.04	45	1.25	420 (IO: 300mA)	SOIC-8EP	Industrial grade
MP2014	3	40	500	10	0.03	45	-	750 (IO: 500mA)	TO252-5	Low I_q
MP2018	3	16	500	10	0.03	45	-	750 (IO: 500mA)	TO252-5	Low I_q , fixed output voltage, power good
MP2005	1	5.5	800	100	0.001	65	0.5	70 (IO: 800mA)	QFN-8 (2x3)	Fast transient, 48dB PSRR at 1MHz
MP2030	1.1	5	3000	220	0.001	32	0.5	150 (IO: 3000mA)	QFN-10 (3x3), QFN-32 (5x5)	Dual supply, fast transient, bias supply, power good, current limit, int. thermal protection

SUPERVISORY | DC/DC POWER CONVERSION

Part Number	V _{IN} (Min) (V)	V _{IN} (Max) (V)	I _Q (Typ) (µA)	Threshold Accuracy (%)	Reset Threshold Accuracy (%)	Delay Time (ms)	Package	Notes
MP6400	1.8	6	1.6	1	1	2.1 to 10000	QFN-10 (3x3)	Power-save mode, load disconnect
MPQ6411	4.8	5.2	-	-	-	-	QFN-10 (3x3)	Power-save mode, load disconnect
N MP6420	3.6	18	3	0.5	-	3000 to 4600	TSOT23-8	Battery protection IC for 2-3 series cell Li-ion with integrated protective MOSFET and PTC interface
N MP6412	2.2	12	1	-	-	-	QFN-10 (1.4x1.8)	Ultra-low I _Q load switch controller with reset timer

MOSFET DRIVERS | DC/DC POWER CONVERSION

Half-Bridge Gate Drivers

Part Number	V _{IN} (Min) (V)	V _{IN} (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	SOIC-8E	4A, high frequency
MP1906	10	16	80	0.35	1	50	30	80	80	SOIC-8	High performance
MP1907	4.5	18	100	1.5	2.5	12	9	18	20	QFN-10 (3x3)	2.5A, high frequency
MP18021A	9	18	100	1.5	2.5	12	9	16	16	SOIC-8E, QFN-8 (3x3)	2.5A, high frequency, industrial grade
MP18021	9	18	100	1.5	2.5	12	9	16	16	SOIC-8EP, QFN-8 (3x3)	High frequency, N-channel MOSFET with 1ns matching delay
S MP1909	4.5	12	50	2	4	10	6	110	30	SOT583	Low I _Q , support 100% duty, 30V, high frequency
MP1917	8	17	115	2.6	4.5	15	15	20	20	QFN-8 (4x4)	105V, 4A, high frequency
MP1917A	8	15	115	2.6	4.5	15	15	20	20	QFN-10 (4x4)	100V, 4A, high frequency

PMICS & MULTIPLE OUTPUTS | DC/DC POWER CONVERSION

Part Number	V _{IN} (Min) (V)	V _{IN} (Max) (V)	V _{OUT} (V)	V _{FET} (V)	I _{SW} Limit (Typ) (A)	f _{SW} (kHz)	Package	Notes
MP28300	2	5.5	Buck: 0.8/1.0/1.2/ 1.5/1.8/2.5/3.3 LDO: 1.3/1.8/3.3	-	0.6	1500	QFN-12 (2x2)	Ultra-low 500nA I _Q , 300mA buck + 100mA LDO, programmable V _{OUT} by CTRL, COT, PG
S MP28310	2	5.5	Buck: 1.2/1.5/1.8/ 2.5/2.8/3.0/3.3 LDO: 1.8/2.8/3.0	-	0.6	1500	CSP-12 (1.2x1.6)	Ultra-low 500nA I _Q , ultra-small package, 300mA buck + 100mA LDO, programmable V _{OUT} by CTRL, COT, PG
MP28301	2	5.5	Buck: 0.8/1.0/1.2/ 1.5/1.8/2.5/3.3 LDO: 1.2/2.5/3.0	-	1.2	1500	QFN-12 (2x2)	Ultra-low 500nA I _Q , 700mA buck + 100mA LDO, programmable V _{OUT} by CTRL, COT, PG
MP5408	6	36	5.1/5.17/5.3	-	Converter: 13 USB SW1: 3.45 USB SW2: 2.75	Prog	QFN-26 (5x5)	Integrated, smart, dual USB charging ports, auto-detect, supports USB type-C 5V at 3A DFP mode

PMICS & MULTIPLE OUTPUTS | DC/DC POWER CONVERSION

Part Number	V_{IN} (Min) (V)	V_{IN} (Max) (V)	V_{OUT} (V)	V_{FB} (V)	I_{SW} Limit (Typ) (A)	f_{SW} (MHz)	Package	Notes
MP5403	2.7	6	Ch 1: 0.9/1.1/2.5/2.85 Ch 2: 0.9/1.2/1.8/2.5	0.6	Ch 1: 5.6 Ch 2: 4.7	1500	UTQFN-20 (2.5x3)	Configurable mini PMIC, two buck converters (2.5A/3.5A) + one load switch (3A)
MP5403B	2.7	6	0.6V to 6V	0.6	Ch 1: 8.5 Ch 2: 7	1500	UTQFN-20 (2.5x3)	Mini PMIC, dual peak buck (4A/5A) + one load switch (2A)
MP5416	2.8	5.5	Prog	Prog	Prog	Prog	QFN-28 (4x4)	I ² C bus and one-time programmable (OTP) function, programmable $V_{OUT}/f_{SW}/I_{SW}$ via I ² C/OTP, configurable mini PMIC, four buck converters (4.5A/4A/2.5A/2A) + four 300mA LDOs and one 10mA RTC LDO
N MP5418	2.3	5	V_{OUT1} : 0 to $-V_{IN}$ V_{OUT2} : 0V to $-C_{TL}$	-	1	30 to 550	QFN-10 (1.4x1.8)	Negative charge pump + an adjustable negative regulator
N MP5470	4	16	0.55 to 7	Prog	Prog	800	QFN-22 (3x4)	I ² C interface, four buck converters, parallel mode for higher current, one GPIO pin
S MP5417	2.8	5.5	Prog	Prog	Ch 1/3: 4 Ch 2/4: 2	Prog	QFN-28 (4x4)	I ² C bus and one-time programmable (OTP) function, programmable $V_{OUT}/f_{SW}/I_{SW}$ via I ² C/OTP, four buck converters + two LDOs + two GPIO pins
S MP5413	2.7	5.5	Prog	Prog	Prog	Prog	WLCSP-38 (2.7x3.1)	Ultra-small package, sleep mode control, I ² C bus and one-time programmable (OTP) function, programmable $V_{OUT}/f_{SW}/I_{SW}$ via I ² C/OTP, four buck converters + two LDOs + two GPIO pins
N MP5461	V_{IN1} : 4.2V V_{IN2} : 2.5V	V_{IN1} : 22V V_{IN2} : 5.5V	3.3	-	2.5	1800	CSP-12 (1.4x1.8)	Dual-input 0-ring switches, power path selection input/indication, fast SCP on OR_{OUT} , fast reverse block within 2 μ s on OR_{OUT} , output OVP for buck-boost converter
N MP5423	25	100	14/5/3.3	-	0.65	200	SOIC8-EP	One 300mA buck converter + two LDOs (100mA/40mA)
S MP5424	2.7	5.5	2.7 to 5.5	Prog	LDO: 0.43/ 0.8 Ch 1/3: 4.5 Ch 2/4: 4.4	1100	QFN-26 (3.5x4.5)	I ² C bus and multiple-time programmable (MTP) function, programmable V_{OUT} via I ² C/MTP, configurable mini PMIC, four buck converters (2A/2.5A/4.5A/4.5A) + three LDOs (0.3A) + one load switch (3A), power-on reset output
N MP5415	3.6	5.5	0.6 to 2.18 (V_{OUT} 1/3) 0.8 to 3.9 (V_{OUT} 2/4)	V_{FB1} : 1.4 V_{FB2} : 1.5 V_{FB4} : 3.3	Ch 1/2/3: 1 Ch 2: 2	Prog	QFN-28 (4x4)	Four bucks (1A, 1A, 1A, 2A), + four 300mA LDOs, one 10mA RTC LDO, I ² C interface, OTP, flexible system programming features
S MP8855	2.7	22	Buck-Boost: 0.6 to 22 Buck: 0.6 to V_{IN} Boost (3x3) 3.7 to 22 Boost (3x4) 2.7 to 22	Prog	7.5	1000	QFN-21 (4x4)	Five-topology selection by PSEL pin, (1 buck-boost, 2 bucks, 1 interleaving buck, 1 interleaving boost, 1 buck + 1 boost), MTP-programmable parameters
S MPQ7920-AEC1	2.7	5.5	0.4 to 3.5875 or V_{IN}	V_{FB1} : 1.375 V_{FB2} : 1.35 V_{FB3} : 1.375 V_{FB4} : 0.675	Ch 1: 4.5 Ch 2: 2.5 Ch 3: 4.5 Ch 4: 2	Adj	QFN-26 (3.5x4.5)	Buck converters, RTC dedicated LDO, four low-noise LDOs, I ² C interface, 2-time programmable MTP
S MP5479	2.7	5.5	0.4V to 3.5875V or V_{IN}	V_{FB1} : 1.375 V_{FB2} : 1.35 V_{FB3} : 1.375 V_{FB4} : 0.675	Ch 1: 4.5 Ch 2: 2.5 Ch 3: 4.5 Ch 4: 2	Adj	QFN-26 (3.5x4.5)	Four buck and five LDO, flexible system settings via I ² C and MTP

FLYBACK | DC/DC POWER CONVERSION

Part Number	V_{IN} (Min) (V)	V_{IN} (Max) (V)	I_{SW} Limit (Typ) (A)	I_a (Typ) (mA)	V_{FB} (V)	f_{sw} (MHz)	Package	Notes
MP6004	14	80	2.05	0.38	1.99	10 to 200	QFN-14 (3x3)	13W, integrated 180V power switch
S MP6005	8	80	$0.8V \times 160mV / R_{SENSE}$	0.45	2	250	MSOP-10	Flyback/forward controller with PSR or SSR, 2A gate and 0.8A sync drivers
MP6001	10	100	2	1	1.21	-	SOIC-8E	15W, integrated 150V power switch
MP6002	10	100	4	1	1.21	-	SOIC-8E	30W, integrated 150V power switch

FULLY INTEGRATED POE PD SOLUTIONS | DC/DC POWER CONVERSION

Part Number	Pass Device	Current Limit (mA)	Thermal Protection	IEEE Detection & Classification	Package	Notes
MP8004	100V, 1 Ω DrMOS	420	✓	802.3af	QFN-20 (4x6)	13W PoE PD interface and PWM converter
MP8007	100V, 0.48 Ω DrMOS	840	✓	802.3af	QFN-28 (4x5)	13W primary-side regulated flyback without optocoupler feedback, 200kHz f_{sw}
MP8008	100V, 0.48 Ω DrMOS	840	✓	802.3af/at	QFN-28 (4x5)	25.5W PoE PD interface and peak-current mode flyback controller
S MP8009	100V, 0.48 Ω DrMOS	840	✓	802.3af/at	QFN-28 (4x5)	PD interface and PSR/SSR controller
N MP8007H	100V, 0.48 Ω DrMOS	840	✓	802.3af	QFN-28 (4x5)	13W primary-side regulated flyback without optocoupler feedback, 300kHz f_{sw}

DC/DC CONTROLLERS FOR POE | DC/DC POWER CONVERSION

Part Number	V_{IN} (Min) (V)	V_{IN} (Max) (V)	I_{SW} Limit (Typ) (A)	I_a (Typ) (mA)	V_{FB} (V)	f_{sw} (MHz)	Package	Notes
MP3900	8.6	12	$0.2V / R_{SENSE}$	0.18	0.816	330	MSOP-8	Boost controller, 10V gate driver
MP6001	10	100	2	-	-	55 to 550	SOIC-8E	15W, integrated 150V power switch
MP6002	10	100	4	1	1.21	55 to 550	SOIC-8E	30W, integrated 150V power switch
MP6004	14	80	2.05	0.38	1.99	10 to 200	QFN-14 (3x3)	13W, integrated 180V power switch
S MP6005	8	80	$0.8V \times 160mV / R_{SENSE}$	0.45	2	250	MSOP-10	Flyback/forward controller with PSR or SSR, 2A gate and 0.8A sync drivers

POE PSE CONTROLLERS | DC/DC POWER CONVERSION

Part Number	V_{IN} (Min) (V)	V_{IN} (Max) (V)	ICUT	ILIM	PoE Standards Supported	FET	MPS Method	Pair Control	Operating Temperature Range (°C)	Number of PSE Ports	Package	Notes
S MP3924	44	57	Prog	Prog	802.3af/at	-	DC Disconnect	-	-40 to +125	4	QFN-32 (5x5)	Power over Ethernet, automatic mode and I ² C command control mode

POE PD IDENTITY | DC/DC POWER CONVERSION

Part Number	Pass Device	Current Limit (mA)	Thermal Protection	IEEE Detection & Classification	Package	Notes
MP8003A	100V, 0.48Ω DrMOS	840	✓	802.3af/at	QFN-10 (3x3)	25.5W PoE PD controller
MP8001	100V, 0.8Ω DrMOS	420	✓	802.3af	SOIC-8	15W PoE PD controller

DIGITAL REGULATORS | DC/DC POWER CONVERSION

	Part Number	V _{IN} (Min) (V)	V _{IN} (Max) (V)	I _{OUT} (mA)	I _D (Typ) (mA)	V _{FB} (Typ) (V)	f _{SW} (MHz)	Power Good	External Soft Start	Light-Load Efficiency	Sync Rectification	Constant-On-Time (COT)	Package	Notes
S	MP8833	2.7	5.5	1.5	1	2.5	Prog	-	✓	-	-	-	QFN-16 (2x3)	I ² C interface, TEC current monitor, external sync function
	MP8843	2.6	6	3	0.06	0.6	1000 to 2000	✓	✓	✓	✓	-	QFN-12 (2x2)	Prog. V _{OUT} , power-save mode
N	MP8854	2.85	18	4	0.42	0.72	500 to 1250	✓	✓	✓	✓	✓	QFN-14 (3x4)	I ² C prog. FB range, integrated telemetry, accurate output voltage/current, readback via I ² C
	MP8861	2.85	18	6	0.42	0.72	500 to 1250	✓	✓	✓	✓	✓	QFN-14 (3x4)	
	MP8864	4.5	21	4	0.5	0.6	1600	✓	✓	✓	✓	-	QFN-15 (3x3)	Prog. V _{OUT} , power-save mode
	MP8846	4.5	8	6	0.5	0.6	1600	✓	✓	✓	✓	-	QFN-15 (3x3)	
	MP8847	2.7	6	6	0.3	0.6	850 to 2200	✓	-	✓	✓	-	QFN-14 (2x3)	
	MP8865	4.5	21	6	0.5	0.6	1600	✓	✓	✓	✓	-	QFN-15 (3x3)	Prog. V _{OUT} , power-save mode
	MP8867	4.5	17	8	0.56	0.6	1500	✓	✓	✓	✓	-	QFN-14 (3x4)	
	MP8868	4.5	17	10	0.56	0.6	1500	✓	✓	✓	✓	-	QFN-14 (3x4)	
	MP8869S	2.85	18	12	0.42	0.72	500 to 1250	✓	✓	✓	✓	✓	QFN-14 (3x4)	V _{OUT} adjustable up to 5.5V with FB pin, integrated telemetry, accurate output voltage/current, readback via I ² C

MPM POWER MODULES | POWER MODULES

Step-Down

 $[V_{IN} \text{ Max} \leq 6V]$

Part Number	I_{OUT} (A)	V_{IN} (V)	I_O (µA)	Light-Load Efficiency	Power Good	I ² C Interface	Soft Start	Protection Features (OCP/SCP/UVLO/OTP)	Package	Notes
MPM3804	0.6	2.3 to 5.5	11	✓	✓	-	Internal	✓	QFN-10 (2x2x0.9)	Adjustable V_{OUT} , excellent load and line regulation
MPM3804-12	0.6	2.3 to 5.5	11	✓	✓	-	Internal	✓	QFN-10 (2x2x0.9)	1.2V fixed V_{OUT} , sync, ultra-small QFN package
MPM3804-18	0.6	2.3 to 5.5	11	✓	✓	-	Internal	✓	QFN-10 (2x2x0.9)	1.8V fixed V_{OUT} , sync, ultra-small QFN package
MPM3804-25	0.6	2.3 to 5.5	11	✓	✓	-	Internal	✓	QFN-10 (2x2x0.9)	2.5V fixed V_{OUT} , sync, ultra-small QFN package
MPM3804-33	0.6	2.3 to 5.5	11	✓	✓	-	Internal	✓	QFN-10 (2x2x0.9)	3.3V fixed V_{OUT} , sync, ultra-small QFN package
MPM3805	0.6	2.5 to 6	17	✓	✓	-	Internal	✓	QFN-12 (3x2.5x0.9)	Ultra-low I_O , adjustable V_{OUT}
MPM3805-12	0.6	2.5 to 6	17	✓	✓	-	Internal	✓	QFN-12 (3x2.5x0.9)	Ultra-low I_O , 1.2V fixed V_{OUT}
MPM3805-18	0.6	2.5 to 6	17	✓	✓	-	Internal	✓	QFN-12 (3x2.5x0.9)	Ultra-low I_O , 1.8V fixed V_{OUT}
MPM3805-25	0.6	2.5 to 6	17	✓	✓	-	Internal	✓	QFN-12 (3x2.5x0.9)	Ultra-low I_O , 2.5V fixed V_{OUT}
MPM3805-33	0.6	2.5 to 6	17	✓	✓	-	Internal	✓	QFN-12 (3x2.5x0.9)	Ultra-low I_O , 3.3V fixed V_{OUT}
N MPM3811	1	2.3 to 5.5	340	✓	-	-	Internal	✓	QFN-10 (2x2x1.6)	Peak 1.2A, sync, ultra-small QFN package, excellent load and line regulation
MPM3810	1.2	2.5 to 6	17	✓	✓	-	Internal	✓	QFN-12 (3x2.5x0.9)	Ultra-low I_O , adjustable V_{OUT}
MPM3810-12	1.2	2.5 to 6	17	✓	✓	-	Internal	✓	QFN-12 (3x2.5x0.9)	Ultra-low I_O , 1.2V fixed V_{OUT}
MPM3810-18	1.2	2.5 to 6	17	✓	✓	-	Internal	✓	QFN-12 (3x2.5x0.9)	Ultra-low I_O , 1.8V fixed V_{OUT}
MPM3810-25	1.2	2.5 to 6	17	✓	✓	-	Internal	✓	QFN-12 (3x2.5x0.9)	Ultra-low I_O , 2.5V fixed V_{OUT}
MPM3810-33	1.2	2.5 to 6	17	✓	✓	-	Internal	✓	QFN-12 (3x2.5x0.9)	Ultra-low I_O , 3.3V fixed V_{OUT}
N MPM3822C	2	2.7 to 6	500	✓	-	-	Internal	✓	QFN-18 (2.5x3.5x1.6)	Ultra-low ripple, sync, adjustable output from 0.6V, forced CCM
MPM3820	2	2.7 to 6	40	✓	✓	-	Internal	✓	QFN-20 (3x5)	Adjustable output from 0.6V, ultra-low I_O
MPM3830	3	2.7 to 6	40	✓	✓	-	Internal	✓	QFN-20 (3x5x1.6)	High light-load efficiency
N MPM3833C	3	2.7 to 6	500	✓	-	-	Internal	✓	QFN-18 (2.5x3.5x1.6)	Ultra-low ripple, sync, adjustable output from 0.6V, forced CCM
MPM3840	4	2.8 to 5.5	40	✓	✓	-	Internal	-	QFN-20 (3x5x1.6)	Light-load efficiency, 100% duty cycle, low I_O
N MPM3860	6	2.75 to 7	100	✓	-	-	Internal/External	✓	QFN-24 (4x6x1.6)	Sync, adjustable output from 0.6V, forced CCM

Step-Down

 $[6V < V_{IN} \text{ Max} \leq 24V]$

MPM3606	0.6	4.5 to 21	200	✓	-	-	Internal	✓	QFN-20 (3x5x1.6)	Output adjustable from 0.8V, fast transient response
MPM3606A	0.6	4.5 to 21	300	✓	✓	-	Internal	✓	QFN-20 (3x5x1.6)	Power good, power-save mode at light load, output adjustable from 0.8V
MPM3610	1.2	4.5 to 21	200	✓	-	-	Internal	✓	QFN-20 (3x5x1.6)	Output adjustable from 0.8V, low I_O
MPM3610A	1.2	4.5 to 21	200	✓	✓	-	Internal	✓	QFN-20 (3x5x1.6)	Output adjustable from 0.8V, low I_O , power good
MPM3620	2	4.5 to 24	200	✓	-	-	Internal	✓	QFN-20 (3x5x1.6)	Adjustable output from 0.8V
MPM3620A	2	4.5 to 24	200	✓	✓	-	Internal	✓	QFN-20 (3x5x1.6)	Power good, adjustable output from 0.8V

MPM POWER MODULES | POWER MODULES

Step-Down ($6V < V_{IN} \text{ Max} \leq 24V$)

	Part Number	I_{OUT} (A)	V_{IN} (V)	I_o (μ A)	Light-Load Efficiency	Power Good	I ² C Interface	Soft Start	Protection Features (OCP/SCP/UVLO/OTP)	Package	Notes
N	MPM3632C	3	4 to 18	1200	-	✓	-	Internal	✓	QFN-20 (3x5x1.6)	Sync, output adjustable from 0.8V, forced CCM
S	MPM3650	5	2.75 to 17	110	-	✓	-	Internal/External	✓	QFN-24 (4x6x1.6)	Sync, adjustable output from 0.6V, high efficiency, ultra-thin
N	MPM3683-7	8	2.7 to 16	650	✓	✓	-	Internal	✓	QFN-28 (7x7x4)	Peak 10A, ultra-low ripple, ultra-fast transient response
N	MPM3695-10	10	3.3 to 14	-	-	✓	✓	Internal	✓	LGA (8x8x2)	10A continuous I_{OUT} , 0.5V to 5V output, parallel up to 60A peak, ultra-thin
	MPM3682	10	2.5 to 18	860	✓	✓	-	Internal/External	✓	QFN-57 (12x12x4)	Programmable f_{sw} , output adjustable from 0.65V to 5V
	MPM3684	15	2.5 to 18	860	✓	✓	-	Internal/External	✓	QFN-65 (12x15x4)	Programmable f_{sw}
N	MPM3695-25	20	3 to 16	-	-	✓	✓	Internal	✓	QFN-59 (10x12x4)	Peak 25A, 0.5V to 5.5V output, parallel up to 50A peak
	MPM3686	20	2.5 to 18	860	✓	✓	-	Internal/External	✓	QFN-65 (12x15x4)	Programmable f_{sw}
S	MPM3695-100	100	3 to 16	-	-	✓	✓	Internal	✓	BGA (15x30x5.2)	0.5V to 3.3V output range, parallel up to 800A

Step-Down ($24V < V_{IN} \text{ Max} \leq 36V$)

	MPM3506A	0.6	4.5 to 36	580	-	✓	-	Internal	✓	QFN-19 (3x5x1.6)	36V/0.6A, output adjustable from 0.8V
	MPM3510A	1.2	4.5 to 36	580	-	✓	-	Internal	✓	QFN-19 (3x5x1.6)	36V/1.2A, high voltage, output adjustable from 0.8V
S	MPM3520E	2	4 to 36	700	-	✓	-	Internal	✓	LGA-8 (10x10x4.2)	36V/2A, metcal can power module, ultra-low EMI, output adjustable from 1.0V to 5.0V
N	MPM3550E	5	4 to 36	450	✓	✓	-	Internal	✓	LGA-18 (12x12x4.2)	36V/5A, metcal can power module, ultra-low EMI, output adjustable from 1.0V to 12.0V

Step-Down ($V_{IN} \text{ Max} > 36V$)

N	MPM3570E	0.3	4.5 to 75	30	✓	✓	-	Internal	✓	LGA-8 (10x10x4.2)	75V/0.3A, metcal can power module, ultra-low EMI, V_{OUT} adjustable from 1.0V to 5.0V
S	MPM3593	3	3.5 to 45	11	✓	✓	✓	Internal	✓	QFN-41 (6x8x1.6)	45V/3A, high efficiency, I ² C interface, synchronous buck, OTP
N	MPM3530	3	4.5 to 55	450	✓	✓	-	External	✓	QFN-44 (12x10x4)	55V/3A continuous output, programmable f_{sw} with external sync function

Step-Down Multiple Output ($V_{IN} \text{ Max} \leq 45$)

