

Power Management Solutions Selector Guide

2020



World's Fastest-Growing
Power Semiconductor Company

MPS
MonolithicPower.com



2500+ Additional Solutions at MonolithicPower.com

CONTENT OF THE SELECTOR GUIDE

DC/DC POWER CONVERSION

4 - 21

Switching Regulators	4 - 15
LDO	16
Supervisory	17
MOSFET Drivers	17
PMICs & Multiple Outputs	18 - 19
Flyback	19
Fully Integrated PoE PD Solutions	20
DC/DC Controllers for PoE	20
PoE PSE Controllers	20
PoE PD Identity	20
Digital Regulators	21

POWER MODULES

22 - 28

Single-Output Step-Down Modules	22 - 24
Multiple-Output Modules	24
mEZ Power Modules	25 - 28
Step-Up Boost & Buck-Boost Modules	28

AUTOMOTIVE

29 - 51

Buck Regulators	29 - 35
Buck-Boost & Boost Regulators	36 - 37
PMICs	37
Linear Regulators & DDR Memory Power	38
LED Lighting	38 - 41
Monitoring & Supervision	41 - 42
USB Wireless Charging	42 - 48
Motor Drivers	48 - 49
Load Switches	50
Class-D Audio Amplifiers	51
Position & Current Sensors	51

AC/DC POWER CONVERSION

52 - 56

EasyPower	52
Flyback	52 - 53
LLC 600V Half-Bridge Drivers	54
PFC + LLC Combo Controllers	54
PFC	54 - 55
Synchronous Rectifiers	55 - 56

LED LIGHTING

57 - 59

AC/DC Isolated	57
AC/DC Non-Isolated	58
DC/DC Lighting	58 - 59
Protection	59

BATTERY MANAGEMENT

60 - 65

Single-Cell Switching Chargers	60 - 61
Linear Chargers	62 - 63
CC & CV Controllers	63

BATTERY MANAGEMENT

60 - 65

Multi-Cell Switching Chargers	64 - 65
Input Protection	65
Fuel Gauges	65

DISPLAY BACKLIGHTING POWER

66 - 70

White LED Drivers	66 - 69
LED Photo Flash Drivers	70

CLASS-D AUDIO

70

Analog Input	70
PWM Input	70

MOTOR DRIVERS

71 - 75

Brushed DC Motors/Solenoid Drivers	71
Brushless DC Pre-Drivers	72
Stepper Motor Drivers	72 - 73
Integrated BLDC Motor Drivers	73
Fan Drivers	74
Motor Controllers	74
Smart Motor Modules & Kits	75

POSITION SENSORS

75 - 76

Position Sensor Magnets	75
MagAlpha Series	76

CURRENT SENSORS

77

PRECISION ANALOG

77

Analog Switches	77
Operational Amplifiers	77
Voltage Reference	77

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

78 - 79

USB/Load Switches	78
USB PD Controllers	78
USB Port Controllers	79
E-Fuses	79 - 80
Hot-Swap Controllers & 48V Modules	80

ULTRASOUND MUX

80

High-Voltage Analog Switches	80
------------------------------	----

INDUCTORS

81 - 84

Semi-Shielded	81 - 82
Molded	82 - 84

EV KITS & EV BOARDS CONTACT & ORDERING

85
87

SWITCHING REGULATORS | DC/DC POWER CONVERSION

CPU Core (Controllers)