	Part Number	I_{OUT} (A)	# of Outputs	V_{IN} (V)	I_o (μ A)	Light-Load Efficiency	Power Good	I ² C Interface	Soft Start	Protection Features (OCP/SCP/UVLO/OTP)	Package	Notes
	MPM38111	Dual 1A	2	2.7 to 6	45	✓	-	-	Internal	✓	QFN-14 (4x4x1.6)	Ultra-low I_o
	MPM38222	Dual 2A	2	2.7 to 6	45	✓	-	-	Internal	✓	QFN-14 (4x4x1.6)	Ultra-low I_o
S	MPM3596	Dual 3A	2	3.5 to 45	50	-	-	✓	Internal	✓	QFN-45 (10x10x4)	Single 6A I_{OUT} , parallel operation up to 36A
N	MPM54304	Quad 3A	4	4 to 16	1500	-	-	✓	Internal	✓	LGA-33 (7x7x2)	MTP programmable

MPM POWER MODULES | POWER MODULES

Step-Up/Down & Step-Up (V_{IN} Max \leq 22V)

Part Number	Converter Type	I_{OUT} (A)	V_{IN} (V)	I_o (μ A)	Power Good	I ² C Interface	Soft Start	Protection Features (OCP/SCP/UVP/LO/OTP)	Package	Notes
S MPM4106	Boost	0.6	1.8V to 5.5V	29	-	-	Internal	✓	QFN-13 (2.2x2.6x1.6)	High efficiency, 1MHz f_{SW} internal compensation
S MPM4330	Boost	3	2.7V to 22V	4mA	✓	✓	Internal	✓	LGA-51 (8x14)	High efficiency
S MPM4730	Buck-Boost	5	3.0V to 22V	150mA	✓	✓	Internal	✓	LGA-51 (8x14)	High efficiency

mEZ POWER MODULES | POWER MODULES

Boost (V_{IN} Max < 6V)

Part Number	I_{OUT} (A)	V_{IN} (V)	V_{OUT} (V)	Light-Load Efficiency	Power Good	Soft Start	Protection Features (OCP/SCP/UVP/LO/OTP)	Package	Notes
mEZD41501A-A	1	2.7 to 4.2	5	-	-	Int	OTP	SiP-6 (27x20)	600kHz, high efficiency
mEZD41502A-A	2	2.7 to 4.2	5	-	-	Int	OTP	SiP-6 (27x20)	High efficiency
mEZD41503A-A	3	2.7 to 4.2	5	-	-	Int	OTP	SiP-6 (27x20)	High efficiency

Boost (V_{IN} Max \geq 6V)

mEZD41501A-B	1	2.7 to 10	12	-	-	Int	OTP	SiP-6 (27x20)	600kHz, high efficiency
mEZD41501A-C	1	2.7 to 13	15	-	-	Int	OTP	SiP-6 (27x20)	600kHz, high efficiency
mEZD41502A-B	2	2.7 to 10	12	-	-	Int	OTP	SiP-6 (27x20)	600kHz, high efficiency
mEZD41502A-C	2	3.4 to 13	15	-	-	Int	OTP	SiP-6 (27x20)	600kHz, high efficiency
mEZD41503A-B	3	2.7 to 10	12	-	-	Int	OTP	SiP-6 (27x20)	600kHz, high efficiency

Buck Buck (V_{IN} Max \leq 24V)

mEZD71201A-A	1	4.5 to 24	1	-	-	Int	OCP, OTP, OVP/UVP, SCP, Hiccup	SiP-3 (10x20)	400kHz f_{SW}
mEZD71201A-B	1	4.5 to 24	1.2	-	-	Int	OCP, OTP, OVP/UVP, SCP, Hiccup	SiP-3 (10x20)	400kHz f_{SW}
mEZD71201A-C	1	4.5 to 24	1.5	-	-	Int	OCP, OTP, OVP/UVP, SCP, Hiccup	SiP-3 (10x20)	400kHz f_{SW}
mEZD71201A-D	1	4.5 to 24	1.8	-	-	Int	OCP, OTP, OVP/UVP, SCP, Hiccup	SiP-3 (10x20)	400kHz f_{SW}
mEZD71201A-E	1	4.5 to 24	2.5	-	-	Int	OCP, OTP, OVP/UVP, SCP, Hiccup	SiP-3 (10x20)	400kHz f_{SW}
mEZD71201A-F	1	4.5 to 24	3.3	-	-	Int	OCP, OTP, OVP/UVP, SCP, Hiccup	SiP-3 (10x20)	400kHz f_{SW}
mEZD71201A-G	1	6.5 to 24	5	-	-	Int	OCP, OTP, OVP/UVP, SCP, Hiccup	SiP-3 (10x20)	400kHz f_{SW}
mEZD71202A-A	2	4.5 to 24	1	-	-	Int	OCP, OTP, OVP/UVP, SCP, Hiccup	SiP-3 (10x20)	400kHz f_{SW}

mEZD POWER MODULES | POWER MODULES

Buck (V_{IN} Max ≤ 24V)

Part Number	I _{OUT} (A)	V _{IN} (V)	V _{OUT} (V)	Light-Load Efficiency	Power Good	Soft Start	Protection Features (OCP/SCP/UV/LU/OTP)	Package	Notes
mEZD71202A-B	2	4.5 to 24	1.2	-	-	Int	OCP, OTP, OVP/UV, SCP, Hiccup	SiP-3 (10x20)	400kHz f _{SW}
mEZD71202A-C	2	4.5 to 24	1.5	-	-	Int	OCP, OTP, OVP/UV, SCP, Hiccup	SiP-3 (10x20)	400kHz f _{SW}
mEZD71202A-D	2	4.5 to 24	1.8	-	-	Int	OCP, OTP, OVP/UV, SCP, Hiccup	SiP-3 (10x20)	400kHz f _{SW}
mEZD71202A-E	2	4.5 to 24	2.5	-	-	Int	OCP, OTP, OVP/UV, SCP, Hiccup	SiP-3 (10x20)	400kHz f _{SW}
mEZD71202A-F	2	4.5 to 24	3.3	-	-	Int	OCP, OTP, OVP/UV, SCP, Hiccup	SiP-3 (10x20)	400kHz f _{SW}
mEZD71202A-G	2	6.5 to 24	5	-	-	Int	OCP, OTP, OVP/UV, SCP, Hiccup	SiP-3 (10x20)	400kHz f _{SW}
mEZD71203A-A	3	5 to 16	1	-	-	Int	OCP, OTP, OVP/UV, SCP, Hiccup	SiP-3 (10x20)	400kHz f _{SW}
mEZD71203A-B	3	5 to 16	1.2	-	-	Int	OCP, OTP, OVP/UV, SCP, Hiccup	SiP-3 (10x20)	400kHz f _{SW}
mEZD71203A-C	3	5 to 16	1.5	-	-	Int	OCP, OTP, OVP/UV, SCP, Hiccup	SiP-3 (10x20)	400kHz f _{SW}
mEZD71203A-D	3	5 to 16	1.8	-	-	Int	OCP, OTP, OVP/UV, SCP, Hiccup	SiP-3 (10x20)	400kHz f _{SW}
mEZD71203A-E	3	5 to 16	2.5	-	-	Int	OCP, OTP, OVP/UV, SCP, Hiccup	SiP-3 (10x20)	400kHz f _{SW}
mEZD71203A-F	3	5 to 16	3.3	-	-	Int	OCP, OTP, OVP/UV, SCP, Hiccup	SiP-3 (10x20)	400kHz f _{SW}
mEZD71210A-A	10	4.5 to 17	1	-	✓	Int	OCP, OTP, SCP	SiP-10 (27x20)	400kHz f _{SW}
N mEZD81260A	60	5 to 16	6.5	-	✓	Int	OVP, UV, OCP, OTP Protection	LGA-28 (25x15.5)	Digital sync, open-frame module

Buck (24 < V_{IN} Max ≤ 36V)

mEZD72401A-A	1	4.5 to 36	1	-	-	Int	OCP, OTP, OVP/UV, SCP, Hiccup	SiP-3 (10x20)	400kHz f _{SW}
mEZD72401A-B	1	4.5 to 36	1.2	-	-	Int	OCP, OTP, OVP/UV, SCP, Hiccup	SiP-3 (10x20)	400kHz f _{SW}
mEZD72401A-C	1	4.5 to 36	1.5	-	-	Int	OCP, OTP, OVP/UV, SCP, Hiccup	SiP-3 (10x20)	400kHz f _{SW}
mEZD72401A-D	1	4.5 to 36	1.8	-	-	Int	OCP, OTP, OVP/UV, SCP, Hiccup	SiP-3 (10x20)	400kHz f _{SW}
mEZD72401A-E	1	4.5 to 36	2.5	-	-	Int	OCP, OTP, OVP/UV, SCP, Hiccup	SiP-3 (10x20)	400kHz f _{SW}
mEZD72401A-F	1	4.5 to 36	3.3	-	-	Int	OCP, OTP, OVP/UV, SCP, Hiccup	SiP-3 (10x20)	400kHz f _{SW}
mEZD72401A-G	1	4.5 to 36	5	-	-	Int	OCP, OTP, OVP/UV, SCP, Hiccup	SiP-3 (10x20)	400kHz f _{SW}
mEZD72401A-H	1	6.5 to 36	12	-	-	Int	OCP, OTP, OVP/UV, SCP, Hiccup	SiP-3 (10x20)	400kHz f _{SW}
mEZD72402A-A	2	4.5 to 36	1	-	-	Int	OCP, OTP, OVP/UV, SCP, Hiccup	SiP-3 (10x20)	400kHz f _{SW}

mEZ POWER MODULES | POWER MODULES

Buck ($24 < V_{IN} \text{ Max} \leq 36V$)

Part Number	I_{OUT} (A)	V_{IN} (V)	V_{OUT} (V)	Light-Load Efficiency	Power Good	Soft Start	Protection Features (OCP/SCP/UVLO/OTP)	Package	Notes
mEZD72402A-B	2	4.5 to 36	1.2	-	-	Int	OCP, OTP, OVP/UVP, SCP, Hiccup	SiP-3 (10x20)	400kHz f_{SW}
mEZD72402A-C	2	4.5 to 36	1.5	-	-	Int	OCP, OTP, OVP/UVP, SCP, Hiccup	SiP-3 (10x20)	400kHz f_{SW}
mEZD72402A-D	2	4.5 to 36	1.8	-	-	Int	OCP, OTP, OVP/UVP, SCP, Hiccup	SiP-3 (10x20)	400kHz f_{SW}
mEZD72402A-E	2	4.5 to 36	2.5	-	-	Int	OCP, OTP, OVP/UVP, SCP, Hiccup	SiP-3 (10x20)	400kHz f_{SW}
mEZD72402A-F	2	4.5 to 36	3.3	-	-	Int	OCP, OTP, OVP/UVP, SCP, Hiccup	SiP-3 (10x20)	400kHz f_{SW}
mEZD72402A-G	2	6.5 to 36	5	-	-	Int	OCP, OTP, OVP/UVP, SCP, Hiccup	SiP-3 (10x20)	400kHz f_{SW}
N mEZS91202A	2.5	7 to 36	5	-	-	Int	OCP, OTP	SiP-4 (13x45)	USB charger, efficiency up to 95%
N mEZDPD3603A	3	4.5 to 36	0.6 to 12	✓	✓	Int	OTP, SCP	LGA (15x15)	DC/DC power supply with PMBus
N mEZDPD3603AS	3	4.5 to 36	0.6 to 12	✓	✓	Int	OTP, SCP	DIP (16x23)	DC/DC power supply with PMBus
N mEZDPD4506A	6	4 to 45	0.6 to 22	✓	✓	Int	OCP, OTP, OVP/UVP, SCP	DIP (8.8x18.8)	DC/DC power supply with PMBus
N mEZDPD4506AS	6	4 to 45	0.6 to 22	✓	✓	Int	OCP, OTP, OVP/UVP, SCP	LGA (10x10)	DC/DC power supply with PMBus
N mEZDPD1620A	20	4 to 16	0.6 to 5.5	✓	✓	Int	OCP, OTP, OVP/UVP, SCP	DIP (16x23)	Peak 25A, DC/DC power supply with PMBus

Buck ($V_{IN} \text{ Max} > 36V$)

mEZDPD1620AS	20	4 to 16	0.6 to 5.5	✓	✓	Int	OCP, OTP, OVP/UVP, SCP	DIP (16x23)	Peak 25A, DC/DC power supply with PMBus
mEZD74800A-A	0.3	4.5 to 75	3.3	-	-	Int	OCP, OTP, SCP, Hiccup	SiP-3 (10x20)	Low EMI
mEZD74800A-B	0.3	4.5 to 75	5	-	-	Int	OCP, OTP, SCP, Hiccup	SiP-3 (10x20)	Low EMI
N mEZD74003L-ADJ	3	5 to 45	1.23 to 15	✓	-	Int	UVLO, OCP, OTP, OVP	LGA (11x15)	Available in fixed output voltages of 3.3V, 5V, 12V, with integrated inductor
N mEZD94003A-ADJ	3	5 to 45	1.23 to 15	✓	-	Int	UVLO, OCP, OTP, OVP	LGA (11x15)	Available in fixed output voltages of 3.3V, 5V, 12V, without integrated inductor
PoE									
N mEZS84801A	1	37 to 57	12	-	✓	Int	OCP, OTP, OVP	SiP-20 (45x39)	12W, IEEE 802.3af-compliant PoE-powered device
USB									
N mEZS91202A	2.5	7 to 36	5	-	-	Int	SCP, OTP, OCP	(31x13.28)	High-efficiency USB charger

REGULATORS | AUTOMOTIVE

Buck Regulators 5V to 6V Secondary Synchronous Buck

	Part Number	V _{IN} (Min) (V)	V _{IN} (Max) (V)	I _{OUT} (A)	I _{SW} Limit (Typ) (A)	I _O (Typ) (µA)	V _{FB} (V)	f _{SW} (kHz)	R _{DS(on)} (mΩ)	Fixed Output Versions (V)	Soft Start	External Sync	Forced CCM	AAM	COI Control	Fixed Frequency	Wideband Flank QFN Option	Package	Notes
N	MPM3805A-AEC1	2.6	6	0.6	1	17	0.6	3500	120/70	1.2, 1.8	Int	-	✓	-	✓	-	✓	QFN-12 (2.5x3.0x0.9)	Module with integrated inductor
	MPQ2171-AEC1	2.5	5.5	1	4.5	-	0.6	2800	80/40	-	Int	-	✓	-	✓	-	-	TSOT23-8	Output discharge, 100% duty cycle
N	MPM3810A-AEC1	2.6	6	1.2	2.1	17	0.6	3500	120/70	1.2, 1.8	Int	-	✓	-	✓	-	✓	QFN-12 (2.5x3.0x0.9)	Module with integrated inductor
	MPQ2172-AEC1	2.5	5.5	2	4.5	-	0.6	2800	80/40	-	Int	-	✓	-	✓	-	-	TSOT23-8	Output discharge, 100% duty cycle
	MPQ2169-AEC1	2.7	6	1.4 + 1.4	2	60	0.6	350 to 3000	55/20	-	Ext	✓	✓	✓	-	✓	✓	QFN-18 (2.5x3.5)	Dual outputs of 1.4A/1.4A or 0.8A/2A, 100% duty cycle operation
	MPQ2143-AEC1	2.5	5.5	3	4.8	40	0.6	1200	80/40	-	Int	✓	-	✓	✓	-	-	TSOT23-8	Output discharge, 100% duty cycle
N	MPQ2124-AEC1	2.7	6	3	6.7	42	0.6	300 to 2200	35/25	-	Ext	-	✓	✓	-	✓	✓	QFN-11 (2x3)	100% duty cycle
	MPQ2166-AEC1	2.7	6	2+2	2	60	0.6	350 to 3000	55/20	-	Ext	✓	✓	✓	-	✓	✓	QFN-18 (2.5x3.5), QFN-18 (2x3)	Dual outputs of 2A/2A or 1A/3A, 100% duty cycle operation
N	MPQ2167-AEC1	2.7	6	4	6.7	42	0.6	300 to 2200	35/25	-	Ext	-	✓	✓	-	✓	-	QFN-11 (2x3)	100% duty cycle
N	MPQ2167B-AEC1	2.7	6	4	6.7	42	0.6	300 to 2200	35/25	-	Ext	✓	✓	✓	-	✓	✓	QFN-11 (2x3)	100% duty cycle
N	MPQ2167A-AEC1	2.7	6	6	9	42	0.6	300 to 2200	35/25	-	Ext	✓	✓	✓	-	✓	✓	QFN-14 (3x3)	100% duty cycle

Buck Regulators 36V to 45V Primary Synchronous Buck

	Part Number	V _{IN} (Min) (V)	V _{IN} (ABS Max)	I _{OUT} (A)	I _{SW} Limit (Typ) (A)	I _O (Typ) (µA)	V _{FB} (V)	f _{SW} (kHz)	R _{DS(on)} (mΩ)	Fixed Output Versions (V)	Soft Start	External Sync	Spread Spectrum	Digital Interface	Forced CCM	AAM	COI Control	Fixed Frequency	Wideband Flank QFN Option	Package	Notes
N	MPQ4300-AEC1	3.5	50	0.5	2	-	-	470	95/50	3.3, 3.8, 5	Int	✓	✓	-	✓	✓	-	✓	-	QFN-16 (4x3), QFN-16 (3x3)	MPQ4300 spread spectrum family, low component count
N	MPM3509B-AEC1	4	40	0.6	5	600	0.8	410	90/50	-	Int	✓	-	-	✓	-	-	✓	✓	QFN-17 (3x5x1.6)	Ultra-compact module with integrated inductor, BST/VCC capacitors
N	MPM3509-AEC1	4	40	0.9	3	600	0.8	2200	90/50	-	Int	✓	-	-	✓	-	-	✓	✓	QFN-17 (3x5x1.6)	
N	MPQ4301-AEC1	3.5	50	1	3	-	-	470	95/50	3.3, 3.8, 5	Int	✓	✓	-	✓	✓	-	✓	-	QFN-16 (4x3), QFN-16 (3x3)	MPQ4300 spread spectrum family, low component count
	MPQ4431-AEC1	3.3	40	1	2.5	10	0.8	350 to 2500	90/80	3.3, 5	Ext	✓	-	-	✓	✓	-	✓	✓	QFN-16 (3x4)	Low I _O , good EMI, and low-dropout mode
	MPM3515-AEC1	4	40	1.5	4	600	0.8	2200	90/50	-	Int	✓	-	-	✓	-	-	✓	✓	QFN-17 (3x5x1.6)	Ultra-compact module with integrated inductor, BST/VCC capacitors
	MPQ4415M-AEC1	4	40	1.5	4	600	0.8	450 to 2200	90/50	-	Int	✓	-	-	✓	-	-	✓	✓	QFN-13 (2.5x3)	Integrated input capacitor

REGULATORS | AUTOMOTIVE

Buck Regulators

36V To 45V Primary Synchronous Buck

	Part Number	V _{in} (Min) (V)	V _{in} (ABS Max)	I _{out} (A)	I _{sw} Limit (Typ) (A)	I _o (Typ) (µA)	V _{FB} (V)	f _{sw} (kHz)	R _{DS(on)} (mΩ)	Fixed Output Versions (V)	Soft Start	External Sync	Spread Spectrum	Digital Interface	Forced CCM	CCM Control	Fixed Frequency	Wettable Flank QFN Option	Package	Notes
N	MPQ4415A-AEC1	4	40	1.5	4	600	0.8	450 to 2200	90/50	-	Int	✓	-	-	✓	-	✓	✓	QFN-13 (2.5x3)	-
N	MPQ4302-AEC1	3.5	50	2	5	-	-	470	90/50	3.3, 3.8, 5	Int	✓	✓	-	✓	✓	-	✓	QFN-16 (4x3), QFN-16 (3x3)	MPQ4300 spread spectrum family, low component count
N	MPQ4312-AEC1	3.3	50	2	5.5	10	0.8	350 to 530	40/17	3.3, 5	Ext	✓	✓	-	✓	✓	-	✓	QFN-20 (4x4)	MPQ4312 low I _o spread spectrum family
	MPQ4420H-AEC1	4	40	2	4.2	500	0.8	410	90/55	-	Int	✓	-	-	✓	-	✓	-	TSOT23-8	-
	MPQ4420A-AEC1	4	40	2	5.6	500	0.8	410	90/55	-	Int	✓	-	-	✓	-	✓	-	TSOT23-8	-
	MPQ4432-AEC1	3.3	40	2.2	5.2	10	0.8	350 to 2500	90/40	3.8, 5	Ext	✓	-	-	✓	✓	-	✓	QFN-16 (3x4)	Low I _o , good EMI, and low-dropout mode
N	MPQ4303-AEC1	3.5	50	3	6	-	-	470	90/50	3.3, 3.8, 5	Int	✓	✓	-	✓	✓	-	✓	QFN-16 (4x3), QFN-16 (3x3)	MPQ4300 spread spectrum family, low component count
N	MPQ4313-AEC1	3.3	50	3	5.5	10	0.8	350 to 530	40/17	3.3, 5	Ext	✓	✓	-	✓	✓	-	✓	QFN-20 (4x4)	MPQ4312 low I _o spread spectrum family
	MPQ4433-AEC1	3.3	40	3	5.8	10	0.8	350 to 2500	90/40	5	Ext	✓	-	-	✓	✓	-	✓	QFN-16 (3x4)	Low I _o , good EMI, and low-dropout mode
	MPQ4423H-AEC1	4	40	3	4.4	500	0.8	410	85/55	-	Int	✓	-	-	✓	-	✓	✓	QFN-8 (3x3)	-
	MPQ4423A-AEC1	4	40	3	5.7	600	0.8	410	85/55	-	Int	✓	-	-	✓	-	✓	-	QFN-8 (3x3)	-
S	MPQ8883-AEC1	3.5	48	3	1 to 8	-	-	250 to 2500	95/50	1.8 to 12	Int	✓	✓	✓	✓	✓	-	✓	QFN-16 (3X3)	I ² C interface, OTP, digitally programmable output voltage, freq. compensation, protection, slew rate, and more
	MPQ4473-AEC1	4.5	40	3.5	6.6	500	0.8	200 to 1000	40/20	-	Ext	-	-	-	-	✓	-	-	QFN-20 (3x4)	-
	MPQ4430-AEC1	3.3	40	3.5	5.8	10	0.8	350 to 2500	90/40	3.8, 5	Ext	✓	-	-	✓	✓	-	✓	QFN-16 (3x4)	Low I _o , good EMI, low-dropout mode
N	MPQ4314-AEC1	3.3	50	4	8	10	0.8	350 to 530	40/17	3.3, 5	Ext	✓	✓	-	✓	✓	-	✓	QFN-20 (4x4)	MPQ4312 low I _o spread spectrum family
	MPQ4470-AEC1	4.5	40	5	8	500	0.8	100 to 1000	40/20	-	Ext	-	-	-	-	✓	-	-	QFN-20 (3x4)	Programmable soft-start time, SCP, OCP, OVP latch
	MPQ4470A-AEC1	4.5	40	5	8	500	0.8	100 to 1000	40/20	-	Ext	-	-	-	-	✓	-	-	QFN-20 (3x4)	Programmable soft-start time, SCP, OCP
N	MPQ4315-AEC1	3.3	50	5	8	10	0.8	350 to 530	40/17	3.3, 5	Ext	✓	✓	-	✓	✓	-	✓	QFN-20 (4x4)	MPQ4312 low I _o spread spectrum family
N	MPQ4480-AEC1	4.2	40	6	17	1000	1	235 to 2200	20/15	-	Int	✓	✓	-	-	-	✓	✓	QFN-25 (4x5)	Adjustable line drop compensation, forced PWM mode, low-dropout mode
N	MPQ4316-AEC1	3.3	50	6	13	10	0.8	350 to 530	40/17	3.3, 5	Ext	✓	✓	-	✓	✓	-	✓	QFN-20 (4x4)	MPQ4312 low I _o spread spectrum family
N	MPQ4436-AEC1	3.3	50	6	13	10	0.8	350 to 530	40/17	3.3, 5	Ext	✓	✓	-	✓	✓	-	✓	QFN-20 (4x4)	Multi-phase, low I _o
N	MPQ4317-AEC1	3.3	50	7	13	10	0.8	350 to 530	40/17	3.3, 5	Ext	✓	✓	-	✓	✓	-	✓	QFN-20 (4x4)	MPQ4312 low-I _o spread-spectrum family
	MPQ2918-AEC1	4	40	Cntrl	-	750	0.8	100 to 1000	-	-	Ext	✓	-	-	✓	✓	-	✓	TSSOP-20EP, QFN-20 (3x4)	High max duty cycle (99.5%)

REGULATORS | AUTOMOTIVE

Buck Regulators

HV Synchronous Buck

Part Number	V _{IN} (Min) (V)	V _{IN} (ABS Max)	I _{OUT} (A)	I _{SW} Limit (Typ) (A)	I _O (Typ) (µA)	V _{FB} (V)	f _{SW} (kHz)	R _{DS(on)} (mΩ)	Fixed Output Versions (V)	Soft Start	External Sync	Forced CCM	AAM	Hysteretic Control	Fixed Frequency	Package	Notes
MPQ4569-AEC1	4.5	80	0.3	0.72	20	1	-	1200/450	-	Ext	-	-	✓	✓	-	QFN-10 (3x3), SOIC-8E	Programmable soft start
MPQ4569A-AEC1	4.5	80	0.3	0.72	20	1	-	1200/500	-	Ext	-	-	✓	✓	-	QFN-10 (3x3)	Programmable soft start, default enable on
MPQ2420-AEC1	4.5	80	0.3	0.72	20	1	-	1200/450	-	Ext	-	-	✓	✓	-	TSSOP-16	Integrated separate windowed watchdog die
MPQ2420A-AEC1	4.5	80	0.3	0.72	20	1	-	1200/450	-	Ext	-	-	✓	✓	-	TSSOP-16	Integrated separate windowed watchdog die, default enable on
N MPQ4590-AEC1	7.5	700	0.4	0.66	200	1.7	-	13.5	-	Int	-	✓	-	✓	-	SOIC-8E	Primary-side CV control, supporting buck, buck-boost, boost, and flyback topologies
N MPQ4571-AEC1	4.5	65	1	1.9	30	0.8	200 to 2200	200/45	-	Int	✓	✓	✓	-	✓	QFN-12 (2.5x3)	Low I _O , compact
N MPQ4572-AEC1	4.5	65	2	3.5	30	0.8	200 to 2200	200/45	-	Int	✓	✓	✓	-	✓	QFN-12 (2.5x3)	Low I _O , compact
MPQ4570-AEC1	4.5	60	3	5.7	520	1	100 to 1000	90/70	-	Ext	✓	-	✓	-	✓	TSSOP-20EP	Programmable soft-start time
MPQ2908A-AEC1	4	60	Cntrl	-	750	0.8	100 to 1000	-	-	Ext	✓	✓	✓	-	✓	TSSOP-20EP, QFN-20 (3x4)	High max duty cycle (99.5%)

Buck Regulators

Buck Controllers

Part Number	V _{IN} (Min) (V)	V _{IN} (Max) (V)	I _O (Typ) (µA)	I _{SW} (Typ) (µA)	V _{FB} (V)	f _{SW} (kHz)	Fixed Output Versions (V)	Soft Start	External Sync	Forced CCM	AAM	Fixed Frequency	Wettable Flank QFN Option	Package	Notes
MPQ2908A-AEC1	4	60	750	0.5	0.8	100 to 1000	-	Ext	✓	✓	✓	✓	✓	TSSOP-20EP, QFN-20 (3x4)	High max duty cycle (99.5%)
MPQ2918-AEC1	4	40	750	0.5	0.8	100 to 1000	-	Ext	✓	✓	✓	✓	✓	TSSOP-20EP, QFN-20 (3x4)	High max duty cycle (99.5%)

Buck Regulators

Buck Modules

Part Number	V _{IN} (Min) (V)	V _{IN} (Max) (V)	I _{OUT} (A)	I _{SW} Limit (Typ) (A)	I _O (Typ) (µA)	V _{FB} (V)	f _{SW} (kHz)	R _{DS(on)} (mΩ)	Fixed Output Versions (V)	Soft Start	External Sync	Spread Spectrum	Digital Interface	Forced CCM	AAM	COT Control	Fixed Frequency	Wettable Flank QFN Option	Package	Notes
N MPM3805A-AEC1	2.6	6	0.6	1	17	0.6	3500	120/70	1.2, 1.8	Int	-	-	-	✓	-	✓	-	✓	QFN-12 (2.5x3.0x0.9)	Module with integrated inductor
N MPM3810A-AEC1	2.6	6	1.2	2.1	17	0.6	3500	120/70	1.2, 1.8	Int	-	-	-	✓	-	✓	-	✓	QFN-12 (2.5x3.0x0.9)	Module with integrated inductor
N MPM3509B-AEC1	4	40	0.6	5	600	0.8	410	90/50	-	Int	✓	-	-	✓	-	-	✓	✓	QFN-17 (3x5x1.6)	Ultra-compact module with integrated inductor, BST/VCC capacitors
N MPM3509-AEC1	4	40	0.9	3	600	0.8	2200	90/50	-	Int	✓	-	-	✓	-	-	✓	✓	QFN-17 (3x5x1.6)	Ultra-compact module with integrated inductor, BST/VCC capacitors
MPM3515-AEC1	4	40	1.5	4	600	0.8	2200	90/50	-	Int	✓	-	-	✓	-	-	✓	✓	QFN-17 (3x5x1.6)	Ultra-compact module with integrated inductor, BST/VCC capacitors

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Buck Regulators

Non-Synchronous Buck

Part Number	V _{IN} (Min) (V)	V _{IN} (Max) (V)	I _{OUT} (A)	I _{SW} Limit (Typ) (A)	I _Q (Typ) (µA)	V _{FB} (V)	f _{SW} (kHz)	R _{DS(on)} (mΩ)	Fixed Output Versions (V)	Soft Start	External Sync	Spread Spectrum	Digital Interface	Forced CCM	COT Control	Fixed Frequency	Package	Notes
MPQ2459-AEC1	4.5	60	0.5	1.25	730	0.8	480	1000	-	Int	-	-	✓	-	✓	TSOT23-6	Superior light-load efficiency	
MPQ2451-AEC1	3.3	40	0.6	1	130	0.8	2000	500	3.3, 5	Int	-	-	✓	-	✓	TSOT23-6L, QFN-6L	Internal comp and SS, programmable	
MPQ2454-AEC1	3.3	40	0.6	1.8	60	0.8	350 to 2300	200	-	Ext	✓	-	✓	-	✓	QFN-10 (3x3), MSOP-10EP	Superior light-load efficiency	
MPQ4558-AEC1	3.8	60	1	1.9	140	0.8	200 to 2000	250	-	Int	-	-	✓	-	✓	QFN-10 (3x3), SOIC-8E	Superior light-load efficiency	
MPQ4559-AEC1	3.8	60	1.5	2.3	140	0.8	200 to 2000	250	-	Int	-	-	✓	-	✓	QFN-10 (3x3)	Superior light-load efficiency	
MPQ4561-AEC1	3.8	60	1.5	2.5	140	0.8	250 to 2000	300	-	Ext	-	-	✓	-	✓	QFN-10 (3x3)	Superior light-load efficiency	
MPQ4560-AEC1	3.8	60	2	3.2	140	0.8	250 to 2000	250	-	Int	-	-	✓	-	✓	QFN-10 (3x3), SOIC-8E	Superior light-load efficiency	
MPQ4462-AEC1	3.8	40	3.5	5.5	120	0.8	250 to 4000	150	-	Int	-	-	✓	-	✓	QFN-10 (3x3), SOIC-8E	Superior light-load efficiency	
N MPQ4467-AEC1	3.3	40	2.5	5.6	10	0.8	350 to 2500	95	-	Ext	✓	-	✓	-	✓	QFN-16 (3x4)	Low dropout, selectable in-phase or 180° out-of-phase	
N MPQ4468-AEC1	3.3	40	3	5.8	10	0.8	350 to 2500	90	-	Ext	✓	-	✓	-	✓	QFN-16 (3x4)	Low dropout, selectable in-phase or 180° out-of-phase	
N MPQ4469-AEC1	3.3	40	5	7.7	10	0.8	350 to 2500	90	-	Ext	✓	-	✓	-	✓	QFN-20 (4x5)	Low dropout, selectable in-phase or 180° out-of-phase	
MPQ2362-AEC1	4.75	25	Dual 2	3.4	2000	1.222	380	180	-	Int	✓	-	✓	-	✓	TSSOP-20F	Dual output	

Buck-Boost Regulators

Buck-Boost Converters

Part Number	V _{IN} (Min) (V)	V _{IN} (Max) (V)	V _{OUT} (Max) (V)	I _{OUT} (Typ) (A)	I _Q (Typ) (µA)	f _{SW} (kHz)	R _{DS(on)} (mΩ)	Interface	Spread Spectrum	Fixed Frequency	Webtable Flank QFN Option	Package	Notes
N MPQ8875A-AEC1	2.2	42	0.5 to 36	5	200	100 to 750	2x 10/20	I ² C	✓	✓	✓	QFN-34 (4x5)	30W, OTP programmable, four-switch buck-boost with advanced protection

Boost Regulators

Synchronous Boost

Part Number	V _{IN} (Min) (V)	V _{IN} (Max) (V)	V _{OUT} (Max) (V)	I _{SW} Limit (Typ) (A)	I _Q (Typ) (µA)	V _{FB} (V)	f _{SW} (kHz)	R _{DS(on)} (mΩ)	Fixed Output Versions	Fixed Frequency	Package	Notes
MPQ3410-AEC1	1.8	6	6	1.3	360	1.19	550	530/300	-	✓	TSOT23-5	Output disconnect
N MPQ3428A-AEC1	3	20	22	19	110	1.2	600	18	-	✓	QFN-22 (3x4)	Input disconnect function, external high-side gate drive
N MPQ3431A-AEC1	0.8	13	16	21	25	1.0	470	15/11.5	-	✓	QFN-13 (3x4)	Programmable input current limit, supports 40W peak power load from 3.3V, selectable PSM and FCCM, adaptive COT

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Boost Regulators

Boost Controllers

Part Number	V_{IN} (Min) (V)	V_{IN} (Max) (V)	I_O (Typ) (μ A)	I_{SD} (Typ) (μ A)	V_{FB} (V)	f_{SW} (kHz)	Soft Start	Sync	Package	Notes
S MPQ3910A-AEC1	5	35	0.29	1	1.5	30 to 400	Ext	✓	MSOP-10	Peak current mode, light-load operation, supports >10A, OVP, SCP, OTP

Boost Regulators

Non-Synchronous Boost

Part Number	V_{IN} (Min) (V)	V_{SW} (Max) (V)	V_{OUT} (Max) (V)	I_{SW} Limit (Typ) (A)	I_O (Typ) (μ A)	V_{FB} (V)	f_{SW} (kHz)	$R_{DS(ON)}$ (m Ω)	Fixed Output Versions	Package	Notes
MPQ3425-AEC1	3.1	55	55	5	650	1.23	300 to 2000	90	-	QFN-14 (3x4)	Programmable UVLO and EN hysteresis
MPQ3426-AEC1	3.2	45	35	8.5	650	1.23	300 to 2000	90	-	QFN-14 (3x4)	Programmable UVLO and EN hysteresis

DDR Memory Power

Part Number	V_{IN} (Min) (V)	V_{IN} (Max) (V)	I_{OUT} (Typ) (A)	Accuracy for VTT, VTTREF (mV)	V Driver (V)	Package	Notes
N MPQ20073-AEC1	1.3	6	2	30	3.3	MSOP-8E	DDR2/3 termination regulator

Audio Products (Class-D Audio Amplifiers)

Part Number	V_{IN} (Min) (V)	V_{IN} (Max) (V)	P_{OUT} (W)	Efficiency (%)	THD+N (%)	PSRR (dB)	Type	Package	Notes
N MPQ7790-AEC1	5.5	18	15	90	0.79 @ 1W	20	Mono	TSSOP-20EP	Low EMI, analog input Class D for mono speaker in bridge-tied load configuration

Supervisory Circuits

Part Number	V_{IN} (Min) (V)	V_{IN} (Max) (V)	Reset Threshold (V)	Threshold Accuracy (%)	I_O (Typ) (μ A)	Package	Notes
MPQ6400-33-AEC1	1.8	5.5	3.07	\pm 1.0	1.6	QFN-6 (2x2)	Voltage supervisor, 3.3V
N MPQ6400-01-AEC1	0.9	5.5	0.4	\pm 1.0	1.6	QFN-6 (2x2)	Voltage supervisor, adjustable
MPQ6411-AEC1	4.8	5	4.5	-	16	SOIC-8E	5V V_{DD} , windowed watchdog, power-on reset
MPQ6411-33-AEC1	3.1	3.3	2.9	-	10	SOIC-8E	3.3V V_{DD} , windowed watchdog, power-on reset

Analog Switches

Part Number	V_{IN} (Min) (V)	V_{IN} (Max) (V)	Switcher Current (A)	t_{ON} (ns)	t_{OFF} (ns)	Power Supply Current (μ A)	Fixed Output Versions	Bandwidth (MHz)	$R_{DS(ON)}$ (m Ω)	Package	Notes
MPQ2735-AEC1	1.65	5.5	0.1	29	23	1	-	50	0.25	QFN-10 (1.4x1.8)	Low-voltage 0.45 Ω dual SPDT analog switches, separate control inputs

REGULATORS | AUTOMOTIVE

Load Switches

Part Number	V _{IN} (Min) (V)	V _{IN} (Max) (V)	Load Current	I _Q (Typ) (mA)	R _{DS(on)} (mΩ)	Package	Notes
MPQ5073-AEC1	0.5	5.5	2	0.18	50	QFN-12 (2x2)	Adjustable current limit
S MPQ5069-AEC1	4.5	28	10	1.5	7	QFN-22 (3x5)	Adjustable current limit

USB CHARGERS | AUTOMOTIVE

USB PD Solutions

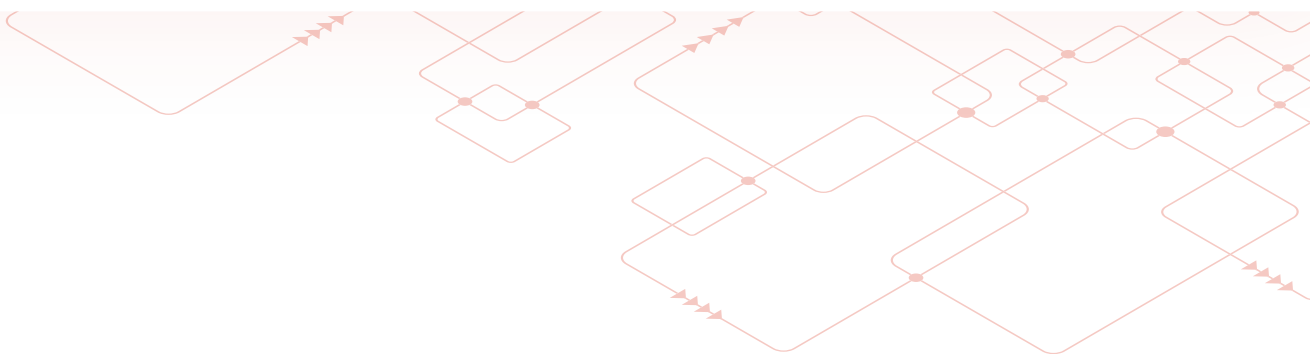
Buck-Boost for USB PD

Part Number	V _{IN} (Min) (V)	V _{IN} (ABS Max) (V)	I _{OUT} (A)	I _Q (Typ) (mA)	f _{SW} (kHz)	Supports USB PD	Battery Short Protection	Frequency Spread Spectrum	Line Drop Compensation	I ² C Interface	EN Shutdown Discharge	Load Shedding	Wettable Flank QFN Option	Package	Notes
N MPQ4214 (Controller)	5	45	-	-	Selectable	✓	✓	✓	-	✓	-	✓	QFN-27 (5x5)	Sync, FCCM mode, current limit adjusting through IPWM pin	
S MPQ4210 (Controller)	5	45	-	-	Selectable	✓	-	✓	-	✓	-	✓	QFN-27 (5x5)	100W synchronous controller with I ² C output current monitor function	
S MPQ4230 (Converter)	4	40	6A Peak	0.3	Selectable	✓	✓	✓	✓ (Adj)	✓	✓	✓	QFN-21 (4x5)	Supports 60W buck-boost or 6A peak I _{OUT}	

All-in-One USB-C/A Charging-Only Port Solutions

Dual USB Type-C & Type-A Charging Port Solutions (Buck with Integrated CLS, Protocol Detection)

Part Number	V _{IN} (ABS Max)	V _{IN} (Max) (V)	Dual/Single Ports	I _{OUT} (A)	I _Q (Typ) (mA)	f _{SW} (kHz)	BC 1.2 DCP	1.2V/1.2V Mode	Divider Mode 3	Type-C DFP (w/o PD)	Type-A Mode	Load Shedding	Frequency Spread Spectrum	Internal USB S-Switch	Line Drop Compensation	USB Discharge	Package	Notes
MPQ4487	6	40	Dual	3 (x2)	1	Selectable	-	-	-	✓	✓	✓	✓	✓	✓	✓	QFN-26 (5x5)	Load shedding vs. temperature
MPQ4488	6	40	Dual	3 (x2)	1	Selectable	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	QFN-26 (5x5)	Selectable V _{OUT} : 5.1V/5.17V/5.3V
S MPQ4488T	6	40	Dual	3 (x2)	1	Adjustable	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	QFN-26 (5x5)	135°C load-shedding temp
N MPQ4253	6	40	Dual	3 (x2)	1	Selectable	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	QFN-26 (5x5)	Low I _Q (Type-A/C)



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All-in-One USB-C/A Charging-Only Port Solutions

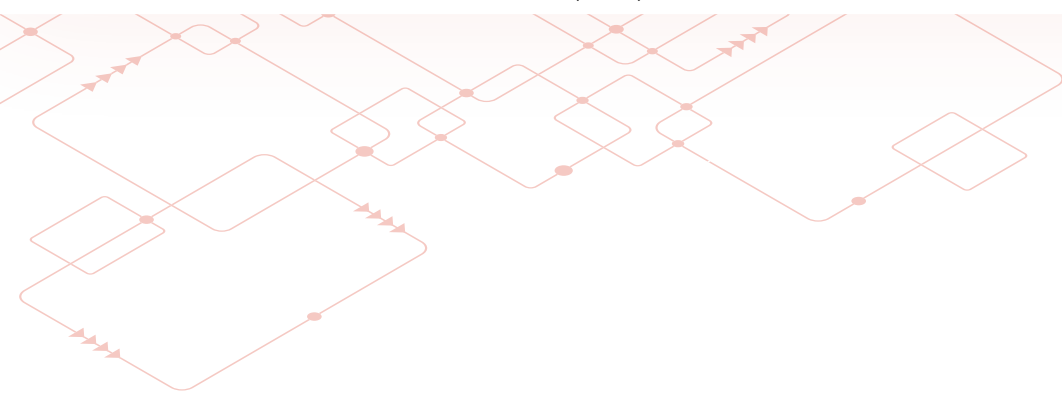
Single USB Type-C & Type-A Charging Port Solutions (Buck with Integrated CLS, Protocol Detection)

Part Number	V _{IN} (Min) (V)	V _{IN} (ABS Max)	Dual/Single Ports	I _{OUT} (A)	I _a (Typ) (mA)	f _{SW} (kHz)	BC 1.2 DCP	1.2V/1.2V Mode	Divider Mode 3	QC2.0	QC3.0	Type-C DFP (w/o PD)	Type-A Mode	Load Shedding	Battery Short Protection	Low-Dropout Mode	Frequency Spread Spectrum	Internal USB Switch	Line Drop Compensation	EN Shutdown Discharge	USB Discharge	Fault Indication	Wettable Flank QFN Option	Package	Notes
MPQ4475-E	7	40	Single	2.5	1.6	Select	✓	✓	✓	-	-	✓	-	-	✓	✓	✓	✓	✓	✓	✓	-	QFN-25 (4x4)	Programmable line drop compensation	
MPQ4491	7	40	Single	2.5	1.6	Select	✓	✓	✓	-	-	✓	-	-	✓	✓	✓	✓	✓	-	-	-	QFN-25 (4x4)	Auto-detect, cable compensation	
MPQ4481	6	40	Single	3	0.7	Select	✓	✓	✓	-	-	✓	✓	✓	-	✓	✓	✓	-	✓	✓	-	QFN-26 (5x5)	EN and Fault pins support hub	
N MPQ4481-FD	6	40	Single	3	0.7	Select	✓	✓	✓	-	-	✓	✓	✓	-	✓	✓	✓	✓	-	✓	✓	-	QFN-26 (5x5)	EN and Fault pins support hub
S MPQ4490	6	40	Single	3	0.2	Adj	✓	✓	✓	-	-	✓	✓	✓	-	-	✓	✓	-	✓	-	-	QFN-26 (5x5)	Low I _Q , FCCM	
S MPQ4482	4	40	Single	3	0.8	Select	✓	✓	✓	-	-	✓	✓	✓	-	-	✓	✓	-	✓	-	✓	QFN-22 (4x4)	3.55A/2.75A USB current limit with FCCM	
S MPQ4482-Q	4	40	Single	3	0.8	Select	✓	✓	✓	✓	✓	✓	✓	✓	-	-	✓	✓	-	✓	-	✓	QFN-22 (4x4)	Accurate USB current limit with FCCM	

All-in-One Data Port Products

Dual USB Type-C & Type-A Charging Data Ports (Buck with Integrated CLS, USB 2.0 Data Switch, Protocol Detection)

Part Number	V _{IN} (Min) (V)	V _{IN} (ABS Max)	Dual/Single Ports	I _{OUT} (A)	I _a (Typ) (mA)	f _{SW} (kHz)	BC 1.2 DCP (Data)	BC 1.2 DCP	1.2V/1.2V Mode	Divider Mode 3	Type-C DFP (w/o PD)	Type-A Mode	Load Shedding	Internal USB Switch	Line Drop Compensation	USB Discharge	Package	Notes
MPQ4485	6	40	Dual	3 (x2)	1	450	✓ (USB2)	✓	✓	✓	✓	✓	✓	✓	✓	✓	QFN-26 (5x5)	Forced CCM operation



USB CHARGERS | AUTOMOTIVE

All-in-One Data Port Products

Single USB Type-C & Type-A Charging Data Ports (Buck + Integrated CLS, USB 2.0 Data Switch, Protocol Detection)

Part Number	V _{IN} (Min) (V)	V _{IN} (ABS Max) (V)	Dual/Single Ports	I _{OUT} (A)	I _O (Typ) (mA)	f _{SW} (kHz)	BC 1.2 CDP (Data)	BC 1.2 DCP	1.2V/1.2V Mode	Divider Mode 3	Type-C DFP (w/o PD)	Type-A Mode	Load Shedding	Battery Short Protection	Low-Dropout Mode	Frequency Spread Spectrum	Internal USB Switch	Line Drop Compensation	EN Shutdown Discharge	USB Discharge	Wettable Flank QFN Option	Package	Notes
N MPQ4482-C	4	40	Single	3	0.8	Select	✓	✓	✓	✓	✓	✓	✓	-	-	✓	✓	-	✓	✓	QFN-22 (4x4)	Supports CDP mode, USB Type-C 5V @ 3A DFP mode, 3.55A/2.75A USB current limit with FCCM	
S MPQ4483	4.2	40	Single	3	1	Select	✓	✓	-	-	✓	-	✓	✓	-	(Adj CC Limit)	(Adj)	✓	-	✓	QFN-25 (4x5)	Supports BC1.2 DCP and CDP mode, bidirectional USB 2.0 high-speed data switch, low-dropout mode, 3.55A/3.75A CC output current limit	
S MPQ4483-FD	4.2	40	Single	3	1	Adj	✓	✓	-	-	✓	-	✓	✓	✓	(Adj CC Limit)	(Adj)	✓	-	✓	QFN-25 (4x5)		

USB-C/A Port Controller and Buck Products Buck Only

Part Number	V _{IN} (Min) (V)	V _{IN} (ABS Max) (V)	I _{OUT} (A)	I _O (Typ) (mA)	f _{SW} (kHz)	Battery Short Protection	Low-Dropout Mode	Internal USB Switch	Line Drop Compensation	EN Shutdown Discharge	Wettable Flank QFN Option	Package	Notes
N MPQ4480	4.2	40	6	1	Selectable	✓	✓	✓ (Adj CC Limit)	✓	✓	✓	QFN-25 (4x5)	-

USB-C/A Port Controller and Buck Products USB Type-C & Type-A Charging Port Controllers

Part Number	V _{IN} (Min) (V)	V _{IN} (ABS Max) (V)	Dual/Single Ports	I _{OUT} (A)	I _O (Typ) (mA)	BC 1.2 CDP (Data)	BC 1.2 DCP	1.2V/1.2V Mode	Divider Mode 3	QC2.0/QC3.0	Type-C DFP (w/o PD)	Type-A Mode	Load Shedding	Battery Short Protection	Internal USB Switch	Line Drop Compensation	USB Discharge	Fault Indication	Client Mode	Wettable Flank QFN Option	Package	Notes
N MPQ5029	2.7	24	Single	3	0.155	-	✓	✓	✓	✓	✓	✓	✓	✓	(Adj)	(Adj)	✓	-	-	✓	QFN-14 (2x3)	NTC pin for thermal management, adjustable OVP threshold, input over-voltage shutdown protection
S MPQ5029-C	2.7	24	Single	3	0.175	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	QFN-14 (2x3)	-