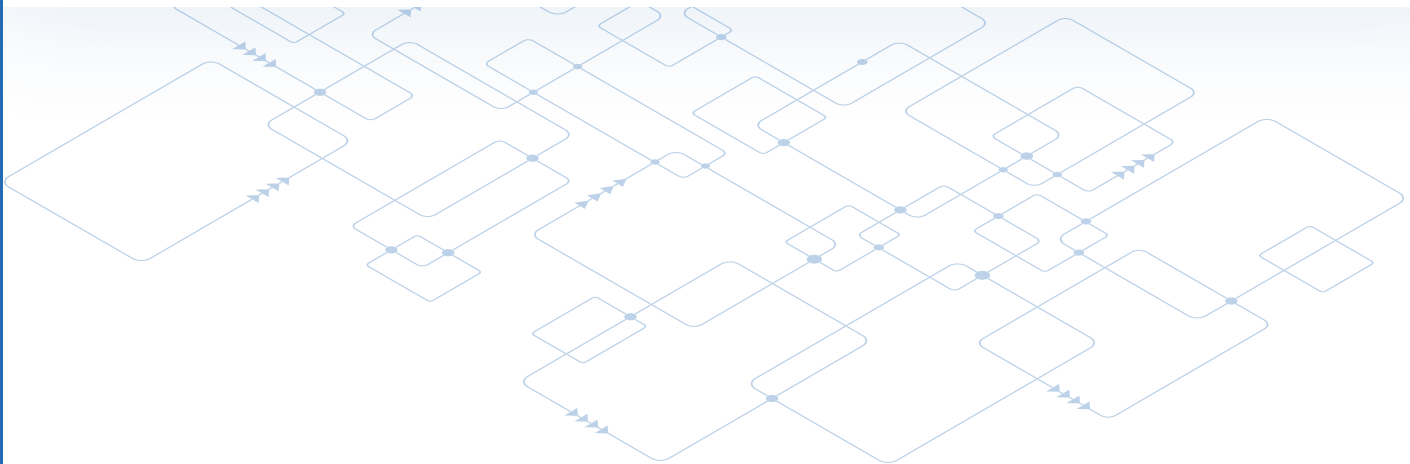
Maximum Operating Input Voltage < 55V

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
MP2939	3.2	3.4	8	0.05	0.3 to 3	Int	4	QFN-48 (6x6)	1+2+1 phase, IMVP8	
MP2949A	3.15	3.4	13	0.07	0.01 to 2	Int	6	TQFN-48 (6x6)	3+2+1 phase for VCCGT, VCORE, and VCCSA, IMVP8/9	

Part Number	V _{CC} (Min) (V)		V _{CC} (Max) (V)	I _Q (Typ) (mA)	Shutdown Current (Typ) (mA)	f _{sw} (MHz)	# of Output Rails	Regulated Output Phase	Package	Notes
MP2965	3	3.6	30	0.15	0.2 to 3	2	10	QFN-48 (6x6)	VR13.HC/AVSBus	
MP2888A	3	3.6	30	0.15	0.2 to 5	1	10	QFN-40 (5x5)	NVIDIA OpenVReg	
MP2884A	3	3.6	30	0.15	0.2 to 5	1	4	QFN-40 (5x5)	NVIDIA OpenVReg	
MP2886A	3	3.6	30	0.15	0.2 to 5	1	6	QFN-40 (5x5)	NVIDIA OpenVReg	
MP2853	3	3.6	34	0.11	0.2 to 3	2	5	QFN-40 (5x5)	AMD SV12	

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
MP86901A	4.5	26	12	25	0.03	0.1 to 2	3.5	TQFN-13 (3x3)
MP86901B	4.5	26	20	35	0.03	0.1 to 2	3.5	TQFN-21 (3x4)
MP86901C	4.5	26	25	60	0.03	0.1 to 2	3.5	TQFN-21 (3x4)
MP86903C	4.5	22	30	60	0.03	0.1 to 1.2	3.5	TQFN-21 (3x4)
MP86902B	3.3	12	35	75	0.03	0.1 to 2	3.5	TQFN-21 (3x4)
MP86905	4.5	16	50	75	0.08	0.1 to 2	3.3	QFN-23 (4x4)
MP86945A	4.5	16	60	90	0.01	0.1 to 2	3.3	TQFN-25 (4x5)
MP86934	4.5	16	25	60	0.03	0.1 to 2	3.3	TQFN-21 (3x4)
MP86933	4.5	16	12	25	-	0.1 to 2	3.3	TQFN-13 (3x3)
N MP86957	3	16	70	110	0.09	0.1 to 3	3.3	LGA-41 (5x6)