POSITION SENSORS | AUTOMOTIVE

Part Number	V _{IN} (Min) (V)	V _{IN} (Max) (V)	Supply Current (mA)	Resolution (Bits)	Output Format	ABZ Resolution (Bits)	PWM Frequency (Hz)	Latency (µs)	Start-Up Time (ms)	Refresh Rate (kHz)	Filter Cutoff Frequency (Hz)	Magnetic Field Detection	Magnetic Field Range (mT)	Wettable Flank QFN Option	Package	Supported Magnet Topology
MAQ430-AEC1	3	3.6	11.7	12	SPI, ABZ, UVW	10	-	10	12	980	390	✓	30 to 150	✓	QFN-16 (3x3)	End-of-shaft, side-shaft
MAQ470-AEC1	3	3.6	11.7	12	SPI, SSI, ABZ, PWM	10	240	10	12	980	390	✓	30 to 150	✓	QFN-16 (3x3)	End-of-shaft, side-shaft

MOTOR DRIVERS | AUTOMOTIVE

Half-Bridge Gate Drivers

	Part Number	V _{IN} (Min) (V)	V _{IN} (Max) (V)	V _{SW} (Max) (V)	HS Gate Drive (Max) (V)	# of Channels	Peak Pull-Up Current (A)	Peak Pull-Down Current (A)	Rise Time (ns)	Fall Time (ns)	Turn-Off/On Delay (ns)	Wettable Flank Option	Package	Notes
N	MPQ18021-A-AEC1	9	18	100	18	1	2.5	3.5	12	9	5	✓	SOIC-8E	100V
N	MPQ18024-AEC1	9	18	100	18	1	4	5.9	15	12	20	✓	SOIC-8E	100V
	MPQ1922-AEC1	4	15	100	15	1	-	-	20μs	20μs	20μs	✓	SOIC-8E, QFN-10 (4x4)	Integrated current sense amp 9ns to 15ns rise/fall (2.2nF load)

Half-Bridge Drivers (Integrated MOSFET)

	Part Number	V _{IN} (Min) (V)	V _{IN} (ABS Max) (V)	BST to SW (Max) (V)	# of Channels	R _{DS(ON)} (mΩ)	Standby I _D (Typ)	Peak Output Current (A)	Rise Time (μs)	Fall Time (μs)	Turn-Off/On Delay (μs)	Open-Load Detection	Serial Interface	Wettable Flank Option	Package	Notes
	MPQ8039-AEC1	7.5	28	6	1	100	2.5	9	20ns	20ns	70ns	-	-	✓	SOIC-8E	General-purpose, high-frequency half-bridge for audio amplifier, wireless charging, and more
	MPQ6523-AEC1	7	40	1	3	1100	6	0.9	20	20	60	✓	✓	✓	QFN-24 (4x4)	Independent half-bridge control, comprehensive protections, daisy-chainable, serial data interface up to 3MHz
	MPQ6526-AEC1	7	40	1	6	650	6	0.9	20	20	50	✓	✓	✓	QFN-24 (4x4), QFN-24 (5x5)	Independent half-bridge control, comprehensive protections, daisy-chainable
S	MPQ6527-AEC1	5.5	40	1	10	1300	6	0.8	2	-	-	✓	✓	✓	TSSOP-28EP	Independent half-bridge control, comprehensive protections, daisy-chainable, SPI interface up to 5MHz

LED LIGHTING | AUTOMOTIVE

Backlight

	Part Number	V _{IN} (Min) (V)	V _{IN} (Max) (V)	Topology	# of Channels	I _{OUT} Per Channel (mA)	f _{SW} (kHz)	Dimming Modes	LED Protection	Channel Current Matching (%)	Interface	Package	Notes
	MPQ3386-AEC1	4.5	25	Boost	6	30	625 or 1250	PWM, Analog	Open, Short	3%	-	QFN-24 (4x4)	3% current matching accuracy
	MPQ3387L-AEC1	3	25	Boost	6	45	500 or 1250	PWM, Analog	Open, Short	3%	-	QFN-24 (4x4)	3% current matching accuracy
N	MPQ3367-AEC1	3.5	36	Boost	6	100	200, 400, 1000, 2200	PWM, Analog	Open, Short	2.5%	I ² C	QFN-24 (4x4), TSSOP-28EP	Spread spectrum, thermal derating, fault pin, rich protection features

Tell-Tale

	Part Number	V _{IN} (Min) (V)	V _{IN} (Max) (V)	Topology	# of Channels	I _{OUT} Per Channel (mA)	f _{SW} (kHz)	Dimming Modes	LED Protection	Channel Current Matching (%)	Interface	Package	Notes
S	MPQ3326-AEC1	2.7	18	Linear	16	25	Selectable	PWM, Analog	Open, Short	2%	I ² C	QFN-24 (4x4), TSSOP-28EP	Independent channel control, daisy-chainable, digital configuration

LED LIGHTING | AUTOMOTIVE

Illumination & Signaling LED Drivers

	Part Number	V _{IN} (Min) (V)	V _{IN} (ABS Max) (V)	LED Power (W)	Topology	Max LEDs in Series	Max Continuous Current (A)	Current Limit (Typ) (A)	R _{DS(on)} (mΩ)	Dimming Modes	f _{sw} (kHz)	LED Protection	Spread Spectrum	Multi-Phase Fault Pin	Example Lighting Application	Wettable Flank QFN Option	Package	Notes
	MPQ2489-AEC1	6	55	4	Low-Side Buck	10	1.4	Adj	500	PWM, Analog	200 to 600	Open	-	-	Stop Light, Turning Light	-	QFN-6 (3x3)	-
	MPQ2483A-AEC1	4.5	55	10	Buck, Buck-Boost	10	2.5	3	280	PWM, Analog	250 to 1350	Open, Short	-	-	Daytime Running Light, Fog Light	-	QFN-10 (3x3), SOIC-14	Output short-circuit protection
S	MPQ2484-AEC1	4.5	45	Adj	Buck, Boost, Buck-Boost	20	Cntrl	Adj	-	PWM, Analog	100 to 2200	Open, Short	✓	-	Daytime Running Light, Fog Light	-	TSSOP-28EP	Cycle-by-cycle current limit output over-voltage protection, open LED protection, fault flag output
N	MPQ24833B-AEC1	4.5	55	12	Buck, Buck-Boost	10	3	6	150	PWM, Analog	420	Open	-	-	Daytime Running Light, Fog Light	-	SOIC-8EP	Output short-circuit protection
	MPM6010-AEC1	4	40	12	Buck	2	1.5	4	85/50	PWM	2200	Open, Short	-	-	Rear Light, Puddle Light, Fog Light	✓	QFN-17 (3x5x1.6)	Module with integrated AEC-Q100 2.2μH inductor and BST/VCC capacitors, synchronous operation, output OCP
	MPQ4425A-AEC1	4	40	12	Buck	2	1.5	4	85/50	PWM	2200	Open, Short	-	-	Rear Light, Puddle Light, Fog Light	✓	QFN-13 (2.5x3)	Synchronous operation, output OCP
	MPQ4425B-AEC1	4	40	12	Buck	2	1.5	4	85/50	PWM	400	Open, Short	-	-	Rear Light, Puddle Light, Fog Light	✓	QFN-13 (2.5x3)	Synchronous operation, output OCP
S	MPQ7200-AEC1	4.5	50	20	Buck, Buck-Boost	3 Buck/ 1.2A Buck-Boost	6	40/ 38	40/ 38	PWM, Analog	2300 Buck, 1150 Buck-Boost	Open, Short	✓	✓	Daytime Running Light, Fog Light, Low Beam, High Beam	✓	QFN-19 (3x4)	Integrated current sense, configurable 1.2A buck-boost or 3A buck, fast transient operation, thermal derating, two-step dimming, external NTC

Dynamic Lighting And Matrix Dimming

	Part Number	V _{IN} (Min) (V)	V _{IN} (ABS Max) (V)	Topology	# of Channels	I _{out} Per Channel (mA)	f _{sw} (kHz)	Dimming Modes	LED Protection	Spread Spectrum	Channel Current Matching (%)	Interface	Wettable Flank QFN Option	Package	Notes
N	MPQ7220-AEC1	3.5	42	Boost	6	100	200, 400, 1000, 2200	PWM, Analog	Open, Short	✓	2.5	-	-	QFN-24 (4x4), TSSOP-28EP	External sync SW function disconnects V _{OUT} from V _{IN} cycle-by-cycle current limiting
S	MPQ7221-AEC1	4	14	Linear	16	80	Selectable	PWM, Analog	Open, Short	-	2	I ² C	✓	QFN-24 (4x4)	6-bit analog dimming for each channel, 12-bit PWM dimming for each channel, refresh signal output

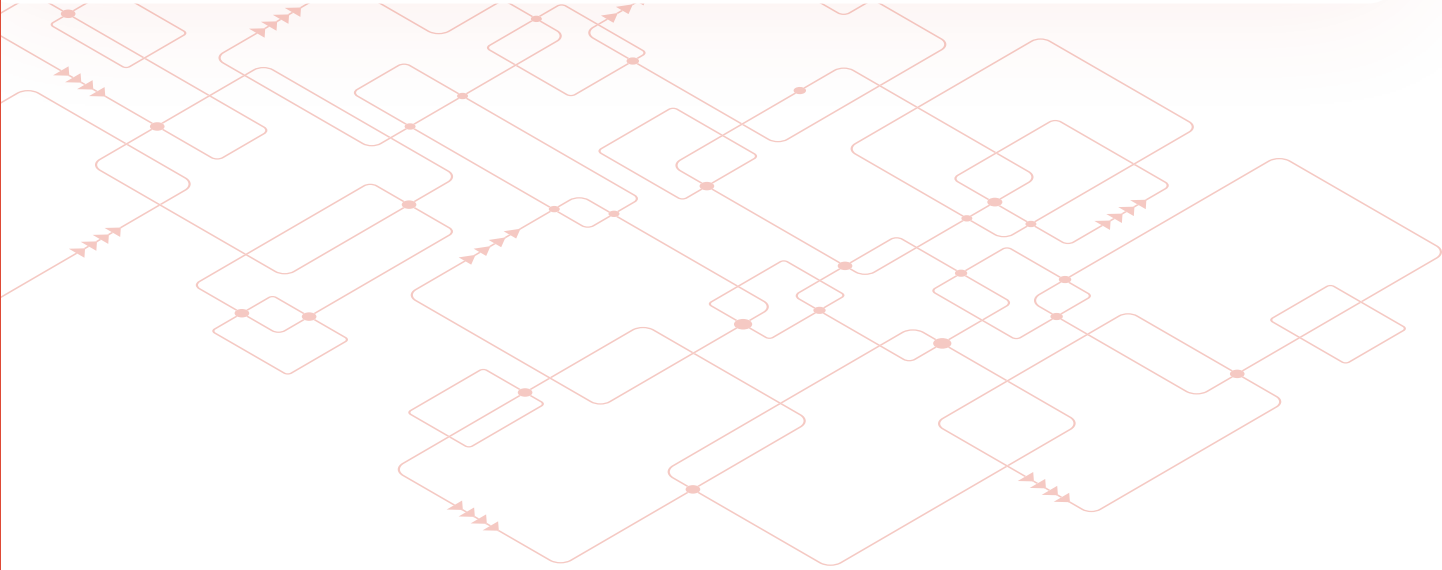
LINEAR REGULATORS | AUTOMOTIVE

5V Secondary LDOs

Part Number	V _{IN} (Min) (V)	V _{IN} (Max) (V)	I _{OUT} (mA)	Load Reg (%/mA)	PSRR @ 1kHz (dB)	V _{FB} (V)	I _Q (Typ) (µA)	Enable Pin	Adjustable Option (V)	Fixed Output Versions	Power Good	Package	Notes
MPQ20056-AEC1	2.5	5.5	250	0.0003	63	0.8	10	✓	0.8 to 5	1.8V, 2.5V, 3.3V	-	QFN-8 (2x2), TSOT23-5	-
MPQ8904-AEC1	2.7	6.5	500	0.001	26	0.5	-	✓	0.5 to 5	-	✓	QFN-8 (2x3)	-
MPQ20051-AEC1	2.5	5.5	1000	0.0003	63	0.8	30	✓	0.8 to 5	-	-	QFN-8 (3x3)	-

40V Primary LDOs

MPQ2016-AEC1	4	42	30	0.003	50	1.23	12	✓	1.2 to 20	-	-	QFN-8 (2x3)	-
MPQ2013AGJE-C672-AEC1	2.5	40	100	0.005	41	1.215	3.2	✓	1.215 to 15	3.3V, 2.5V, 5V	-	TSOT23-4	-
MPQ2013A-AEC1	2.5	40	150	0.005	41	1.215	3.3	✓	1.215 to 15	QFN-8: 3.3V, 2.5V, 5V, 1.8V QFN-6: 3.3V, 5V	-	QFN-6 (2x2), QFN-8 (3x3)	-
MPQ2019-AEC1	3	40	300	0.04	45	1.25	10	✓	1.2 to 15	3.3V, 5V	✓	SOIC-8EP	-
MPQ2029-AEC1	3	40	450	0.04	45	1.25	10	✓	1.2 to 15	-	✓	SOIC-8EP	-



EASYPower | AC/DC POWER CONVERSION

AC Buck

Part Number	Typ. Max. Power (W)	V _{IN} (Min) (V)	V _{IN} (Max) (V)	Control Method	R _{DS(on)} (Ω)	Breakdown Voltage (V)	No-Load Power (mW)	Package	Notes
MP100L	0.5	85AC	305AC	Smart LDO	9.5	700	100	SOIC-8E	Inductorless regulator for low-power applications, up to 0.5W
MP103	1.0	85AC	305AC	Smart LDO	NA	700	100	SOIC-8E	Inductorless controller for low-power applications, up to 1W
MP150	2.0	20	265AC	Non-Isolated	30	500	150	TSOT23-5, SOIC-8	Offline regulator, up to 200mA output current
MP155	3.0	20	265AC	Non-Isolated	20	500	100	TSOT23-5, SOIC-8	Offline regulator, up to 220mA output current
MP157	6.0	20	265AC	Non-Isolated	10	500	100	TSOT23-5, SOIC-8	Offline regulator, up to 360mA output current
MP158	3.0	20	265AC	Non-Isolated	20	500	100	TSOT23-5, SOIC-8	Offline regulator, up to 70mA output current
MP171	2.0	20	305AC	Non-Isolated	20	700	30	TSOT23-5, SOIC-8	Offline regulator, up to 60mA output current
N MP171A	2.0	20	305AC	Non-Isolated	20	700	30	TSOT23-5, SOIC-8	Improved EMI performance from the MP171 (up to 60mA output current)
N MP172A	3.0	20	305AC	Non-Isolated	16	700	30	TSOT23-5, SOIC-8	Improved EMI performance from the MP172 (up to 120mA output current)
N MP173A	4.0	20	305AC	Non-Isolated	14	700	30	TSOT23-5, SOIC-8	Improved EMI performance from the MP173 (up to 280mA output current)
N MP174A	5.0	20	305AC	Non-Isolated	13.5	700	30	TSOT23-5, SOIC-8	Improved EMI performance from the MP174 (up to 400mA output current)
N MP175	10	30	265AC	Non-Isolated	4.5	700	30	SOIC-8, PDIP8-7	Offline regulator, up to 600mA output current
N MP163A	2.0	20	265AC	Non-Isolated	16	700	30	SOIC-8-7B, SOIC-16	Offline regulator with integrated LDO, 210mA current-limited switching regulator
N MP163B	3.0	20	265AC	Non-Isolated	14	700	30	SOIC-8-7B, SOIC-16	Offline regulator with integrated LDO, 420mA current-limited switching regulator
N MP163C	4.0	20	265AC	Non-Isolated	13.5	700	30	SOIC-8-7B, SOIC-16	Offline regulator with integrated LDO, 660mA current-limited switching regulator
N MP161A	2.0	30	265AC	Non-Isolated	17	700	10	SOIC-16	Integrated 240mA current-limited switching regulator, linear regulator, and relay driver
N MP161B	3.0	30	265AC	Non-Isolated	14	700	10	SOIC-16	Integrated 420mA current-limited switching regulator, linear regulator, and relay driver
P MP161C	4.0	30	265AC	Non-Isolated	13.5	700	10	SOIC-16	Integrated 660mA current-limited switching regulator, linear regulator, and relay driver

FLYBACK | AC/DC POWER CONVERSION

Secondary-Side Regulation

Part Number	Typ Max Power (W)	V _{IN} (Min) (V)	V _{IN} (Max) (V)	Type	f _{sw} (Max) (kHz)	Control Scheme	Breakdown Voltage (V)	R _{DS(on)} (Ω)	Package	Notes
HFC0100	Ext FET	85AC	305AC	Controller	-	Quasiresonant	700	N/A	SOIC-8	Quasiresonant
HFC0300	Ext FET	85AC	305AC	Controller	-	Variable Frequency	700	N/A	SOIC-7	Variable off time
HFC0310	Ext FET	85AC	305AC	Controller	600	Fixed Frequency	-	N/A	SOIC-8	Programmable fixed frequency
HFC0500	Ext FET	85AC	305AC	Controller	65	Fixed Frequency	700	N/A	SOIC8-7A	HV start-up, X capacitor discharge, brown-in/out
HFC0511	Ext FET	85AC	305AC	Controller	130	Fixed Frequency	700	N/A	SOIC8-7A	130kHz fixed frequency, ultra-low no-load power consumption
P HFC0650	Ext FET	85AC	305AC	Controller	1000	Variable Frequency	650	N/A	SOIC8-7A	QRZVS flyback controller for high-efficiency, high-density adapters
HF900	10	85AC	440AC	Regulator	300	Peak Current	900	13	PDIP8-7EP, SOIC14-11	Integrated 900V MOSFET
N HF920	10	85AC	440AC	Regulator	150	Peak Current	900	15	SOIC14-11, SOIC8-7A	Integrated 900V MOSFET
N HF920A	10	85AC	440AC	Regulator	150	Peak Current	900	15	SOIC14-11, SOIC8-7A	HF920 with AC UV protection
S HF920B	10	85AC	440AC	Regulator	150	Peak Current	900	15	SOIC14-11, SOIC8-7A	Improved EMI performance from the HF920
N HF500-7	7	85AC	305AC	Regulator	65	Fixed Frequency	700	12	SOIC8-7B	Integrated 700V MOSFET
N HF500-15	15	85AC	305AC	Regulator	65	Fixed Frequency	700	4.5	SOIC8-7B	Integrated 700V MOSFET
N HF500-30	30	85AC	305AC	Regulator	65	Fixed Frequency	700	1.4	PDIP8-7B	Integrated 700V MOSFET
P HF500A-30	30	85AC	305AC	Regulator	65	Fixed Frequency	700	1.4	PDIP8-7B	Improved EMI performance from the HF500-30
N HF500-40	40	85AC	305AC	Regulator	65	Fixed Frequency	700	0.9	PDIP8-7B	Integrated 700V MOSFET
P HF500A-40	40	85AC	305AC	Regulator	65	Fixed Frequency	700	0.9	PDIP8-7B	Improved EMI performance from the HF500-40

Primary-Side Regulation

N MP020A-5	7	85AC	305AC	Regulator	75	Variable Frequency	700	10	SOIC8-7A	CV/CC control
MP023	Ext FET	85AC	305AC	Controller	100	Variable Frequency	700	N/A	SOIC8-7A	CV/CC control
MP024-10	10	85AC	305AC	Regulator	100	Variable Frequency	700	4.5	SOIC8-7B	CV/CC control

All-in-one Flyback with Primary and Secondary Controllers

N MPX2001	Ext FET	85AC	305AC	Controller	85	Variable/CCM	650	N/A	SOICW-20	200V integrated SR controller and capacitive isolation
P MPX2002	Ext FET	85AC	305AC	Controller	85	CCM/QR	650	N/A	SOICW-16	150V integrated SR controller and capacitive isolation

LLC 600V HALF-BRIDGE DRIVERS | AC/DC POWER CONVERSION

Part Number	V _{IN} (Min) (V)	V _{IN} (Max) (V)	Control Scheme	Power (W)	Topology	Capacitive Mode Protection	Adaptive Dead Time Control	Package	Notes
HR1000A	85AC	305AC	Voltage Mode	External FET	LLC Resonant	-	-	SOIC-16	Variable frequency, high-power applications
HR1001A	85AC	305AC	Voltage Mode	External FET	LLC Resonant	✓	✓	SOIC-16	Two-level OCP via frequency shift and auto-restart, other features same as the HR1001B
HR1001B	85AC	305AC	Voltage Mode	External FET	LLC Resonant	✓	✓	SOIC-16	Variable frequency, two-level OCP (1 st level auto-restart, 2 nd level latch)
HR1001C	85AC	305AC	Voltage Mode	External FET	LLC Resonant	✓	✓	SOIC-16	Improved surge performance compared to the HR1001B
HR1001L	85AC	305AC	Voltage Mode	External FET	LLC Resonant	✓	✓	SOIC-16	Two-level OCP via frequency shift and latch, other features same as the HR1001B

PFC + LLC COMBO CONTROLLERS | AC/DC POWER CONVERSION

Part Number	LLC Control Scheme	PFC Control Scheme	No-Load Power Consumption (mW)	Programming Ability	Topology	High-Voltage Start-Up	Package	Notes
N HR1203	Voltage Mode	Digital CCM/DCM Multi-mode	<150	I ² C/GUI	PFC + LLC	✓	TSSOP-28, SOIC-28	Digital PFC + analog LLC with graphic user interface, replaces the HR1200
N HR1204	Voltage Mode	Digital CCM/DCM Multi-mode	<150	I ² C/GUI	PFC + LLC	-	TSSOP-28, SOIC-28	Digital PFC + analog LLC with graphic user interface, replaces the HR1201
N HR1210	Digital Current Mode	Digital CCM/DCM Multi-mode	<100	UART/GUI	PFC + LLC	✓	TSSOP-20, SOIC-20	High-performance fully digital PFC + LLC controller
S HR1211	Digital Current Mode	Digital CCM/DCM Multi-mode	<100	UART/GUI	PFC + LLC	✓	TSSOP-20, SOIC-20	High-performance fully digital PFC + LLC controller

PFCS | AC/DC POWER CONVERSION

Part Number	V _{IN} (Min) (V)	V _{IN} (Max) (V)	I _{O, MAX} / I _{OC, MAX} (mA)	I _{LOAD, SRC} / I _{LOAD, SINK} (mA)	Control Scheme	Topology	Package	Notes
MP44010	85AC	305AC	0.65/2.5	-350/600	Boundary Mode	Boost/Buck-Boost	SOIC-8	Boundary-mode PFC controller, general purpose
MP44011	85AC	305AC	0.65/2.5	-350/600	Boundary Mode	Boost/Buck-Boost	SOIC-8	Boundary-mode PFC controller with harmonic injection function (reduced capacitor value and inductor size compared to the MP44010)
MP44014	85AC	305AC	3.2/4.5	-750/800	Boundary Mode	Boost/Buck-Boost	SOIC-8	Boundary-mode PFC controller
MP44014A	85AC	305AC	3.2/4.5	-750/800	Boundary Mode	Boost/Buck-Boost	SOIC-8	Boundary-mode PFC controller with adjusted open-loop protection
N MP44018A	85AC	305AC	0.2/1.5	-600/1000	CrM/DCM Multi-Mode	Boost	SOIC-8	CrM/DCM multi-mode boost PFC controller with enhanced light-load efficiency
N MP4078	85AC	305AC	0.4/5	35V/0.27Ω Source-Driven	DCM	Flyback/Buck-Boost/Buck	SOIC-8	Primary-side control and PFC controller for constant voltage power

SYNCHRONOUS RECTIFIERS | AC/DC POWER CONVERSION

Flyback Topology (Fast Turn-Off, Intelligent)