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	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
N MP28310	2	5.5	0.3	0.5	-	1.5	✓	✓	✓	✓	-	CSP-12 (1.2x1.6)	100mA LDO with 300nA $I_{Q,prog}$. V_{OUT} by CTRL, P2P with the MP28210, equivalent to the TPS62743
MP21600	2.3	5.5	0.6	11	0.6	2.4	-	✓	✓	✓	-	QFN-6 (1x1.5)	High switching frequency, ultra-small package
MP28300	2	5.5	0.3	0.5	-	1.5	✓	✓	✓	✓	-	QFN-12 (2x2)	Ultra-low I_Q
MP28301	2	5.5	0.7	0.5	0.6	1.5	✓	✓	✓	✓	-	QFN-12 (2x2)	100mA LDO with 300nA $I_{Q,prog}$. V_{OUT} by CTRL, P2P with the MP28300
N MP28210	2	5.5	1	0.5	-	1.5	✓	✓	✓	✓	-	CSP-12 (1.2x1.6)	P2P with the MP28310
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

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	Light-Load Efficiency	Constant-On-Time (COT)	100% Duty Cycle	Industrial	Package	Notes
MP2148	2.3	5.5	1	10	0.6	2.2	✓	✓	✓	✓	-	QFN-6 (1x1.5)	High switching frequency, ultra-small package
MP21148	2.3	5.5	1	500	0.6	2.4	✓	-	✓	✓	-	QFN-6 (1x1.5)	FCCM, low ripple across entire load range
MP2149	2.7	6	1 (2x)	45	0.608	1	-	✓	-	✓	-	TSOT23-8	Dual 1A output current
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, adj. and fixed V_{OUT} versions, P2P with the MP2152/3
MP2181	2.5	5.5	1	21	0.6	1.2	✓	✓	✓	✓	-	SOT583 (1.6x2.1)	External soft start, 1% V_{FB} accuracy, output discharge, P2P with the MP2182/3/4
MP2141Q-18	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, adj. and fixed V_{OUT} versions, P2P with the MP2151/3
MP2172C	2.38	5.5	2	450	0.6	1.1	-	-	✓	✓	-	UTQFN (1.2x1.6)	FCCM, 1% V_{FB} accuracy, output discharge
S MP2192C	2.5	5.5	2	25	0.6	1.1	-	-	✓	✓	-	WLCSP-6 (1.23x0.86)	FCCM, 1% V_{FB} accuracy, fast output discharge, P2P with the MP2193

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	Light-Load Efficiency	Constant-On-Time (COT)	100% Duty Cycle	Industrial	Package	Notes
MP2182	2.5	5.5	2	21	0.6	1.2	✓	✓	✓	✓	-	SOT583 (1.6x2.1)	External soft start, 1% V_{FB} accuracy, output discharge, P2P with the MP2182/3/4
N MP2122A	2.7	6	2 (2x)	45	0.608	1	-	✓	-	✓	-	TSOT23-8	Dual 2A output current
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, adj. and fixed V_{OUT} versions, P2P with the MP2151/2
S MP2193	2.5	5.5	3	25	0.6	1.1	-	✓	✓	✓	-	WLCSP-6 (1.23x0.86)	1% V_{FB} accuracy, output discharge, adj. output, P2P with the MP2192C
MP2164	2.5	5.5	3	50	0.6	2.3	✓	✓	✓	✓	-	QFN-12 (2x2)	Forced PWM and auto-PFM mode

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
MP2183	2.5	5.5	3	21	0.6	1.2	✓	✓	✓	✓	✓	-	SOT583 (1.6x2.1)	1% V_{FB} accuracy, output discharge, P2P with the MP2181/3/4
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
N MP2184	2.5	5.5	4	21	0.6	1.2	✓	✓	✓	✓	✓	-	SOT583 (1.6x2.1)	1% V_{FB} accuracy, output discharge, P2P with the MP2181/2/3
MP2145	2.8	5.5	6	40	0.6	1.2	✓	-	✓	✓	-	-	QFN-12 (2x3)	Output discharge, PWM/PFM mode, dynamic voltage scaling
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
MP8770C	3	17	8	0.1	0.6	0.7	✓	✓	-	✓	-	-	QFN-16 (3x3)	FCCM, wide V_{IN} range supports 3.3V, 5V, and 12V inputs
MP8771	3	18	10	0.1	0.6	0.7	✓	✓	✓	✓	-	-	QFN-16 (3x3)	Fast load transient response, SCP, UVP, OCP, and hiccup
MP8774	3	18	12	0.1	0.6	0.7	✓	✓	✓	✓	-	-	QFN-16 (3x3)	High frequency, wide V_{IN} range supports 3.3V, 5V, and 12V inputs
MP8774H	3	18	12	0.1	0.6	1.4	✓	✓	✓	✓	-	-	QFN-16 (3x3)	High frequency, wide V_{IN} range supports 3.3V, 5V, and 12V inputs



SWITCHING REGULATORS | DC/DC POWER CONVERSION

Step-Down Converters (Buck)

Maximum Operating Input Voltage ≤ 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
MP1479	4.2	18	1	0.19	0.805	0.8	-	-	✓	✓	SOT563 (1.6x1.6)	Low UVLO, P2P with the MP1476/MP1477
MP2313	4.5	24	1	0.2	0.8	2	-	-	✓	-	TSOT23-8	High frequency, light-load mode (AAM pin), P2P with the MP2138
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 the MP2314, optimized EMI
MP2322	3	22	1	0.005	0.6	1.25	✓	-	✓	✓	QFN-8 (1.5x2)	Ultra-low I _D , small package, output discharge
MP1476	4.2	18	2	0.19	0.805	0.8	-	-	✓	✓	SOT563 (1.6x1.6)	P2P with the MP1479/MP1477
MP2318	4.5	24	2	0.2	0.798	2	-	-	✓	-	TSOT23-8	High frequency, light-load mode (AAM pin), P2P with the MP2313
MPQ2314	4.5	24	2	0.18	0.791	0.5	-	-	✓	✓	TSOT23-8	AAM power-save mode, industrial grade
MP2332H	4.2	18	2	0.2	0.805	1.2	✓	✓	-	✓	SOT583 (1.6x2.1)	High frequency, FCCM, P2P with the MP2333H
MP2321	4	19	2	0.04	0.6	Prog	✓	✓	✓	-	QFN-14 (2x3)	Forced PWM or auto-PFM/PWM mode, 100% duty cycle
MP2392	4.2	24	2	0.2	0.805	0.65	✓	✓	✓	✓	SOT583 (1.6x2.1)	P2P with the MP2393
MP2331H	4.2	24	2	0.2	0.805	1.2	✓	✓	-	✓	SOT583 (1.6x2.1)	High frequency, FCCM, P2P with the MP2330H
MP2344	7.5	26	2	0.17	0.791	0.6	-	-	✓	-	TSOT23-6	P2P with the MP2317/MP2345, optimized EMI
MP2345	7.5	26	2.5	0.17	0.791	0.6	-	-	✓	-	TSOT23-6	P2P with the MP2317/MP2344, optimized EMI
MP2393	4.2	24	3	0.2	0.805	0.65	✓	✓	✓	✓	SOT583 (1.6x2.1)	P2P with the MP2392
MP2333H	4.2	18	3	0.2	0.805	1.2	✓	✓	-	✓	SOT583 (1.6x2.1)	High frequency, FCCM, P2P with the MP2332H
MP2330H	4.2	24	3	0.2	0.805	1.2	✓	✓	-	✓	SOT583 (1.6x2.1)	High frequency, FCCM, P2P with the MP2331H
N MP2386C	4.5	24	8	0.105	0.6	0.7	✓	-	-	-	QFN-11 (2x2)	FCCM
MP1477	4.2	17	3	0.2	0.805	0.8	-	-	✓	✓	SOT-563 (1.6x1.6)	P2P with the MP1479/MP1476
MP1477H	4.2	17	3	0.2	0.805	1.2	-	-	-	✓	SOT563 (1.6x1.6)	High frequency, FCCM
N MP1660	4.5	16	3	0.19	0.6	0.6	-	-	✓	✓	SOT-563 (1.6x1.6)	600mV V _{REF}
MP2223	4.5	18	3/2	1	0.8	0.54	-	-	✓	-	TSOT23-8	Dual 3A/2A buck, 180° out-of-phase operation
MP2348	4.2	24	4	0.2	0.802	0.65	-	✓	✓	✓	SOT583 (1.6x2.1)	Forced PWM, auto-PFM mode, ultrasonic mode
MP8854	2.85	18	4	0.42	0.6 to 1.108 (Adj)	0.5 to 1.25	✓	✓	✓	✓	QFN-14 (3x4)	I ² C prog. FB range, int. telemetry, accurate V _{OUT} /I _{OUT} readback via I ² C, P2P with the MP8861/69S
S MP8853	2.85	18	4	0.42	0.6 to 1.108 (Adj in 4mV Steps)	0.5 to 1.25	✓	-	✓	✓	QFN-14 (3x3)	I ² C prog. FB range and f _{SW} , accurate V _{OUT} /I _{OUT} readback via I ² C