Part Number	Type	V _{DD} (Min) (V)	V _{DD} (Max) (V)	f _{SW} (Max) (kHz)	Drain Rating (V)	Regulation Voltage (mV)	Total I _R (500m) (mA)	Package	Notes
MP6902	Controller	6	27	400	180	70	Ext FET	SOIC-8	Light-load management
MP6906	Controller	4.2	35	400	180	30	Ext FET	SOIC-8, TSOT23-6	VCC down to 4.5V, light-load management, turn-off blanking and SYNC feature
MP6907	Controller	4.2	35	400	180	50	Ext FET	SOIC-8, TSOT23-6	VCC down to 4.5V, light-load management, turn-off blanking and SYNC feature, better efficiency than the MP6902
MP6908	Controller	4	13	400	180	40	Ext FET	TSOT23-6	Fast turn-off intelligent rectifier, slew rate detection, self-biased (no need for auxiliary winding)
N MP6908A	Controller	4	13	600	180	40	Ext FET	TSOT23-6	Very high-frequency, fast turn-off intelligent rectifier, slew rate detection, self-biased (no need for auxiliary winding)
N MP6909	Controller	4	13	400	180	40	Ext FET	TSOT23-6	Fast turn-off intelligent rectifier, slew rate detection
MP6960	Controller	8	24	400	180	70	Ext FET	SOIC-8	Integrated CC/CV controller
N MP6910A	Ideal diode	8	24	250	100	NA	15	SOIC-8	MP6902-based ideal diode
N MP6910B	Ideal diode	8	24	250	100	NA	13	SOIC-8	MP6902-based ideal diode
N MP6919	Ideal diode	4	13	400	180	NA	15	SOIC-8	MP6908-based ideal diode
N MP9989	Ideal diode	4	13	400	180	NA	10	SOIC-8, QFN-8 (4x5)	MP6908-based ideal diode
P MP9989A	Ideal diode	4	13	600	180	NA	15	SOIC-8, QFN-8 (4x5)	MP6908A-based ideal diode
N MP6953	Ideal diode	8	24	250	100	NA	17	SOIC-8	12V, 2.5A, new ideal diode
N MP6954	Ideal diode	8	24	250	100	NA	14	SOIC-8	12V, 3A, new ideal diode
N MP6972	Ideal diode	4.5	13	-	100	NA	14	SOIC-8	12V, 2.5A, new ideal diode with slew rate detection
N MP6973	Ideal diode	4.5	13	-	100	NA	14	SOIC-8	12V, 3A, new ideal diode with slew rate detection

LLC Topology (Fast Turn-Off, Intelligent)

Part Number	Type	f _{SW} (Max) (kHz)	Drain Rating (V)	Regulation Voltage (mV)	Single/Dual	Package	Notes
MP6903	Controller	300	180	70	Single	SOIC-8E	High-noise immunity, light-load management
MP6922	Controller	300	180	70	Dual	SOIC-8E, SOIC-14	V _{FWD} 70mV for LLC
MP6922A	Controller	300	180	30	Dual	SOIC-8E, SOIC-14	High-efficiency, V _{FWD} 30mV for LLC, light-load management
MP6922L	Controller	300	180	70	Dual	SOIC-8	V _{FWD} 70mV for LLC, shorten LL mode entry t _{ON} threshold, disable light-load entry when no gate pulse compared to the MP6922
MP6923	Controller	300	180	15	Dual	SOIC-14	High-power optimized
N MP6925	Controller	500	180	45	Dual	SOIC-8	Enhanced light-load performance, compatible with the MP6924A
N MP6925A	Controller	500	180	45	Dual	SOIC-8	Enhanced light-load performance, compatible with the MP6924
N MP6928A	Controller	500	200	35	Dual	SOIC-8	LL mode configuration to avoid ripple in light-load steady state

AC/DC ISOLATED | LED LIGHTING

Controllers

	Part Number	V _{in} (Min) (V)	V _{in} (Max) (V)	Power (W)	Topology	Package	Notes
	MP4026	85AC	305AC	External FET	Flyback	SOT23-6	Primary-side control, active PFC
	MP4027	85AC	305AC	External FET	Flyback	SOT23-8	Primary-side control, PFC, NTC, PWM dimming
	MP4031	85AC	305AC	External FET	Flyback	SOIC-8	TRIAC and analog dimmable, deep dimming, primary-side control, active PFC
	MP4033	85AC	305AC	External FET	Flyback	SOIC-8, MSOP-10, SOIC-14	Enhanced TRIAC-dimmable, primary-side control, active PFC
N	MP4057A	85AC	305AC	External FET	Buck-Boost	MSOP-10, SOIC-14	Single-chip/single-stage solution for smart LED/wireless modules
N	MP4059	85AC	305AC	External FET	Buck-Boost	SOIC-8	3% analog dimming
	MP4060	85AC	305AC	External FET	Buck-Boost	SOIC-8, MSOP-10, SOIC-14	Improved trailing-edge dimmer performance at high line over the MP4056
S	MP4078	85AC	305AC	External FET	Flyback/Buck-Boost/ Buck	SOIC-8	Primary-side control and PFC controller for constant voltage power
	HR1001A	85AC	305AC	External FET	LLC Resonant	SOIC-16	Resonant half-bridge, variable frequency, high-power application, auto-restart at over-current for street lighting applications
	HR1001B	85AC	305AC	External FET	LLC Resonant	SOIC-16	Resonant half-bridge, variable frequency, high-power application, two-level OCP
	HR1001C	85AC	305AC	External FET	LLC Resonant	SOIC-16	Enhanced LLC controller with adaptive dead-time control, OCP, auto-restart, latch, enhanced surge
	HR1001L	85AC	305AC	External FET	LLC Resonant	SOIC-16	Enhanced LLC controller with adaptive dead-time control, OCP, latch
	MP44010	85AC	305AC	External FET	PFC Boost/Buck-Boost	SOIC-8, DIP-8	Offline PFC, boundary conduction, ultra-low start-up current (15µA)
	MP44011	85AC	305AC	External FET	PFC Boost/Buck-Boost	SOIC-8	Offline PFC, boundary conduction, harmonic injection function (reduced capacitor value and inductor size from the MP44010)
	MP44014	85AC	305AC	External FET	PFC Boost/Buck-Boost	SOIC-8	Offline PFC, boundary conduction
	MP44014A	85AC	305AC	External FET	PFC Boost/Buck-Boost	SOIC-8	Boundary-mode PFC controller with adjusted open-loop protection
S	MP44018A	85AC	305AC	External FET	PFC Boost/Buck-Boost	SOIC-8	CrM/DCM multi-mode boost PFC controller with enhanced light-load efficiency

Regulators

	MP4032-1	85AC	132AC	7	Flyback	SOIC8-7A	Integrated 500V FET, TRIAC dimmable, deep dimming, primary-side control, active PFC
	MP4034	85AC	305AC	7	Flyback	SOIC-8, MSOP-10, SOIC-14	Integrated 700V FET, primary-side control, no dimming or PFC

PROTECTION | LED LIGHTING

Part Number	Control Method	Package	Notes
MP4690	Shunt	SOD-123	Smart bypass for LED Protection, 6V threshold voltage protects 1 LED

AC/DC NON-ISOLATED | LED LIGHTING

Controllers

Part Number	V _{IN} (Min) (V)	V _{IN} (Max) (V)	Power (W)	Configuration	Package	Notes
MP4001	85AC	305AC	External FET	Low-Side Buck	SOIC-8	Offline LED controller, integrated high-voltage LDO, analog and PWM dimming
MP4054	85AC	305AC	External FET	Buck-Boost	SOT23-8	Offline LED controller, active PFC
MP4054A	85AC	305AC	External FET	Buck-Boost	SOT23-8	Offline LED controller, active PFC, NTC, PWM dimming
MP4056	85AC	305AC	External FET	Buck-Boost	SOIC-8, MSOP-10, SOIC-14	TRIAC dimmable, offline LED controller, active PFC

Regulators

MP4050A	85AC	265AC	8	Buck	SOIC-8, SOT23-5	Integrated 500V FET, offline driver, enhanced thermal, no PFC or dimming
MP4068	85AC	305AC (Recommend Low-Line Only)	10	Buck/Buck-Boost	SOIC8-7A, SOIC-8EP	Integrated 500V FET, PFC driver with TRIAC dimming
MP4088	85AC (Recommend High-Line Only)	305AC	8.5	Buck/Buck-Boost	SOIC8-7A, SOIC-8EP, TSOT23-5	Integrated 500V FET, PFC driver with TRIAC dimming

DC/DC LIGHTING | LED LIGHTING

Regulators

Part Number	V _{IN} (Min) (V)	V _{IN} (Max) (V)	Configuration	I _{OUT} (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	SOIC-8E	Hysteretic control, PWM dimming
MP2481	4.5	36	Buck/Buck-Boost	1.2	95	1.4MHz	MSOP-8E	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 the MP2489
MP24893	6	36	Low-Side Buck	1	95	600kHz	QFN-6 (3x3), TSOT23-5	Hysteretic control, analog and PWM dimming, lower cost version of the MP2489
MP2483	4.5	55	Buck/Buck-Boost	2.5	95	1.35MHz	QFN-10 (3x3), SOIC-14	Analog and PWM dimming, consumer-grade
MP24183	4.5	55	Buck/Buck-Boost	1	95	1.35MHz	QFN-10 (3x3)	Analog and PWM dimming
MP2488	4.5	55	Buck	2	97.5	200kHz	QFN-10 (3x3), SOIC-8E	PWM dimming
MP2487	4.5	55	Buck	1	97.5	200kHz	SOIC-8E	PWM dimming
N MP24833A	4.5	55	Buck/Boost/ Buck-Boost	3	90	210kHz	SOIC-8E	Analog and PWM dimming
MP24895	6	36	Low-Side Buck	1	95	600kHz	TSOT23-5, QFN-6	Hysteretic control, PWM and analog dimming
MP24895A	6	36	Low-Side Buck	-	-	-	MSOP-8EP	The MP24895 in an MSOP-8EP package, PWM and analog dimming
MP4688	4.5	80	Buck	1	95	2MHz	SOIC-8, SOIC-8E	Hysteretic control, PWM dimming
MP4689A	4.5	100	Buck	1	95	1MHz	SOIC-8EP	Hysteresis current-mode control, dedicated PWM dimming control input

DC/DC LIGHTING | LED LIGHTING

Regulators

	Part Number	V_{in} (Min) (V)	V_{in} (Max) (V)	Configuration	I_{out} (A)	Max Efficiency (%)	Typ Frequency	Package	Notes
N	MP2410	4.2	24	Buck	2	97	1MHz	TSOT23-6, TSOT23-8	Synchronous buck, analog dimming only
N	MP2410A	4.2	24	Buck	2	97	1MHz	TSOT23-6, TSOT23-8	Synchronous buck, analog and PWM dimming
N	MP2410B	4.2	24	Buck	2	97	1MHz	TSOT23-6, TSOT23-8	Synchronous buck, analog and PWM dimming, supports battery charger
N	MP2489	6	60	Low-Side Buck	1	95	600kHz	QFN-6 (3x3), TSOT23-5, SOIC-8E	Hysteretic control

Controllers

	Part Number	V_{in} (Min) (V)	V_{in} (Max) (V)	Power (W)	Configuration	Max Efficiency (%)	Package	Notes
	MP4012	8	55	Ext FET	Buck/Boost/Buck-Boost/SEPIC	-	SOIC-16	HV9912 pin comp, for backlight (i.e. $V_{out} > 200V$) and lighting (high-output power)
	MP24894	6	60	Ext FET	Low-Side Buck	95	TSOT-6	Buck controller, hysteresis control

PHOTO FLASH | LED LIGHTING

	Part Number	Charge Type	V_{in} (Min) (V)	V_{in} (Max) (V)	V_{sw} (Max) (V)	I_{out} (Max) (A)	I_{out} (Min) (A)	Package	Notes
	MP3331	WLED	2.7	5.5	6	2	-	WLCSP (1.7x1.7)	Single-channel boost driver for smartphone camera flash
	MP3361	Xenon Flash	2.5	6	60	1.2	1.0 (Typ)	MSOP-10	Highly integrated, IGBT driver
	MP3360	Xenon Flash	2.5	6	60	1.7	0.4	QFN-10 (2x2)	Programmable peak current, highly integrated, IGBT driver for mobile phones
	MP3356	Xenon Flash	2.8	6	50	1.7	1.5	QFN-10 (2x2)	Highly integrated, IGBT driver for DSC
	MP3351	Xenon Flash	3	6	60	2	0.3	QFN-16 (3x3)	Integrated photo flash charger with IGBT driver
	MP3352	Xenon Flash	3	6	60	2.5	0.3	QFN-16 (3x3)	Integrated photo flash charger with IGBT driver and quench

SINGLE-CELL SWITCHING CHARGERS | BATTERY MANAGEMENT

Part Number	Operating V_{IN} (Min) (V)	Operating V_{IN} (Max) (V)	Absolute V_{IN} (Max) (V)	Charge Current (Max) (A)	Battery Charge Voltage (V)	OTG Current (Max) (A)	f_{SW} (kHz)	Control Interface	NVDC Power Path	Battery Type	Package	Notes
MP2611	3.95	6	7.5	2	4.2	-	1500	Standalone	-	Li-Ion, Li-Polymer	QFN-14 (3x4)	Dual inputs, NTC battery temp monitor
MP2615B	4.5	18	23	2	3.99/ 4.03	-	760	Standalone	-	Li-Ion, Li-Polymer	QFN-16 (3x3)	NTC battery temp monitor
N MP2615C	3.95	18	23	2	4.1/8.4	-	760	Standalone	-	Li-Ion, Li-Polymer	QFN-16 (3x3)	NTC battery temp monitor, 25m Ω R_{SNS}
MP2625B	4	10	20	2	4.2	-	1600	Standalone	✓	Li-Ion, Li-Polymer	QFN-20 (3x4)	NTC battery temp monitor
MP2626	4.2	6.5	20	2	4.2/ 4.35	1.5	1200/ 600	Standalone	-	Li-Ion, Li-Polymer	QFN-24 (4x4)	NTC battery temp monitor
MP2617A	4	10	20	3	4.35	-	1600	Standalone	✓	Li-Ion, Li-Polymer	QFN-20 (3x4)	NTC battery temp monitor
MP2617B	4	10	20	3	4.2	-	1600	Standalone	✓	Li-Ion, Li-Polymer	QFN-20 (3x4)	NTC battery temp monitor
MP2617H	4	14	20	3	4.2	-	1600	Standalone	✓	Li-Ion, Li-Polymer	QFN-20 (3x4)	NTC battery temp monitor
N MP2695	4	11	16	3.6	3.6 to 4.45	-	720/ 1200	I ² C	-	Li-Ion, Li-Polymer	QFN-21 (3x3)	JEITA battery NTC monitor, OTP programmable charging parameters, battery current monitor
MP2624	3.6	7	20	4.5	3.48 to 4.425	1.3	1700	I ² C	✓	Li-Ion, Li-Polymer	QFN-22 (3x4)	JEITA battery NTC monitor, BC1.2 detection, shipping mode, OTG OCP hiccup function
MP2624A	3.6	7	20	4.5	3.48 to 4.425	1.3	1700	I ² C	✓	Li-Ion, Li-Polymer	QFN-22 (3x4)	JEITA battery NTC monitor, BC1.2 detection, shipping mode, OTG OCP latch function
N MP2629	3.7	5.5	22	4.5	3.4 to 4.67	3	750/ 1500	I ² C/ Standalone	✓	Li-Ion, Li-Polymer	QFN-26 (3.5x3.5)	JEITA battery NTC monitor, OTP programmable charging parameters, ADC
N MP2639B	3.6	16	20	5	4.35	3	1300	Standalone	-	Li-Ion, Li-Polymer	QFN-26 (4x4)	JEITA battery NTC monitor, LED fuel gauge, battery current monitor
N MP2723	3.7	5.5	22	3	3.4 to 4.67	1.5	1000/ 1350	I ² C/ Standalone	✓	Li-Ion, Li-Polymer	QFN-26 (3.5x3.5)	JEITA battery NTC monitor, OTP programmable charging parameters, ADC
N MP2731	3.7	16	22	4.5	3.4 to 4.67	3	1000/ 1500	I ² C/ Standalone	✓	Li-Ion, Li-Polymer	QFN-26 (3.5x3.5)	JEITA battery NTC monitor, OTP programmable charging parameters, ADC

LINEAR CHARGERS | BATTERY MANAGEMENT

Part Number	Operating V_{IN} (Min) (V)	Operating V_{IN} (Max) (V)	Absolute V_{IN} (Max) (V)	Charge Current (Max) (mA)	Battery Charge Voltage (V)	Power Path	Control Interface	Battery Type	Package	Notes
MPQ5480	4	6	7	7.8 to 127	4.10	✓	Standalone	Li-Ion, Li-Polymer	WLCSP-16 (1.7x1.7)	Integrated charger with 5V/100mA DC/DC, synchronous regulator
MP2603	2.8	5.25	25	50 to 150	4.20	-	Standalone	Li-Ion, Li-Polymer	TSOT23-5	Charging indication
MP2660	4	5.85	13	8 to 500	3.6 to 4.5	✓	I ² C	Li-Ion, Li-Polymer/ LiFePO4	WCSP-9 (1.55x1.55)	Shipping mode, integrated battery pack protection, OTP programmable charging parameters, NTC battery temp monitor
MP2661	4	5.85	13	8 to 500	3.6 to 4.565	✓	I ² C	Li-Ion, Li-Polymer/ LiFePO4	WCSP-9 (1.55x1.55)	Shipping mode, integrated battery pack protection, OTP programmable charging parameters, NTC battery temp monitor

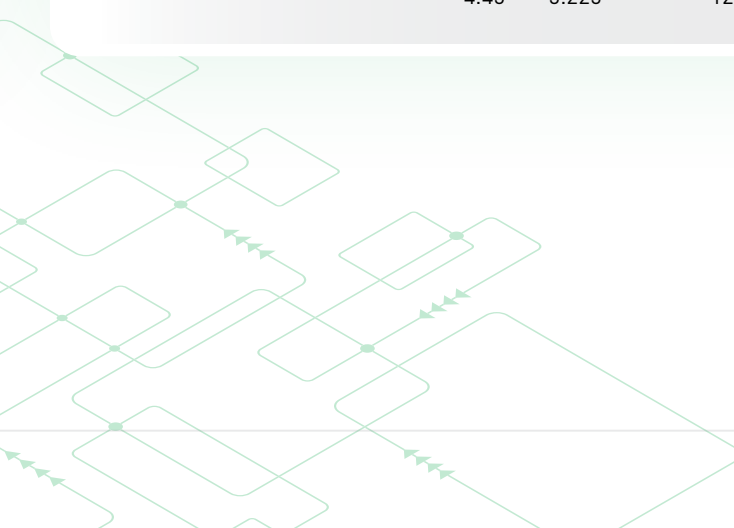
	Part Number	Operating V_{IN} (Min) (V)		Operating V_{IN} (Max) (V)	Absolute V_{IN} (Max) (V)	Charge Current (Max) (mA)	Battery Charge Voltage (V)	Power Path	Control Interface	Battery Type	Package	Notes
N	MP2662	3.83	5.85	21	8 to 456	3.6 to 4.5	✓	I ² C	Li-Ion, Li-Polymer/LiFePO ₄	WCSP-9 (1.75x1.75)	Shipping mode, integrated battery pack protection, 1µA battery leakage current, low $R_{DS(ON)}$, OTP programmable charging parameters, NTC battery temp monitor	
	MP2663	4.35	5.5	13	8 to 500	3.6 to 4.5	✓	I ² C	Li-Ion, Li-Polymer/LiFePO ₄	WCSP-9 (1.55x1.55)	Shipping mode, integrated battery pack protection, OTP programmable charging parameters, NTC battery temp monitor	
	MP2664	4	5.85	13	8 to 500	3.6 to 4.5	✓	I ² C	Li-Ion, Li-Polymer/LiFePO ₄	QFN-10 (2x2)	Shipping mode, integrated battery pack protection, OTP programmable charging parameters, NTC battery temp monitor	
	MP2602	3.2	5.8	28	85 to 1000	4.20	-	Standalone	Li-Ion, Li-Polymer	QFN-10 (3x3)	NTC battery temp monitor, adapter present and charging indication, programmable termination current	
	MP26028	3.2	6.8	20	85 to 1000	4.20	-	Standalone	Li-Ion, Li-Polymer	QFN-10 (3x3)	Adapter present and charging indication, programmable termination current	
	MP26029	3.9	6.25 or 10.6	13	30 to 1000	3.6 to 4.4	-	Standalone	Li-Ion, Li-Polymer	SOT563, SOIC-8E, QFN-10 (3x3)	NTC battery temp monitor, OTP programmable charging parameters, die temperature regulation, P2P with the MP2602	
	MP2604	3.2	6.7	28	85 to 1000	4.2	-	Standalone	Li-Ion, Li-Polymer	QFN-10 (3x3)	Adapter present and charging indication, programmable termination current, NTC battery temp monitor	
	MP2605	2.5	6.7	28	200 to 1000	4.20	-	Standalone	Li-Ion, Li-Polymer	QFN-10 (3x3)	Adapter present and charging indication, NTC battery temp monitor	
	MP26053	2.5	6.7	28	200 to 1000	4.20	-	Standalone	Li-Ion, Li-Polymer	QFN-10 (3x3)	Adapter present and charging indication, NTC battery temp monitor	
	MP26056	2.5	6.8	28	200 to 1000	4.20	-	Standalone	Li-Ion, Li-Polymer	QFN-10 (3x3)	Dual-mode USB and AC adapter current limits, adapter present and charging indication, programmable termination current	
	MP26057	3.5	6.8	28	200 to 1000	4.20	-	Standalone	Li-Ion, Li-Polymer	QFN-10 (3x3)	Adapter present and charging indication, programmable termination current, NTC battery temp monitor	
	MP26058	2.8	6.7	28	200 to 1000	4.20	-	Standalone	Li-Ion, Li-Polymer	QFN-10 (3x3)	Adapter present and charging indication, programmable termination current, NTC battery temp monitor	
	MP2606	3.2	6.8	28	85 to 1000	4.20	-	Standalone	Li-Ion, Li-Polymer	QFN-10 (3x3)	Adapter present and charging indication, programmable termination current	
	MP26060	3.2	6.8	24	85 to 1000	4.15	-	Standalone	Li-Ion, Li-Polymer	QFN-10 (3x3)	Adapter present and charging indication, programmable termination current	
	MP2607	4.51	6.27	13	300 to 1500	4.20	✓	Standalone	Li-Ion, Li-Polymer	QFN-14 (3x4)	Power-path management, dual-mode USB and AC adapter current limits, low $R_{DS(ON)}$, adapter present and charging indication, NTC battery temp monitor	
	MP2608	4.25	5.8	28	100 to 1000	4.20	-	Standalone	Li-Ion, Li-Polymer	QFN-10 (3x3)	Dual inputs, fault and charging indication, programmable termination current	
	MP26121	2.5	6.7	28	200 to 1000	4.20	-	Standalone	Li-Ion, Li-Polymer	QFN-10 (3x3)	Adapter present and charging indication, NTC battery temp monitor	
	MP2631	2.5	6.7	28	200 to 1000	4.20	✓	Standalone	Li-Ion, Li-Polymer	QFN-10 (3x3)	Integrated 10mA LDO, adapter present and charging indication	
N	MP2667	4	5.85	13	26 to 1049	3.6 to 4.545	✓	I ² C	Li-Ion, Li-Polymer/LiFePO ₄	WLCSP-16 (1.7x1.7)	Shipping mode, integrated battery pack protection, OTP programmable charging parameters, NTC battery temp monitor	
S	MP2665	3.83	5.85	21	16 to 896	3.6 to 4.545	✓	I ² C	Li-Ion, Li-Polymer/LiFePO ₄	QFN-12 (2.5x3.0)	Shipping mode, integrated battery pack protection, 1µA battery leakage current, low $R_{DS(ON)}$, OTP programmable charging parameters, NTC battery temp monitor	

MULTI-CELL SWITCHING CHARGERS | BATTERY MANAGEMENT

Part Number	Operating V_{IN} (Min) (V)	Operating V_{IN} (Max) (V)	Absolute V_{IN} (Max) (V)	Charge Current (Max) (A)	Battery Charge Voltage (V)	f_{SW} (kHz)	Topology	# of Series Cells	Control Interface	Battery Type	Package	Notes
MP2610	5	24	26	2	4.2/8.4	1100	Non-Sync Buck	1, 2	Standalone	Li-Ion, Li-Polymer	QFN-16 (4x4)	NTC battery temp monitor
MP26101	5	24	26	2	4.1/8.2	1100	Non-Sync Buck	1, 2	Standalone	Li-Ion, Li-Polymer	QFN-16 (4x4)	NTC battery temp monitor
MP26123	9	24	26	2	8.4/12.6	600	Non-Sync Buck	2, 3	Standalone	Li-Ion, Li-Polymer	QFN-16 (4x4)	NTC battery temp monitor
MP26124	18	24	28	2	16.8	600	Non-Sync Buck	4	Standalone	Li-Ion, Li-Polymer	QFN-16 (4x4)	NTC battery temp monitor
MP2615	3.95	18	23	2	4.1/8.4	760	Sync Buck	1, 2	Standalone	Li-Ion, Li-Polymer	QFN-16 (3x3)	NTC battery temp monitor
MP2615A	3.95	18	23	2	4.2/8.7	760	Sync Buck	1, 2	Standalone	Li-Ion, Li-Polymer	QFN-16 (3x3)	NTC battery temp monitor
N MP2615C	3.95	18	23	2	4.1/8.4	760	Sync Buck	1, 2	Standalone	Li-Ion, Li-Polymer	QFN-16 (3x3)	NTC battery temp monitor, 25m Ω R_{SNS}
MP2619	3.4	24	26	2	8.4/12.6	600	Non-Sync Buck	2, 3	Standalone	Li-Ion, Li-Polymer	QFN-28 (4x5)	Power-path management, NTC battery temp monitor
MP2623	3.5	24	26	2	3.6/7.2	1100	Non-Sync Buck	1, 2	Standalone	LiFePO4	QFN-16 (4x4)	NTC battery temp monitor
N MP2672	3.65	5.75	14	2	8.4	600/1200	Sync Boost	2	I ² C/ Standalone	Li-Ion, Li-Polymer	QFN-18 (2x3)	NVDC power-path management, JEITA battery NTC monitor, OTP programmable charging parameters, integrated cell balancing
MP2639A	3.9	5.5	20	2.5	8.4	1300	Sync Boost	2	Standalone	Li-Ion, Li-Polymer	QFN-26 (4x4)	JEITA battery NTC monitor, LED fuel gauge, battery current monitor, integrated cell balancing, USB OTG
N MP2639C	3.9	5.5	20	2.5	8.4	1300	Sync Boost	2	Standalone	Li-Ion, Li-Polymer	QFN-26 (4x4)	USB OTG, integrated cell-balancing, USB-compatible, JEITA battery NTC monitor, thermal regulation, V_{IN} regulation, LED fuel gauge
N MP2659	3.9	36	40	3	10.8 to 26.1	350/680	Sync Buck	3, 4, 5, 6	Standalone	Li-Ion, Li-Polymer/ LiFePO4	QFN-19 (3x3)	Battery NTC monitor, OTP programmable charging parameters, integrated power FETs
N MP2759	3.9	36	40	3	3.6 to 26.4	1000/1350	Sync Buck	1, 2, 3, 4, 5, 6	Standalone	Li-Ion, Li-Polymer/ LiFePO4	QFN-19 (3x3)	Battery NTC monitor, OTP programmable charging parameters, integrated power FETs
N MP2672A	3.65	5.75	14	2	8.4	1000/1500	Sync Boost	2	I ² C/ Standalone	Li-Ion, Li-Polymer	QFN-18 (2x3)	NVDC power-path management, JEITA battery NTC monitor, OTP programmable charging parameters, integrated cell balancing

POWER BANK MANAGEMENT | BATTERY MANAGEMENT

Part Number	Operating V_{IN} (Min) (V)	Operating V_{IN} (Max) (V)	Absolute V_{IN} (Max) (V)	Charge Current (Max) (A)	Battery Charge Voltage (V)	OTG Voltage (V)	OTG Current (Max) (A)	f_{SW} (kHz)	Control Interface	Battery Type	Package	Notes
MP2633A	4.2	6.5	20	1.5	4.2/ 3.6	4.2 to 6	1.5	1200/ 600	Standalone	Li-Ion, Li-Polymer/ LiFePO4	QFN-24 (4x4)	Power-path management, NTC battery temp monitor, adjustable boost output voltage
MP2635A	4.2	6.5	20	2	4.2/ 3.6	4.2 to 5.6	1.5	1200/ 600	Standalone	Li-Ion, Li-Polymer/ LiFePO4	QFN-24 (4x4)	Power-path management, NTC battery temp monitor, adjustable boost output voltage
MP2635B	4.2	6.5	20	2	4.2/ 4.35	4.2 to 5.6	1.5	1200/ 600	Standalone	Li-Ion, Li-Polymer	QFN-24 (4x4)	Power-path management, NTC battery temp monitor, adjustable boost output voltage
MP2637	4.5	6.5	20	2.5	4.2/ 4.35	4.2 to 6	2.4	600	Standalone	Li-Ion, Li-Polymer	QFN-24 (4x4)	Power-path management, NTC battery temp monitor, adjustable boost output voltage
MP2637A	4.5	6.5	20	2.5	4.055/ 4.2	4.2 to 6	2.4	620	Standalone	Li-Ion Li-Polymer	QFN-24 (4x4)	Power-path management, NTC battery temp monitor, adjustable boost output voltage
MP2639A	4.05	5.75	20	2.5	8.4	4.5 to 5.5	5	1300	Standalone	Li-Ion Li-Polymer	QFN-26 (4x4)	JEITA battery NTC monitor, LED fuel gauge, battery current monitor, integrated cell balancing, adjustable buck output voltage
N MP2639C	3.9	5.75	20	2.5	8.4	4.5 to 5.5	5	1300	Standalone	Li-Ion Li-Polymer	QFN-26 (4x4)	USB OTG, integrated cell balancing, USB-compatible, JEITA battery NTC monitor, thermal regulation, V_{IN} regulation, LED fuel gauge
MP2690	3.6	5.8	14	2.5	4.2/ 4.35/ 4.45	5.1	2.1	600	Standalone	Li-Ion Li-Polymer	QFN-26 (4x4)	Power-path management, BC1.2 detection, LED fuel gauge, NTC battery temp monitor, all-in-one autonomous mode
MP2632B	3.6	5.8	20	3	4.2/ 4.35/ 4.45	5.1	3	600	Standalone	Li-Ion Li-Polymer	QFN-26 (4x4)	Power-path management, BC1.2 detection, LED fuel gauge, NTC battery temp monitor, all-in-one autonomous mode
MP2636	4.5	6.5	16	3	4.2/ 4.3/ 4.35	4.2 to 6	3	600	Standalone	Li-Ion Li-Polymer	QFN-30 (4x4)	Power-path management, NTC battery temp monitor, adjustable boost output voltage, battery current monitor
N MP2696A	4	11	16	3.6	3.6 to 4.45	5.05 to 5.225	3.6	700/ 1200	I ² C	Li-Ion Li-Polymer	QFN-21 (3x3)	JEITA battery NTC monitor, power-path management, OTP programmable charging parameters, battery current monitor, programmable boost output voltage
MP2639B	4.5	16	20	5	4.35	5 to 15	3	1300	Standalone	Li-Ion Li-Polymer	QFN-26 (4x4)	JEITA battery NTC monitor, LED fuel gauge, battery current monitor, adjustable boost output voltage
MP2659	4.2	36	40	3	10.8 to 26.4	700/ 350	Sync Buck	3, 4, 5, 6	Standalone	Li-Ion Li-Polymer	QFN-19 (3x3)	Battery NTC monitor, OTP programmable charging parameters, integrated power FETs
S MP2696B	4	11	16	3.6	3.6 to 4.45	5.05 to 5.225	3.6	700/ 1200	I ² C	Li-Ion Li-Polymer	QFN-21 (3x3)	JEITA battery NTC monitor, power-path management, OTP programmable charging parameters, battery current monitor, programmable boost V_{OUT}

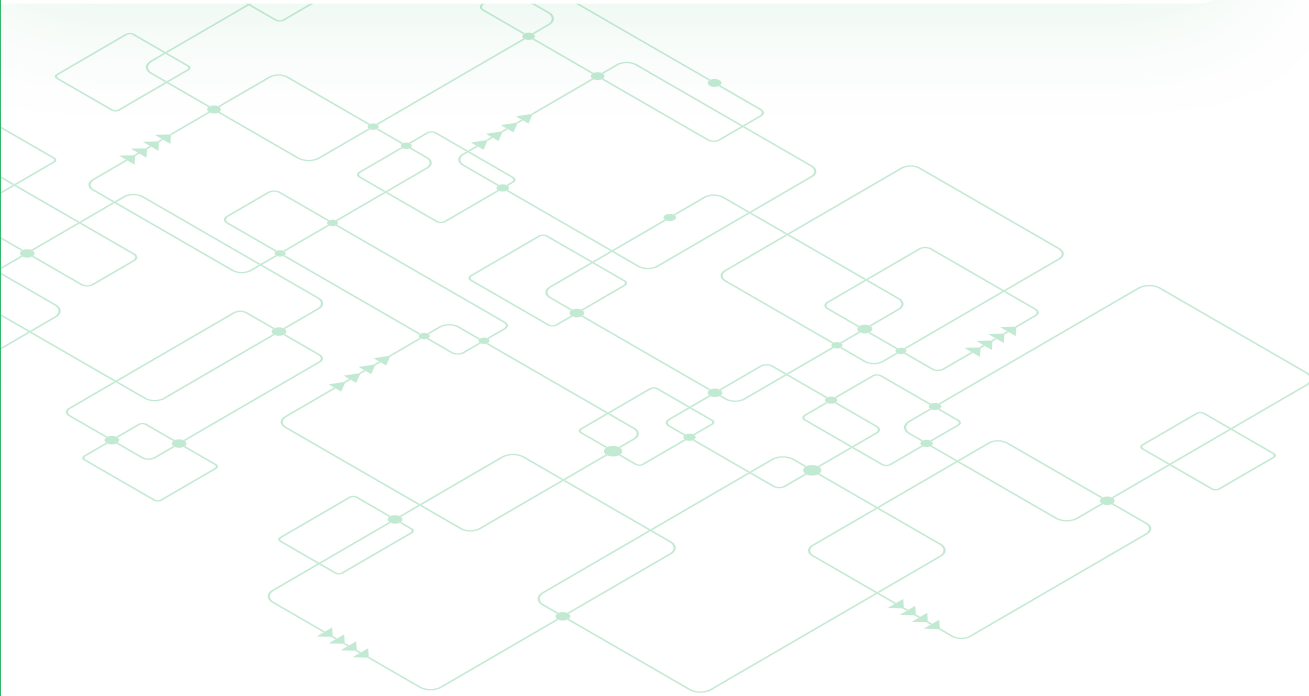


CRADLE CHARGERS | BATTERY MANAGEMENT

Part Number	Operating V_{IN} (Min) (V)	Operating V_{IN} (Max) (V)	Absolute V_{IN} (Max) (V)	Charge Current (Max) (A)	Charge Status	Charge Type	Battery Charge Voltage (V)	Package	Notes
MP26075	2.5	6.1	28	1	✓	CV/CC Linear	4.05 to 4.2	QFN-10 (3x3)	Pre-charge function, thermal foldback, voltage control function for flyback controller
MP26085	7	20	22	20	-	CV/CC Controller	Programmable	SOT23-8	CC/CV controller with 1.223V voltage reference
MP2681	4.9	30	36	4	✓	CV/CC Controller	4.15 to 20.75	SOIC-16	Full protection and indication, one-chip solution for power tool applications
MP2681B	4.9	30	36	5	✓	CV/CC Controller	4.158 to 20.79	SOIC-16	Full protection and indication, one-chip solution for power tool applications

PROTECTION | BATTERY MANAGEMENT

Part Number	Operating V_{IN} (Min) (V)	Operating V_{IN} (Max) (V)	Absolute V_{IN} (Max) (V)	Charge Type	Package	Notes
MP2670	3	5.55	30	Battery Protection	QFN-10 (3x3)	Li-ion battery charger, protection circuit
MP2671	2.7	5.65	30	Battery Protection	QFN-12 (3x4)	Li-ion battery charger, protection circuit



WHITE LED DRIVERS | DISPLAY BACKLIGHTING POWER

Inductors & Charge Pumps

Part Number	V _{IN} (Min) (V)	V _{IN} (Max) (V)	V _{OUT} (Max) (V)	# of Channels	Current Limit (Typ) (A)	V _{FB} (V)	f _{SW} (kHz)	Open LED Protection	Type	Package	Notes
MP1517	2.6	25	25	1	4	0.7	1100	✓	Boost	QFN-16 (4x4)	UVLO, external comp
MP1518	2.5	6	25	1	0.35	0.104	1300	-	Boost	QFN-8 (2x2), TSOT23-6	-
MP1519	2.5	5.5	10	4	-	-	1300	-	Charge Pump	QFN-16 (3x3)	Common cathode
MP1528	2.7	36	36	1	0.95	0.4	Variable	✓	Boost	MSOP-8, QFN-6 (3x3), QFN-8 (2x3)	Drives up to 9 series white LED drivers
MP1529	2.7	5.5	25	3	1.2	-	1200	✓	Boost	QFN-16 (4x4)	Integrated flash
N MP23701	4.2	24	-	1	-	0.1	1500	✓	Buck	UTQFN-8 (1.5x2.5)	2A, 1.5MHz, synchronous, step-down LED driver
MP24830-C470	Offline	Offline	External FET	1	External FET	0.2	50 to 365	✓	Buck-Boost	SOIC-14, QFN-14	Power leverage in 2.5 power stages, low BOM cost and high efficiency
MP3021	2.7	5.5	4	4	-	-	1250	-	Charge Pump	QFN-16 (3x3)	Single-wire brightness control, common anode
MP3202	2.5	6	25	1	1.3	0.104	1300	✓	Boost	QFN-8 (2x2), TSOT23-5	UVLO, low EMI, thermal shutdown
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
MP3301	2.5	6	36	1	1	-	1300	✓	Boost	TSOT23-5	Up to 10 series LED
MP3302	2.5	6	36	1	1.3	0.2	1300	✓	Boost	QFN-8 (2x3), TSOT23-5	UVLO, low EMI, thermal shutdown
MP3304A MP3304B MP3304C	3	6	36 24 18	1	1.33	0.2	2200	✓	Boost	QFN-8 (2x3)	High efficiency, true PWM dimming
MP3305	3	6	36	1	1.33	0.2	2200	✓	Boost	QFN-8 (2x3)	High efficiency, true PWM dimming, adjustable OVP threshold
MP3306	3	12	30	1	1.8	0.2	700	✓	Boost	QFN-12 (2x2)	Synchronous boost, integrated disconnect FET
MP3307	2.7	5.5	35	1	1.6 (Min)	0.2	300 to 2200, Prog	✓	Boost	TSOT23-8	Up to 2.2MHz for automotive infotainment LCD
MP3308	3	6	36	1	1.3	0.2	2200	✓	Boost	QFN-14 (3x4)	Supporting CABG dimming
MP3309	2.7	5.5	35	1	1.5	0.2	300 to 2200, Prog	✓	Boost	QFN-10 (1.4x1.8)	Synchronous boost
MP3309A	2.7	5.5	35	1	1.5	0.2	300 to 2200, Prog	✓	Boost	QFN-10 (3x3)	Synchronous boost
MP3309C	2.7	5.5	35	1	1.5	0.2	300 to 2200, Prog	✓	Boost	QFN-10 (1.4x1.8)	Synchronous boost, I ² C interface
MP3309L	2.7	5.5	24	1	1.6	0.2	300 to 2200, Prog	✓	Boost	QFN-10 (1.4x1.8)	Synchronous boost
MP3310	4.5	25	50	1	1.3	0.5	1200, Prog	✓	Boost	QFN-10 (3x3)	-
MP3312	2.7	5.5	36	2	1.8	0.24	1200	✓	Boost	WLCSP-9 (1.3x1.3)	-
MP3313	2.7	5.5	38	3	1.5	-	250/500/1000	✓	Boost	WLCSP-12	Linear/exponential dimming, analog dimming, 100mA LED current in flash mode, I ² C

WHITE LED DRIVERS | DISPLAY BACKLIGHTING POWER

Inductors & Charge Pumps

Part Number	V _{IN} (Min) (V)	V _{IN} (Max) (V)	V _{OUT} (Max) (V)	# of Channels	Current Limit (Typ) (A)	V _{FB} (V)	f _{sw} (kHz)	Open LED Protection	Type	Package	Notes
MP3318	2.7	5.5	38	3	1.5	-	250/500/1000	✓	Boost	WLCSP-12	Linear/exponential dimming, 50mA LED current in flash mode, I ² C
S MP3326	4	16	-	16	-	-	-	✓	LED Driver with Current Source	QFN4-24 (4x4)	10 programmable addresses, programmable LED current slew rate, phase shift
S MP3362	3	36	36	1	4	0.2	200 to 2200 Prog	✓	Boost	FCTSOT23-8	Low R _{DS(ON)} , soft start operation
S MP3363	1.8	36	36	1	1	0.2	200 to 2200 Prog	✓	Boost	FCTSOT23-8	Low R _{DS(ON)} , soft start operation
MP3366	3	25	50	6	2.5	0.5	600	✓	Boost	WLCSP-18 (1.3x2.5)	Smart dimming, tablet PC
N MP3367	3.5	36	45	6	3	0.4	200 to 2200	✓	Boost/SEPIC	QFN4-24 (4x4), TSSOP-28EP	I ² C interface, 15000:1 dimming ratio, prog. LED short threshold, prog. OVP threshold
N MP3370	3.5	36	38	1	3	-	350 to 450	✓	Boost	SOIC-8E	LED driver with current source
S MP3371	3	30	50	8	1.8/2.5	-	350/500/650/800/950/1200	✓	Boost	QFN4-24 (4x4)	I ² C interface, linear smooth dimming, multiple dimming operation mode
MP3373	9	40	External FET	8	External FET	0.2	100 to 1000	✓	Boost	SOIC-28, TSSOP-28	Phase-shift inductor short protection, cost-effective, replaces the MP3393 in new designs
MP3376	3	30	36	8	2.5	-	350 to 2400	✓	Boost	QFN-24 (4x4)	Max 50mA/string, I ² C interface
MP3376A	3	30	37.5	8	2.5	-	350 to 2400	✓	Boost	QFN-24 (4x4)	Max 50mA/string, I ² C interface
S MP3377	3	30	36	8	1.8/2.5	-	350/500/650/800/950/1200/1800/2400	✓	Boost	CSP-25 (2.6x2.6)	4 I ² C addresses, linear smooth dimming, multiple dimming operation mode
MP3378	5	24	55	4	-	-	300 to 500	✓	Boost	SOIC-28, TSSOP-28EP	Integrated boost controller, DC/DC buck converter
MP3384L	3	25	50	4	1.3	0.6	1250 or 625	✓	Boost	QFN-16 (3x3)	-
MP3385	4.5	33	External FET	4	External FET	0.6	100 to 900	✓	Boost	QFN-20	I ² C digital interface, ABS 80V LED feedback voltage rating, max 300mA/channel
MP3387A	3	26	50	6	2.5	-	500 to 1250	✓	Boost	TQFN-24 (4x4)	Max 80mA/string, combined analog and PWM dimming
MP3387L	3	25	50	6	2.5	0.6	500 to 1250	✓	Boost	TQFN-24 (4x4)	Smart dimming
MP3388S	4.5	25	50	8	2	0.6	625 or 1250	✓	Boost	QFN-24 (4x4), SOIC-28	PWM/DC input burst PWM dimming
MP3389	5	28	External FET	12	External FET	0.6	100 to 500	✓	Boost	TSSOP-28EP, SOIC-28	External MOSFET, PWM or DC input burst, PWM dimming
MP3391	9	35	External FET	8	External FET	0.45	150 to 500	✓	Boost	SOIC-28, TSSOP-28EP	80mA/channel for 18" to 24" LCD panels/TVs
MP3394S	5	28	55	4	External FET	0.3	150 to 500	✓	Boost	TSSOP-16EP, SOIC-16	Replaces the MP3394
MP3398A	5	28	External FET	4	External FET	0.6	100 to 500	✓	Boost	TSSOP-16EP, SOIC-16, SOIC-20	Inductor short protection, separate ADIM pin
MP3398D	5	28	55	4	External FET	-	100 to 500	✓	Boost	SOIC-16, SOIC-20	Max 350mA/channel, analog and PWM dimming

WHITE LED DRIVERS | DISPLAY BACKLIGHTING POWER

Inductors & Charge Pumps

Part Number	V _{IN} (Min) (V)	V _{IN} (Max) (V)	V _{OUT} (Max) (V)	# of Channels	Current Limit (Typ) (A)	V _{FB} (V)	f _{SW} (kHz)	Open LED Protection	Type	Package	Notes
MP3398L	4.5	28	External FET	4	External FET	0.6	100 to 500	✓	Boost	SOIC-16	Lower V _{IN} (min) than the MP3398A
MP3412	0.8	4.4	5	1	1.1	0.2	1000	✓	Boost	TSOT23-6	High efficiency
MP4013B	8	26	External FET	1	External FET	0.6	100 to 600	✓	Boost	SOIC-16	More features and better protection, replaces the MP4012 and MP4013 in new designs
MP4601	4.5	75	75	1	2.5	0.2	200 to 2000	✓	Buck-Boost	TSSOP-16EP, SOIC-16	Novel power-leverage technology, regulates LED string up to 350V
MP4653	Offline	Offline	External FET	1	External FET	0.2	20 to 250	✓	LLC	SOIC-20	LIPS CC/CV mode low BOM cost, high efficiency
MP4655	Offline	Offline	External FET	1	External FET	0.2	40 to 130	✓	LLC	SOIC-28	Single-stage LED driver and system voltage regulator
S MP4657	4	16	80	4	-	1.2	20 to 350	✓	Pre-Flyback	SOIC-16	Pure single-stage, flyback LED driver and system voltage controller
MP4700	Offline	Offline	External FET	1	External FET	0.3	Up to 160	Ext Comp	Buck	SOIC-8E	BCM zero-current and valley voltage switching >97% efficiency, low BOM, low-power stress
MP9361	2.8	5	5	1	-	-	1350	✓	Reg Charge Pump	TSOT23-6	Internal soft start
S MPQ3326	4	16	-	16	-	-	-	✓	LED Driver with Current Source	QFN4-24 (4x4)	10 programmable addresses, programmable LED current slew rate, phase shift, AEC-Q100
S MPQ3362	3	36	36	1	4	0.2	200 to 2200 Prog	✓	Boost	FCTSOT23-8	4A current limit, low R _{DS(ON)} , soft start operation, AEC-Q100
N MPQ3367	3.5	36	45	6	3	0.4	200 to 2200	✓	Boost/SEPIC	QFN4-24 (4x4), TSSOP-28EP	150mA/ch, I ² C interface, high dimming ratio, prog. LED short threshold, prog. OVP threshold
S MPQ3369	3.5	36	45	6	3	0.4	200 to 2200	✓	Boost/SEPIC	QFN4-24 (4x4), TSSOP-28EP	100mA/ch, I ² C interface, high dimming ratio, prog. LED short threshold, prog. OVP threshold
MPQ3386	4.5	25	50	6	2.5	0.6	1250	✓	Boost	QFN-24 (4x4)	White LED driver, industrial and AEC-Q100 qualified
MPQ9361	2.8	5	5	1	-	-	1350	-	Reg Charge Pump	TSOT23-6	Internal soft start, industrial grade

LED PHOTO FLASH DRIVERS | DISPLAY BACKLIGHTING POWER

Photo Flash

Part Number	V _{IN} (Min) (V)	V _{IN} (Max) (V)	V _{OUT} (Max) (V)	# of Channels	I _{OUT} (Max) (A)	f _{SW} (kHz)	Type	Package	Notes
MP3214	2.7	5.5	-	1	0.5	1.35	Charge Pump	QFN-16 (3x3)	Charge pump
MP3331	2.7	5.5	-	1	2	1/2/3/4	Boost	WLCSP-9 (1.7x1.7)	2A boost, I ² C, sync rectification output disconnect
MP3332	2.7	5.5	5	2	3	1/2/3/4	Boost	WLCSP-16 (1.7x1.7)	3A boost, I ² C, sync rectification output disconnect
N MP3336A	2.7	5.5	5.2	2	4	1/2/3/4	Boost	WLCSP-20 (1.6x2.0)	Flash LED driver with 2A/ch, I ² C interface

ANALOG INPUT | CLASS-D AUDIO

Mono

Part Number	V _{IN} (Min) (V)	V _{IN} (Max) (V)	P _{OUT} (W)	Efficiency (%)	THD+N (%)	PSRR (dB)	Package	Notes
MP1720	2.5	5.5	2.7	90	0.11 @ 1W	60	QFN-10 (3x3), MSOP-10E	BTL, low EMI, high efficiency, flexible switching frequency setting
MP7731	9.5	18	30	90	0.10 @ 1W	60	TSSOP-20F	Exposed pad
MPQ7731	9.5	18	30	90	0.10 @ 1W	60	TSSOP-20F	Exposed pad, industrial grade
MP7741	9.5	36	10	94	0.02 @ 1W	58	QFN-10 (3x3)	Single-ended, fully integrated audio amplifier
MP7740	9.5	36	15	90	0.018 @ 1W	60	SOIC-8	Single-ended amplifier
MP7747	9.5	36	20	91	0.02 @ 1W	59	QFN-10 (3x3)	Single-ended, fully integrated audio amplifier

Stereo

MP7722	9.5	24	20 (2x)	93	0.06 @ 1W	60	TSSOP-20F	Single-ended audio amplifier, exposed pad
MP7742	9.5	28	15 (2x)	90	0.018 @ 1W	60	TSSOP-20F	Single-ended, fully integrated audio amplifier, P2P with the MP7722, exposed pad
MP7745	9.5	26	20 (2x)	93	0.06 @ 1W	59	TSSOP-20F	
MP7748S	9.5	36	30 (2x)	94	0.02 @ 1W	59	TSSOP-28EP	2 x 30W SE or 1 x 60W BTL audio amplifier
MP7751	5	26	20 (2x)	92	0.06 @ 1W	60	TSSOP-28EP	5V to 26V _{DD} , 2 x 20W BTL audio amplifier
MP7752	5	18	15 (2x)	90	0.06 @ 1W	60	TSSOP-28EP	5V to 18V _{DD} , 2 x 15W filterless BTL audio amplifier
MP7770	9.5	36	45 (2x)	95	0.03 @ 1W	60	TSSOP-28F	2 x 45W SE or 1 x 90W BTL audio amplifier, 8.5A peak, exposed pad

BRUSHED DC SOLENOID DRIVERS | MOTOR DRIVERS

Part Number	V _{IN} (Min) (V)	V _{IN} (Max) (V)	# of Half-Bridges	I _{OUT} (Max) (A)	Control Interface	Package	Notes
MP6507	2.7	15	4	0.7	PWM	TSSOP-16EP, QFN-16 (3x3), QFN-16 (4x4)	Bipolar stepper
MP6508	2.7	18	4	1.2	PWM	TSSOP-16EP, QFN-16 (4x4)	Bipolar stepper
MP6513	2.5	21	2	0.8	PWM	TSOT23-6	Half-bridge
MP6513L	2.5	5.5	2	0.6	PWM	TSOT23-6	Half-bridge
MP6514	2.5	14	2	0.6	PWM	UTQFN-8 (2x2)	Half-bridge, separate HS/LS control
MP6515	5.4	35	2	2.8	PWM	QFN-20 (3x4), TSSOP-16EP	Half-bridge
MP6516	5.4	35	2	2.8	PWM	TSSOP-16EP	Half-bridge, separate HS/LS control
MP6519	2.5	28	2	5	PWM	QFN-19 (3x3)	Half-bridge current regulator
N MP6523	7	28	3	0.9	SPI	QFN-24 (4x4)	Half-bridge, serial input control
N MP6526	7	28	6	0.9	SPI	SOIC-28, QFN-24 (4x4), QFN-24 (5x5)	Half-bridge, serial input control
N MP6550	1.8	22	2	2	PWM	QFN-12 (2x2)	Half-bridge
S MP6610	4	55	1	3	PWM	TSOT23-8, SOIC-8	Half-bridge power driver, IN/EN control inputs
S MP6610A	4	55	1	3	PWM	TSOT23-8	Half-bridge power driver, HS/LS control inputs
S MP6619	2.5	32	2	5	PWM	QFN-19 (3x3)	Half-bridge
MP8040	7.5	24	1	9	PWM	SOIC-8EP	Half-bridge driver
MP8042	7.5	24	2	5	PWM	TSSOP-20EF	Full-bridge driver
MP8044	7.5	22	2	5	PWM	TSSOP-20F	Full-bridge driver
MP8046	7.5	28	2	5	PWM	TSSOP-20F	Full-bridge driver
MP8049S	5	26	4	5.5	PWM	QFN-40 (5x5)	Dual full-bridge driver
S MPQ6519	2.5	32	2	5	PWM	QFN-19 (3x3)	Half-bridge current regulator
MPQ6523	7	28	3	0.9	SPI	QFN-24 (4x4)	Half-bridge driver for automotive HVAC
N MPQ6524	7	28	4	0.9	PWM	QFN-24 (4x4)	Half-bridge, serial input control
MPQ6526	7	28	6	0.9	SPI	QFN-24 (4x4), QFN-24 (5x5)	Half-bridge driver for automotive HVAC
S MPQ6527	5.5	40	10	0.8	SPI	TSSOP-28EP	Half-bridge
S MPQ6610	4	55	1	3	PWM	TSOT23-8, SOIC-8	Half-bridge power driver
S MPQ6626	5.5	40	6	0.8	SPI	TSSOP-28EP	Half-bridge
S MPQ6628	5.5	40	8	0.8	SPI	TSSOP-28EP	Half-bridge



BRUSHLESS DC PRE-DRIVERS | MOTOR DRIVERS

	Part Number	Supply Voltage (Min) (V)	Supply Voltage (Max) (V)	V _{sw} (Max) (V)	# of Half-Bridges	I _{SWK} /I _{SOURCE} (A)	Hall Input	Package	Notes
	MP1921A	9	18	100	1	2.5/1.5	-	SOIC-8EP, QFN-8 (3x3), QFN-9 (3x3), QFN-10 (4x4)	Half-bridge gate driver
N	MP1921B	9	18	100	1	2.5/1.5	-	QFN-10 (3x3)	Half-bridge gate driver
S	MP1922	4	15	100	1	4/3	-	QFN-22 (4x5)	Half-bridge pre-driver
	MP1924A	8	15	100	1	4.5/3	-	QFN-10 (4x4), SOIC-8	Half-bridge gate driver
N	MP1925	8	15	100	1	4.5/3	-	QFN-8 (4x4)	Half-bridge gate driver
	MP6528	5	60	-	2	1/0.8	-	QFN-28 (4x4)	Half-bridge pre-driver
	MP6530	5	60	60	3	1/0.8	-	QFN-28 (4x4), TSSOP-28EP	Three-phase BLDC pre-driver
	MP6532	5	60	60	3	1/0.8	✓	QFN-28 (4x4), TSSOP-28EP	Three-phase BLDC pre-driver, commutation logic
	MP6534	5	55	55	3	1/0.8	-	QFN-41 (5x5)	Three-phase BLDC pre-driver, commutation logic, buck regulator
	MP6535	5	55	55	3	1/0.8	✓	QFN-40 (5x5)	Three-phase BLDC pre-driver, buck regulator
	MP6537	8	100	-	3	1/0.8	-	QFN-28 (4x5)	Three-phase BLDC pre-driver, PWM and enable inputs
	MP6538	8	100	-	3	1/0.8	✓	QFN-28 (4x5)	Three-phase BLDC pre-driver, Hall commutation logic
	MP6539	8	100	-	3	1/0.8	-	QFN-28 (4x5), TSSOP-28EP	Three-phase BLDC pre-driver, HS/LS inputs
N	MP6539B	8	100	-	3	1/0.8	-	QFN-28 (4x5), TSSOP-28EP	Three-phase BLDC pre-driver
	MP6570	3	3,6	5	-	-	-	QFN-32 (4x4)	BLDC FOC controller
S	MPQ1922	4	15	100	1	4/3	-	QFN-22 (4x5)	Half-bridge pre-driver
N	MPQ6531	5	60	65	3	1/0.8	-	QFN-28 (4x5)	Half-bridge motor driver
S	MPQ6533	6	40	-	3	1/0.8	-	QFN-32 (5x5)	Three-channel automotive pre-driver

STEPPER | MOTOR DRIVERS

	Part Number	V _{in} (Min) (V)	V _{in} (Max) (V)	I _{out} (Max) (A)	Step Mode	Control Interface	Package	Notes
	MP6500	4.5	35	2.5	1, 1/2, 1/4, 1/8	Indexer	QFN-24 (5x5), TSSOP-28	Bipolar stepper, micro-stepping, internal current sense
	MP6500A	4.5	35	2.5	1, 1/2, 1/4, 1/8	Indexer	TSSOP-28EP	Bipolar stepper, micro-stepping, internal current sense
	MP6501A	8.5	35	2.5	1, 1/2, 1/4, 1/8	Indexer	TSSOP28EP	Bipolar stepper, micro-stepping
	MP6504	8	32	2	1, 1/2, 1/4, 1/8	Indexer	QFN-28 (4x5)	Bipolar stepper, micro-stepping
	MP6507	2.7	15	0.7	1, 1/2	Parallel	TSSOP-16EP, QFN-16 (3x3), QFN-16 (4x4), TSSOP-16	Bipolar stepper
	MP6508	2.7	18	1.2	1, 1/2	Parallel	TSSOP-16EP, QFN-16 (4x4)	Bipolar stepper
	MP6509	2.7	18	1.2	1, 1/2	Parallel	TSSOP-20EP	Bipolar stepper, current attenuation

STEPPER | MOTOR DRIVERS

Part Number	V _{IN} (Min) (V)	V _{IN} (Max) (V)	I _{OUT} (Max) (A)	Step Mode	Control Interface	Package	Notes
MP6518	8.5	35	1.5	1, 1/2, 1/4, 1/8	Indexer	TSSOP-28EP	Bipolar stepper, micro-stepping
MP6600	4.5	35	1.5	1, 1/2, 1/4, 1/8	Indexer	QFN-24 (4x4)	Bipolar stepper, micro-stepping, internal current sense
N MP6601	4.5	35	2.5	1, 1/2, 1/4	Indexer	QFN-24 (5x5), TSSOP-28EP	Stepper motor driver

INTEGRATED BLDC | MOTOR DRIVERS

Part Number	V _{IN} (Min) (V)	V _{IN} (Max) (V)	# of Half-Bridges	I _{OUT} (Max) (A)	Hall Input	Package	Notes
MP6505	4.5	16	2	0.4	✓	QFN-16 (3x3), TSSOP-16EP	Single-phase brushless DC fan driver
MP6510	4.5	16	2	1.2	✓	SOIC-8EP, QFN-8 (3x3), QFN-9 (3x3)	Single-phase brushless DC fan driver
MP6517	3.3	18	2	1.2	✓	TSOT23-6, TSOT23-6-SL	Programmable single-phase, BLDC fan driver, integrated Hall
MP6517A	3.3	16	2	2	✓	TSOT23-6, TSOT23-6-SL	Programmable single-phase, BLDC fan driver, integrated Hall
MP6536	5	26	3	5.5	-	QFN-16 (5x5)	Three-channel half-bridge driver
N MP6540	5.5	35	3	3	-	QFN-26 (5x5)	Three-phase power stage, PWM and enable inputs
N MP6540A	5.5	35	3	3	-	QFN-26 (5x5)	Three-phase power stage, HS/LS inputs
S MP6540H	7	55	3	5	-	QFN-26 (5x5)	Three-phase power stage, PWM/ENBL inputs
S MP6540H-A	7	55	3	5	-	QFN-26 (5x5)	Three-phase power stage, HS/LS inputs
S MP6541	4.75	45	3	8	-	QFN-26 (6x6)	Three-phase power stage, PWM/ENBL inputs
S MP6541A	4.75	45	3	8	-	QFN-26 (6x6)	Three-phase power stage, HS/LS inputs
S MP6542	4.5	35	3	11	-	QFN-26 (6x6)	Three-phase power stage, PWM/ENBL inputs
S MP6542A	4.5	35	3	11	-	QFN-26 (6x6)	Three-phase power stage, HS/LS inputs
S MP6543	3	12	3	2	-	QFN-24 (3x4)	Three-phase power stage
S MP6543H	3	22	3	2	-	QFN-24 (3x4)	Three-phase power stage
S MP6616	3.3	18	2	2	✓	QFN-10 (2x3)	Single-phase BLDC driver for closed-loop applications
S MP6630	2	5.5	3	0.5	✓	TQFN-8 (2x3)	Three-phase fan driver for notebooks
S MP6650	3.3	18	2	2	✓	TSOT23-6-L, TSOT23-6-R, TSOT23-6-SL, TSOT23-6-RSL	Single-phase, BLDC fan driver with integrated Hall
S MP6651	3.3	18	2	2	✓	QFN-10 (2x3)	Single-phase BLDC driver for open-loop applications
S MPQ6541	4.75	45	3	8	-	QFN-26 (6x6)	Three-phase power stage, PWM/ENBL inputs
S MPQ6541A	4.75	45	3	8	-	QFN-26 (6x6)	Three-phase power stage, HS/LS inputs

MAGALPHA SERIES | POSITION SENSORS

Part Number	Resolution	Interface	Supply Voltage (V)	Supply Current (mA)	Sensing Range	Bandwidth (Hz)	Latency at Constant Speed (µs)	Temperature Range (°C)	Package	Notes
MA102	12-bit	SPI, UVW	3 to 3.6	12	30mT + (No Upper Limit)	390	8	-40 to +125	QFN-16 (3x3)	Motor commutation angle sensor, UVW multi-pole pair emulation
MA302	12-bit	SPI, UVW, ABZ	3 to 3.6	12	30mT + (No Upper Limit)	390	8	-40 to +125	QFN-16 (3x3)	Contactless angle sensor, ABZ & UVW incremental outputs
MA310	12-bit	SPI, UVW, ABZ	3 to 3.6	12	15mT + (No Upper Limit)	93	8	-40 to +125	QFN-16 (3x3)	Contactless angle sensor, ABZ & UVW incremental outputs
N MA330	10-bit to 14-bit	SPI, UVW, ABZ	3 to 3.6	12	30mT + (No Upper Limit)	23 to 6000	8	-40 to +125	QFN-16 (3x3)	Contactless angle sensor, ABZ & UVW incremental outputs
MA702	12-bit	SPI, SSI, PWM, ABZ	3 to 3.6	12	30mT + (No Upper Limit)	390	8	-40 to +125	QFN-16 (3x3)	Contactless angle sensor, ABZ incremental & PWM outputs
MA704	10-bit	SPI, SSI, PWM, ABZ	3 to 3.6	12	30mT + (No Upper Limit)	3000	8	-40 to +125	QFN-16 (3x3)	Contactless angle sensor, ABZ incremental & PWM outputs
MA710	12-bit	SPI, SSI, PWM, ABZ	3 to 3.6	12	15mT + (No Upper Limit)	93	8	-40 to +125	QFN-16 (3x3)	Contactless angle sensor, ABZ incremental & PWM outputs
MA730	14-bit	SPI, SSI, PWM, ABZ	3 to 3.6	12	40mT + (No Upper Limit)	23	8	-40 to +125	QFN-16 (3x3)	Contactless angle sensor, ABZ incremental & PWM outputs
N MA732	10-bit to 14-bit	SPI, SSI, PWM, ABZ	3 to 3.6	12	30mT + (No Upper Limit)	23 to 6000	8	-40 to +125	QFN-16 (3x3)	Contactless angle sensor, ABZ incremental & PWM outputs
MA800	8-bit	SPI, SSI	3 to 3.6	12	30mT + (No Upper Limit)	93	2000	-40 to +125	QFN-16 (3x3)	Contactless angle sensor, push-button function
MA820	8-bit	SPI, ABZ	3 to 3.6	12	30mT + (No Upper Limit)	93	2000	-40 to +125	QFN-16 (3x3)	Contactless angle sensor, ABZ output, push-button function
MA850	8-bit	SPI, PWM	3 to 3.6	12	30mT + (No Upper Limit)	93	2000	-40 to +125	QFN-16 (3x3)	Contactless angle sensor, PWM output, push-button function
S MA780	10-bit to 12-bit	SPI	3 to 3.6	0.001 to 10	30mT + (No Upper Limit)	5 to 16000	4 to 16000	-40 to +125	QFN-16 (3x3)	Contactless low-power angle sensor
S MA782	10-bit to 12-bit	SPI	3 to 3.6	0.001 to 10	30mT + (No Upper Limit)	5 to 16000	4 to 16000	-40 to +125	QFN-16 (2x2)	Contactless low-power angle sensor

CURRENT SENSORS

Part Number	Current Range (A)	V _{CC} (V)	Accuracy (from 25°C to 125°C)	Temperature Range (°C)	Bandwidth (kHz)	Isolation Voltage (V)	Primary Conductor Resistance (mΩ)	Package	Notes
S MCS1800	±12.5, ±25	3.3	3%	-40 to +125	100	200	1.2	SOIC-8	Coreless, analog output, immune to external magnetic fields
S MCS1801	±12.5, ±25	5	3%	-40 to +125	100	200	1.2	SOIC-8	Coreless, analog output, immune to external magnetic fields
S MCS1802	±5, ±10, ±20, ±30, ±40, ±50	3.3	±2.5%	-40 to +125	100	2400	0.9	SOIC-8	Coreless, analog output, immune to external magnetic fields
S MCS1803	±5, ±10, ±20, ±30, ±40, ±50	5	±2.5%	-40 to +125	100	2400	0.9	SOIC-8	Coreless, analog output, immune to external magnetic fields

ANALOG SWITCHES | PRECISION ANALOG

Part Number	V_{IN} (Min) (V)	V_{IN} (Max) (V)	# of Channels	t_{ON} (ns)	t_{OFF} (ns)	$R_{DS(ON)}$ (Max) (Ω)	Package	Notes
MP2735	1.65	5.5	2	29	23	0.45	QFN-10 (1.4x1.8)	Low-voltage, dual SPDT
MP2736	1.65	5.5	2	29	23	0.45	QFN-10 (1.4x1.8)	Low-voltage, dual SPDT, EN function

OPERATIONAL AMPLIFIERS | PRECISION ANALOG

Part Number	V_{IN} (Min) (V)	V_{IN} (Max) (V)	GBW (kHz)	I_{O1} (Typ) (μ A)	PSRR (dB)	Slew Rate (V/ μ s)	Offset Voltage (mV)	Package	Notes
MP8102	1.8	5.5	200	7.5	80	0.1	1	TSOT23-5	Ultra-low power, 600kHz
MP8101	1.8	5.5	400	11	80	0.2	1	TSOT23-5	Ultra-low power, 400kHz
MP8103	1.8	5.5	200	14	80	0.1	1	MSOP-8	Dual ultra-low power, 600kHz
MP8104	1.8	5.5	400	11	80	0.2	1	TSOT23-5	Ultra-low power, 400kHz, industry-standard pin out
MP8130	2.7	36	100	10	80	0.1	1	TSOT23-5	Ultra-low power, 200kHz, high-voltage
MP8110	2.5	40	12	0.05	0.5	-	-	SOIC-8, MSOP-8	High-side current sense

VOLTAGE REFERENCE | PRECISION ANALOG

Part Number	V_{IN} (Min) (V)	V_{IN} (Max) (V)	V_{OUT} (V)	Initial Accuracy (%)	Operating Current (mA)	Z_{OUT} (Ω)	Package	Notes
MP8201	1.2	12	1.2 to 10	0.5	60 μ A to 20mA	1	SOT-23	Precision adjustable, shunt voltage regulator, 1.0V shunt reference
MP8200	1	12	1	1	100 μ A to 10mA	0.5	SOT-23	1.0V precision shunt reference

USB/LOAD SWITCHES

USB/LOAD SWITCHES, USB PORT CONTROLLERS, E-FUSES

Single-Channel

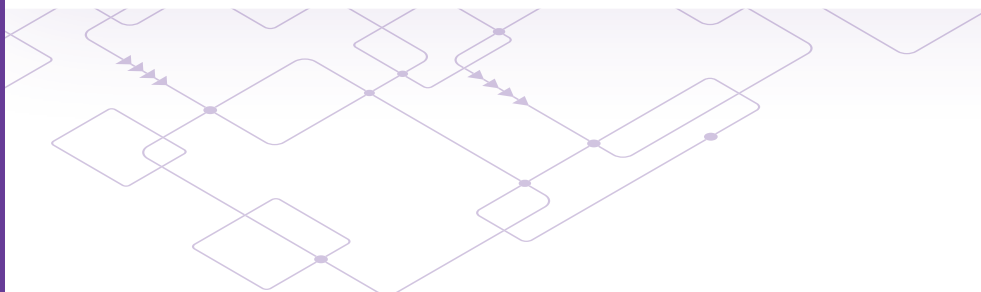
Part Number	V_{IN} (Min) (V)	V_{IN} (Max) (V)	Continuous Current (Max) (A)	Short-Circuit Current (Max) (A)	Enable Logic	Fault Flags	Output Discharge	Package	Notes
MP62055	2.7	5.5	0.5	1.1	Active High	Over-Current, Active High	-	TSOT23-5	Small package, P2P with the TPS2051B
MP5075L	3	5.5	1	7	Active High	-	✓	SOT-563 (1.6x1.6)	OCP, thermal protection, small package
MP62550 MP62551	2.5	5.5	1.5	1.7	Active Low Active High	Over-Current, Active Low	-	TQFN-6 (2x2), TSOT23-6	Precision-adjustable, current-limited power distribution switch, 88mΩ/100mΩ @ 100mA, 1.5μA max shutdown current
MP5073	0.5	5.5	2	2	Active High	-	✓	QFN-12 (2x2)	Programmable current limit, power good, slew rate control
MP5083	0.5	5.5	2	Prog	Active High	-	✓	QFN-12 (2x2)	5% current monitoring (from 0.6A to full load), power good, slew rate control
MP5075	3	5.5	2.4	7	Active High	-	✓	SOT-563 (1.6x1.6)	OCP, thermal protection, small package
MP5077	0.5	5.5	7	7	Active High	-	✓	TQFN-12 (2x2)	Programmable current limit, slew rate control, fast-off protection
MP5087	0.5	5.5	7	7	Active High	-	✓	TQFN-12 (2x2)	5% current monitoring (from 1.5A to full load), power good, slew rate control, fast-off protection, UL certified
MP5087A	0.5	5.5	7	7	Active High	-	✓	TQFN-12 (2x2)	Programmable current limit, slew rate control, fast-off protection, UL certified
MP5086	2.3	5.5	7	7	Active High Active Low	-	✓	TQFN-12 (2x2)	5% current monitoring (from 1.5 to full load), NTC comparator, open-drain OTP indicator

Dual-Channel

MP5095	0.5	5.5	2.3 (x2)	5	Active High	-	✓	TSOT23-8	Dual-channel, low I_{DQ} , 30mΩ Low $R_{DS(ON)}$, reverse-block connection
MP5090	0.5	5.5	3/2	5	Active High	-	✓	TQFN-8 (1.5x2), CSP (1.05x1.6)	Dual-channel, low I_{DQ} , 30mΩ Low $R_{DS(ON)}$, reverse-block connection, small package
MP5092	0.5	5.5	7.5 (x2)	7	Active High	-	✓	TQFN-18 (2x3)	Dual-channel, programmable current limit, slew rate control, fast-off protection

USB Port Controllers

MP5034	3.6	14		6	Active High	-	-	TSOT23-8	USB charging port controller integrating QC 3.0 protocol
MP5030C	-	14	3	6	-	-	-	QFN-10 (1.5x2)	USB charging port controller with current limit switch, supports CDP, DCP, and QC 3.0 modes
MP5032	3.6	14	3	6	Active High	-	-	TSOT23-8	QC 3.0 controller, integrated current-limit switch
N MP5030D	-	14	3	6	Active High	-	-	QFN-10 (1.5x2)	USB charging port controller, load detection, supports CDP and DCP mode



E-FUSES (ELECTRONIC FUSES, INTEGRATED HOT-SWAP SWITCHES)

USB/LOAD SWITCHES, USB PORT CONTROLLERS, E-FUSES

	Part Number	V _{IN} (Min) (V)	V _{IN} (Max) (V)	Continuous Current (Max) (A)	Short-Circuit Current (Max) (A)	Fault Flags	Output Discharge	Package	Notes
N	MP5094	5/12	16/24	3/4	8	-	-	TSOT23-8	Dual-channel, over-voltage clamp, OCP hiccup
	MP5013A	3	5.5	4.2	Prog	Short-Circuit, Over-Current, Under-Voltage, Over-Voltage, Thermal Shutdown	-	TSOT23-8	5V, 36mΩ R _{DS(ON)} , programmable current limit, slew rate control, 5A/2.8A trip/hold current
	MP5014A	10	13.8	5	Prog	Short-Circuit, Over-Current, Under-Voltage, Over-Voltage, Thermal Shutdown	-	TSOT23-8	12V, 36mΩ R _{DS(ON)} , programmable current limit, over-voltage clamp, slew rate control
	MP5016	2.7	15	5	8	Thermal Fault = Tri-State	✓	QFN-10 (1.5x2)	Reverse-current blocking, over-voltage clamp, auto-retry
N	MP5016-L	2.7	22	5	8	-	✓	QFN-10 (1.5x2)	Latch-off OCP, over-voltage clamp, reverse blocking
	MP5016H	2.7	22	5	8	Short-Circuit, Over-Current, Under-Voltage, Over-Voltage, Thermal Shutdown	✓	QFN-10 (1.5x2)	UL certified, over-voltage clamp, reverse-current blocking, auto-retry
	MP5018	4.5	5.5	5	Prog	Thermal Fault = Tri-State	-	QFN-12 (2x3)	Reverse-current blocking, 45mΩ R _{DS(ON)} , programmable current limit, OTP latch-off
	MP5017	3	5.5	5	Prog	-	✓	QFN-12 (2x3)	Current-limit switch, over-voltage clamp, reverse block, OTP auto-retry
N	MP5036	2.9	14	5	8	-	✓	TSOT23-6	Fixed 15V over-voltage clamp, programmable current limit, fast output OVP response
N	MP5036A	2.9	5.5	5	8	-	✓	TSOT23-6	Fixed 5.75V over-voltage clamp, programmable current limit, fast output OVP response
	MP5021B	4.8	16	10	25	Current Limit, Thermal Shutdown, Damaged MOSFET Detection	✓	QFN-22 (3x5)	16V, 7mΩ R _{DS(ON)} , hot-swap protection, current monitoring
	MP5022A	8	16	12	36	Current Limit, Thermal Shutdown, Damaged MOSFET Detection	✓	QFN-22 (3x5)	16V, 3mΩ R _{DS(ON)} , hot-swap protection, current monitoring, controlled R _{ON} mode
	MP5022C	4.5	16	15	36	Current Limit, Thermal Shutdown, Damaged MOSFET Detection	-	QFN-22 (3x5)	16V, 3mΩ R _{DS(ON)} , hot-swap protection, current monitoring
	MP5023	4	16	50	110	Current Limit, Thermal Shutdown, Damaged MOSFET Detection	✓	QFN-24 (4x5)	1.1mΩ, hot-swap protection, PMBus interface, current monitoring
	MP5061	4.5	28	15	25	Current Limit, Thermal Shutdown, Under-Voltage, Damaged MOSFET Detection	✓	QFN-22 (3x5)	Enable blanking time set and 36V input transient before V _{OUT} start-up, current monitoring
N	MP5921	4	16	50	120	GOK Fault Flag, Current Limit, Thermal Shutdown and Damaged MOSFET Detection	-	QFN-28 (4x5)	16V, 1mΩ R _{DS(ON)} , hot-swap Intelli-Phase™ solution, current monitoring, fault reporting output

HIGH-VOLTAGE ANALOG SWITCHES | ULTRASOUND MUX

Serial Shift Register Control

Part Number	Channels	V _{SIG} (Max) (V)	R _{SWITCH} (Ω)	Output Bleed Resistor	Switch Configuration	Bandwidth (MHz)	Package	Notes
MP4816A	16	±90	12.5	✓	SPST	80	TQFP-48 (7x7)	16-bit
MP4816	16	±90	12.5	-	SPST	80	TQFP-48 (7x7)	16-bit
MP4832A	32	±90	14.0	✓	SPST	80	QFN-72 (10x10)	32-bit with bank switching
MP4833A	32	±90	12.5	✓	SPST	80	BGA-80 (7x7)	32-bit
MP4864A	64	±90	14.0	✓	SPST	80	BGA-144 (10x10)	64-bit

SEMI-SHIELDED | INDUCTORS

Part Number	L (µH)	R _{DC} (Typ) (mΩ)	I _R (40K Rise) (A)	I _{SAT} (30% Drop) (A)	Operating Temp (Max) (°C)	Size	A Dimension (L) (mm)	B Dimension (W) (mm)	C Dimension (H) (mm)	Construction	Notes
N MPL-SE2512-R47	0.47	27	4.5	6.5	125	2512	2.5	2	1.2	SMD	Low profile, external epoxy resin for better magnetic characteristics
N MPL-SE2512-R68	0.68	33	3.8	4.3	125	2512	2.5	2	1.2	SMD	Low profile, external epoxy resin for better magnetic characteristics
N MPL-SE2512-1R0	1.0	45	3.35	4.2	125	2512	2.5	2	1.2	SMD	Low profile, external epoxy resin for better magnetic characteristics
N MPL-SE2512-1R5	1.5	62	2.9	3.2	125	2512	2.5	2	1.2	SMD	Low profile, external epoxy resin for better magnetic characteristics
N MPL-SE2512-2R2	2.2	92	2.5	2.7	125	2512	2.5	2	1.2	SMD	Low profile, external epoxy resin for better magnetic characteristics
N MPL-SE2512-3R3	3.3	158	1.8	2.4	125	2512	2.5	2	1.2	SMD	Low profile, external epoxy resin for better magnetic characteristics
N MPL-SE2512-4R7	4.7	205	1.6	1.9	125	2512	2.5	2	1.2	SMD	Low profile, external epoxy resin for better magnetic characteristics
N MPL-SE2512-100	10	400	1.1	1.3	125	2512	2.5	2	1.2	SMD	Low profile, external epoxy resin for better magnetic characteristics
N MPL-SE2512-150	15	620	0.85	0.9	125	2512	2.5	2	1.2	SMD	Low profile, external epoxy resin for better magnetic characteristics
N MPL-SE2512-220	22	1000	0.7	0.8	125	2512	2.5	2	1.2	SMD	Low profile, external epoxy resin for better magnetic characteristics
N MPL-SE4030-1R0	1.0	12.5	6.3	7.5	125	4030	4	4	3	SMD	External epoxy resin for better magnetic characteristics
N MPL-SE4030-2R2	2.2	30	3.9	5.5	125	4030	4	4	3	SMD	External epoxy resin for better magnetic characteristics
N MPL-SE4030-3R3	3.3	39.8	3.45	4.1	125	4030	4	4	3	SMD	External epoxy resin for better magnetic characteristics
N MPL-SE4030-4R7	4.7	63	2.6	3.7	125	4030	4	4	3	SMD	External epoxy resin for better magnetic characteristics
N MPL-SE4030-6R8	6.8	83	2.4	3.3	125	4030	4	4	3	SMD	External epoxy resin for better magnetic characteristics
N MPL-SE4030-100	10	97	2.2	2.4	125	4030	4	4	3	SMD	External epoxy resin for better magnetic characteristics
N MPL-SE4030-150	15	185	1.6	1.95	125	4030	4	4	3	SMD	External epoxy resin for better magnetic characteristics
N MPL-SE4030-220	22	219	1.5	1.65	125	4030	4	4	3	SMD	External epoxy resin for better magnetic characteristics
N MPL-SE5040-R47	0.47	7.3	8.0	16	125	5040	4.9	4.9	4	SMD	External epoxy resin for better magnetic characteristics
N MPL-SE5040-1R0	1.0	9.4	7.6	10.5	125	5040	4.9	4.9	4	SMD	External epoxy resin for better magnetic characteristics
N MPL-SE5040-1R5	1.5	14	6.2	9.3	125	5040	4.9	4.9	4	SMD	External epoxy resin for better magnetic characteristics
N MPL-SE5040-2R2	2.2	16	5.4	7.9	125	5040	4.9	4.9	4	SMD	External epoxy resin for better magnetic characteristics
N MPL-SE5040-3R3	3.3	22	5.2	6.4	125	5040	4.9	4.9	4	SMD	External epoxy resin for better magnetic characteristics
N MPL-SE5040-4R7	4.7	33	4.3	5	125	5040	4.9	4.9	4	SMD	External epoxy resin for better magnetic characteristics
N MPL-SE5040-6R8	6.8	45	3.5	4.6	125	5040	4.9	4.9	4	SMD	External epoxy resin for better magnetic characteristics
N MPL-SE5040-100	10	56	3.2	3.6	125	5040	4.9	4.9	4	SMD	External epoxy resin for better magnetic characteristics
N MPL-SE5040-150	15	83	2.5	2.9	125	5040	4.9	4.9	4	SMD	External epoxy resin for better magnetic characteristics
N MPL-SE5040-220	22	124	2.1	2.4	125	5040	4.9	4.9	4	SMD	External epoxy resin for better magnetic characteristics

SEMI-SHIELDED | INDUCTORS

Part Number	L (μ H)	R _{DC} (Typ) (m Ω)	I _R (40K Rise) (A)	I _{SAT} (30% Drop) (A)	Operating Temp (Max) (°C)	Size	A Dimension (L) (mm)	B Dimension (W) (mm)	C Dimension (H) (mm)	Construction	Notes
N MPL-SE6040-1R5	1.5	11.5	6.8	8.9	125	6040	6	6	4	SMD	External epoxy resin for better magnetic characteristics
N MPL-SE6040-2R2	2.2	14.5	6.3	7.2	125	6040	6	6	4	SMD	External epoxy resin for better magnetic characteristics
N MPL-SE6040-3R3	3.3	19.5	5.6	5.6	125	6040	6	6	4	SMD	External epoxy resin for better magnetic characteristics
N MPL-SE6040-4R7	4.7	23	5.2	5	125	6040	6	6	4	SMD	External epoxy resin for better magnetic characteristics
N MPL-SE6040-6R8	6.8	33	4.4	4.1	125	6040	6	6	4	SMD	External epoxy resin for better magnetic characteristics
N MPL-SE6040-8R2	8.2	39	4.0	3.6	125	6040	6	6	4	SMD	External epoxy resin for better magnetic characteristics
N MPL-SE6040-100	10	41	3.8	3.4	125	6040	6	6	4	SMD	External epoxy resin for better magnetic characteristics
N MPL-SE6040-150	15	70	2.8	2.7	125	6040	6	6	4	SMD	External epoxy resin for better magnetic characteristics
N MPL-SE6040-220	22	97	2.35	2.25	125	6040	6	6	4	SMD	External epoxy resin for better magnetic characteristics

MOLDED INDUCTORS | INDUCTORS

Part Number	L (μ H)	R _{DC} (Typ) (m Ω)	I _R (40K Rise) (A)	I _{SAT} (30% Drop) (A)	Operating Temp (Max) (°C)	Size	A Dimension (L) (mm)	B Dimension (W) (mm)	C Dimension (H) (mm)	Construction	Notes
N MPL-AT2010-R47	0.47	27	4.4	5.7	125	2010	2	1.6	1	SMD	Low profile
N MPL-AT2010-R68	0.68	41	3.5	4.9	125	2010	2	1.6	1	SMD	Low profile
N MPL-AT2010-1R0	1	50	3.2	4.2	125	2010	2	1.6	1	SMD	Low profile
N MPL-AT2010-1R5	1.5	97	2.4	3.2	125	2010	2	1.6	1	SMD	Low profile
N MPL-AT2010-2R2	2.2	137	2.2	2.7	125	2010	2	1.6	1	SMD	Low profile
N MPL-AT2010-4R7	4.7	215	1.5	1.9	125	2010	2	1.6	1	SMD	Low profile
N MPL-AT2512-R33	0.33	13.5	6.4	8.5	125	2512	2.5	2	1.2	SMD	Low profile
N MPL-AT2512-R47	0.47	19	5.5	6.4	125	2512	2.5	2	1.2	SMD	Low profile
N MPL-AT2512-R68	0.68	26	4.7	6	125	2512	2.5	2	1.2	SMD	Low profile
N MPL-AT2512-1R0	1.0	35	4.0	5.2	125	2512	2.5	2	1.2	SMD	Low profile
N MPL-AT2512-1R5	1.5	56	3.2	4.2	125	2512	2.5	2	1.2	SMD	Low profile
N MPL-AT2514-2R2	2.2	70	2.6	3.4	125	2514	2.5	2	1.4	SMD	Low profile
N MPL-AT2512-3R3	3.3	121	2	2.7	125	2512	2.5	2	1.2	SMD	Low profile
N MPL-AT2514-4R7	4.7	180	1.7	2.4	125	2514	2.5	2	1.4	SMD	Low profile
N MPL-AT2512-6R8	6.8	280	1.4	2.2	125	2512	2.5	2	1.2	SMD	Low profile
N MPL-AT2512-100	10	355	1.2	1.7	125	2512	2.5	2	1.2	SMD	Low profile

MOLDED INDUCTORS | INDUCTORS

	Part Number	L (µH)	R _{DC} (Typ) (mΩ)	I _R (40K Rise) (A)	I _{SAT} (30% Drop) (A)	Operating Temp (Max) (°C)	Size	A Dimension (L) (mm)	B Dimension (W) (mm)	C Dimension (H) (mm)	Construction	Notes
N	MPL-AY3020-R47	0.47	19.5	6.3	9	125	3020	3.5	3.2	1.8	SMD	-
N	MPL-AY3020-R68	0.68	26	5.15	8.6	125	3020	3.5	3.2	1.8	SMD	-
N	MPL-AY3020-R82	0.82	28	4.7	8	125	3020	3.5	3.2	1.8	SMD	-
N	MPL-AY3020-1R0	1.0	30	4.3	6.2	125	3020	3.5	3.2	1.8	SMD	-
N	MPL-AY3020-1R5	1.5	35	3.4	5.9	125	3020	3.5	3.2	1.8	SMD	-
N	MPL-AY3020-2R2	2.2	64	3.0	5.3	125	3020	3.5	3.2	1.8	SMD	-
N	MPL-AY3020-3R3	3.3	121	2.5	3.7	125	3020	3.5	3.2	1.8	SMD	-
N	MPL-AY3020-4R7	4.7	173	2.0	3.1	125	3020	3.5	3.2	1.8	SMD	-
N	MPL-AY3020-5R6	5.6	209	1.8	2.8	125	3020	3.5	3.2	1.8	SMD	-
N	MPL-AY3020-6R8	6.8	250	1.65	2.6	125	3020	3.5	3.2	1.8	SMD	-
N	MPL-AY3020-8R2	8.2	345	1.4	1.95	125	3020	3.5	3.2	1.8	SMD	-
N	MPL-AY3020-100	10	370	1.3	1.75	125	3020	3.5	3.2	1.8	SMD	-
N	MPL-AY4020-5R6	5.6	97	2.45	2.6	155	4020	4.45	4.1	1.8	SMD	High temperature capabilities
N	MPL-AY4020-6R8	6.8	129	2.2	2.4	155	4020	4.45	4.1	1.8	SMD	High temperature capabilities
N	MPL-AY4020-8R2	8.2	136	2.1	2.1	155	4020	4.45	4.1	1.8	SMD	High temperature capabilities
N	MPL-AY4020-100	10	163	1.9	2	155	4020	4.45	4.1	1.8	SMD	High temperature capabilities
N	MPL-AY1050-R47	0.47	1.25	25	41	155	1050	11	10	4.8	SMD	High temperature capabilities
N	MPL-AY1050-R68	0.68	1.75	23	36	155	1050	11	10	4.8	SMD	High temperature capabilities
N	MPL-AY1050-1R0	1.0	2.6	19	33	155	1050	11	10	4.8	SMD	High temperature capabilities
N	MPL-AY1050-1R5	1.5	3.4	17	26.5	155	1050	11	10	4.8	SMD	High temperature capabilities
N	MPL-AY1050-2R2	2.2	4.9	15	19.5	155	1050	11	10	4.8	SMD	High temperature capabilities
N	MPL-AY1050-3R3	3.3	8	12.5	17	155	1050	11	10	4.8	SMD	High temperature capabilities
N	MPL-AY1050-4R7	4.7	9.5	11.5	15	155	1050	11	10	4.8	SMD	High temperature capabilities
N	MPL-AY1050-5R6	5.6	13	9.8	14	155	1050	11	10	4.8	SMD	High temperature capabilities
N	MPL-AY1050-6R8	6.8	15	9	13	155	1050	11	10	4.8	SMD	High temperature capabilities
N	MPL-AY1050-100	10	19	7.8	12	155	1050	11	10	4.8	SMD	High temperature capabilities
N	MPL-AY1265-R47	0.47	0.89	33	64	155	1265	13.5	12.6	6.2	SMD	High temperature capabilities
N	MPL-AY1265-R56	0.56	1.1	31	58	155	1265	13.5	12.6	6.2	SMD	High temperature capabilities
N	MPL-AY1265-R68	0.68	1.25	29	51	155	1265	13.5	12.6	6.2	SMD	High temperature capabilities
N	MPL-AY1265-R82	0.82	1.3	27	46	155	1265	13.5	12.6	6.2	SMD	High temperature capabilities

Part Number	L (µH)	R _{DC} (Typ) (mΩ)	I _R (40K Rise) (A)	I _{SKT} (30% Drop) (A)	Operating Temp (Max) (°C)	Size	A Dimension (L) (mm)	B Dimension (W) (mm)	C Dimension (H) (mm)	Construction	Notes
N MPL-AY1265-1R0	1.0	1.5	25.5	43	155	1265	13.5	12.6	6.2	SMD	High temperature capabilities
N MPL-AY1265-1R2	1.2	1.8	24	37	155	1265	13.5	12.6	6.2	SMD	High temperature capabilities
N MPL-AY1265-1R5	1.5	2.3	22	34	155	1265	13.5	12.6	6.2	SMD	High temperature capabilities
N MPL-AY1265-1R8	1.8	3.3	20	29	155	1265	13.5	12.6	6.2	SMD	High temperature capabilities
N MPL-AY1265-2R2	2.2	3.7	17	26.5	155	1265	13.5	12.6	6.2	SMD	High temperature capabilities
N MPL-AY1265-3R3	3.3	5.5	16	25	155	1265	13.5	12.6	6.2	SMD	High temperature capabilities
N MPL-AY1265-4R7	4.7	7.0	14	23	155	1265	13.5	12.6	6.2	SMD	High temperature capabilities
N MPL-AY1265-5R6	5.6	8.6	13	20	155	1265	13.5	12.6	6.2	SMD	High temperature capabilities
N MPL-AY1265-6R8	6.8	9.9	12	19.5	155	1265	13.5	12.6	6.2	SMD	High temperature capabilities
N MPL-AY1265-8R2	8.2	12.5	11.5	18	155	1265	13.5	12.6	6.2	SMD	High temperature capabilities
N MPL-AY1265-100	10	13.3	10.7	16	155	1265	13.5	12.6	6.2	SMD	High temperature capabilities
N MPL-AY1265-150	15	21.8	8.5	12	155	1265	13.5	12.6	6.2	SMD	High temperature capabilities
N MPL-AY1265-220	22	31.4	7	9	155	1265	13.5	12.6	6.2	SMD	High temperature capabilities
N MPL-AL4020-R47	0.47	6.2	9.2	12.5	155	4020	4.1	4.1	1.9	SMD	High temperature capabilities, low resistance
N MPL-AL4020-R68	0.68	7.5	8.7	11	155	4020	4.1	4.1	1.9	SMD	High temperature capabilities, low resistance
N MPL-AL4020-R82	0.82	9.0	8.4	9.5	155	4020	4.1	4.1	1.9	SMD	High temperature capabilities, low resistance
N MPL-AL4020-1R0	1.0	10.1	7.9	8.6	155	4020	4.1	4.1	1.9	SMD	High temperature capabilities, low resistance
N MPL-AL4020-1R2	1.2	12.2	7.4	7.5	155	4020	4.1	4.1	1.9	SMD	High temperature capabilities, low resistance
N MPL-AL4020-1R5	1.5	14.5	6.4	7.1	155	4020	4.1	4.1	1.9	SMD	High temperature capabilities, low resistance
N MPL-AL4020-2R2	2.2	21.5	5.5	6.2	155	4020	4.1	4.1	1.9	SMD	High temperature capabilities, low resistance
N MPL-AL4020-3R3	3.3	34.5	4.4	5.2	155	4020	4.1	4.1	1.9	SMD	High temperature capabilities, low resistance
N MPL-AL4020-4R7	4.7	52.2	3.65	4.2	155	4020	4.1	4.1	1.9	SMD	High temperature capabilities, low resistance
N MPL-AL5030-R47	0.47	3.78	13.6	26.5	155	5030	5.5	5.3	2.9	SMD	High temperature capabilities, low resistance
N MPL-AL5030-R56	0.56	3.92	13.2	22	155	5030	5.5	5.3	2.9	SMD	High temperature capabilities, low resistance
N MPL-AL5030-R82	0.82	5.0	12.8	18	155	5030	5.5	5.3	2.9	SMD	High temperature capabilities, low resistance
N MPL-AL5030-1R0	1.0	6.5	11.2	16	155	5030	5.5	5.3	2.9	SMD	High temperature capabilities, low resistance
N MPL-AL5030-1R2	1.2	8.0	10.0	14	155	5030	5.5	5.3	2.9	SMD	High temperature capabilities, low resistance
N MPL-AL5030-1R5	1.5	9.7	9.0	12.5	155	5030	5.5	5.3	2.9	SMD	High temperature capabilities, low resistance
N MPL-AL5030-1R8	1.8	10.5	8.8	12	155	5030	5.5	5.3	2.9	SMD	High temperature capabilities, low resistance
N MPL-AL5030-2R2	2.2	12.3	8.2	11	155	5030	5.5	5.3	2.9	SMD	High temperature capabilities, low resistance

MOLDED INDUCTORS | INDUCTORS

	Part Number	L (µH)	R _{DC} (Typ) (mΩ)	I _R (40K Rise) (A)	I _{SAT} (30% Drop) (A)	Operating Temp (Max) (°C)	Size	A Dimension (L) (mm)	B Dimension (W) (mm)	C Dimension (H) (mm)	Construction	Notes
N	MPL-AL5030-3R3	3.3	21	6.0	10	155	5030	5.5	5.3	2.9	SMD	High temperature capabilities, low resistance
N	MPL-AL5030-4R7	4.7	33	5.3	8	155	5030	5.5	5.3	2.9	SMD	High temperature capabilities, low resistance
N	MPL-AL5050-5R6	5.6	20	6.8	8	155	5050	5.5	5.3	4.8	SMD	High temperature capabilities, low resistance
N	MPL-AL5050-6R8	6.8	25	6.1	7.6	155	5050	5.5	5.3	4.8	SMD	High temperature capabilities, low resistance
N	MPL-AL5050-8R2	8.2	28	5.8	7.2	155	5050	5.5	5.3	4.8	SMD	High temperature capabilities, low resistance
N	MPL-AL5050-100	10	37	4.8	5.5	155	5050	5.5	5.3	4.8	SMD	High temperature capabilities, low resistance
N	MPL-AL6050-R82	0.82	3.9	16.9	24	155	6050	6.6	6.4	4.8	SMD	High temperature capabilities, low resistance
N	MPL-AL6050-1R0	1.0	4.3	16.2	21	155	6050	6.6	6.4	4.8	SMD	High temperature capabilities, low resistance
N	MPL-AL6050-1R2	1.2	5.3	14.6	20	155	6050	6.6	6.4	4.8	SMD	High temperature capabilities, low resistance
N	MPL-AL6050-1R5	1.5	6	13.3	18	155	6050	6.6	6.4	4.8	SMD	High temperature capabilities, low resistance
N	MPL-AL6050-2R2	2.2	8.3	12.0	15	155	6050	6.6	6.4	4.8	SMD	High temperature capabilities, low resistance
N	MPL-AL6050-3R3	3.3	11.5	10.1	12	155	6050	6.6	6.4	4.8	SMD	High temperature capabilities, low resistance
N	MPL-AL6050-4R7	4.7	16.5	7.5	11	155	6050	6.6	6.4	4.8	SMD	High temperature capabilities, low resistance
N	MPL-AL6050-5R6	5.6	19	7	10	155	6050	6.6	6.4	4.8	SMD	High temperature capabilities, low resistance
N	MPL-AL6060-4R7	4.7	12	10	9	155	6060	6.6	6.4	5.8	SMD	High temperature capabilities, low resistance
N	MPL-AL6060-5R6	5.6	13	9.4	8.6	155	6060	6.6	6.4	5.8	SMD	High temperature capabilities, low resistance
N	MPL-AL6060-6R8	6.8	16	8.5	8	155	6060	6.6	6.4	5.8	SMD	High temperature capabilities, low resistance
N	MPL-AL6060-8R2	8.2	19	8.0	7	155	6060	6.6	6.4	5.8	SMD	High temperature capabilities, low resistance
N	MPL-AL6060-100	10	24	6.9	6.6	155	6060	6.6	6.4	5.8	SMD	High temperature capabilities, low resistance
N	MPL-AL6060-150	15	35	5.8	5.5	155	6060	6.6	6.4	5.8	SMD	High temperature capabilities, low resistance

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PART NUMBERING NOMENCLATURE

EXAMPLE

MP1234GQV-Z

①

②

③

④

⑤

① MP

Prefix

MP###

MP####

MP#####

MPQ####

HF####

NB###

...see more at

MonolithicPower.com

② 1234

Part Number

③ G

Temperature Grade (T_A)

C 0°C to +70°C

D -40°C to +85°C

E -20°C to +85°C

G -40°C to +125°C

H -40°C to +125°C

K -55°C to +125°C

-----> Temperature Internal to Datasheet; (T_J) Standard

④ QV

Package (mm) and Features

C WLCSP

D QFN (2x3)

E SC70

F TSSOP w/ Exposed Pad

FP QFP

G QFN (2x2)

H MSOP w/ Exposed Pad

J TSOT23 (0.9 Height)

K MSOP

L QFN (3x4)

M TSSOP

N SOIC w/ Exposed Pad

P PDIP (300 Mil)

Q QFN (3x3)

QD QFN (1x1.5)

QF QFN (1.2x1.6)

QG QFN (1.4x1.8)

QH QFN (1.5x2)

QJ QFN (5x6)

QK QFN (6x6)

QM QFN (6x7)

QN QFN (7x7)

QP QFN (7x8)

QQ QFN (8x8)

QV QFN (3x5)

QW QFN (4x6)

QX QFN (6x10)

QY QFN (5x8)

R QFN (4x4)

S SOIC

SD SOD123

T SOT23 (1.1 Height)

U QFN (5x5)

V QFN (4x5)

W SOIC-WB w/ Exposed Pad

X Sorted Wafer

XN Unsorted Wafer

Y TO220

ZF TO263

C C-Spec

E Enhanced

R Reserve Lead Bend or Top Exposed Pad

S Customer Specific

T Thin Package

U Ultra-Thin Package

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⑤ -Z

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