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)	Package	Notes
MP8864	4.5	21	4	0.5	0.6 to 1.87 (Adj in 10mV Steps)	0.6 to 1.6 (Selectable)	✓	✓	✓	-	QFN-15 (3x3)	I ² C interface, prog. V_{OUT} , power-save mode
S MP2349	4.5	24	6.5	0.105	0.6	0.7	-	-	✓	✓	QFN-11 (2x2)	Forced PWM, auto-PFM mode, ultrasonic mode
S MPQ8861	2.85	18	12	0.42	0.6 to 1.108 (Adj)	0.5 to 1.25	✓	✓	✓	✓	QFN-14 (3x4)	Wettable flank package, output adj. in 4mV steps, I ² C
MPQ8623	4	16	6	0.65	0.9	0.6/1.1/2	✓	✓	✓	✓	QFN-14 (2x3)	Prog. current limit, prop. switching loss red., pre-biased start-up, stable w/ zero-ESR output cap., excel. load reg.
MPQ8626	4	16	6	0.65	0.6	0.6/1.1/2	✓	✓	✓	✓	QFN-14 (2x3)	Prog. current limit, prop. switching loss red., pre-biased start-up, stable w/ zero-ESR output cap., excel. load reg.
MPQ8633A	4	16	16	0.65	0.6	0.6/0.8/1	✓	✓	✓	✓	QFN-21 (3x4)	Prog. current limit and freq., voltage tracking, prop. switching loss red., pre-biased start-up, stable w/ zero-ESR output cap., excel. load reg.
MPQ8633B	4	16	20	0.65	0.6	0.6/0.8/1	✓	✓	✓	✓	QFN-21 (3x4)	Prog. current limit and freq., voltage tracking, prop. switching loss red., pre-biased start-up, stable w/ zero-ESR output cap., excel. load reg.
MPQ8634A	4	16	12	0.65	0.9	0.6/0.8/1	✓	✓	✓	✓	QFN-21 (3x4)	Prog. current limit and freq., voltage tracking, prop. switching loss red., pre-biased start-up, stable w/ zero-ESR output cap., excel. load reg.
MPQ8634B	4	16	20	0.65	0.9	0.6/0.8/1	✓	✓	✓	✓	QFN-21 (3x4)	Prog. current limit and freq., voltage tracking, prop. switching loss red., pre-biased start-up, stable w/ zero-ESR output cap., excel. load reg.
MPQ8645P	4	16	30	2.5	0.6	0.4/0.6/0.8/1	✓	-	✓	✓	TQFN-25 (4x5)	Scalable multi-phase operation, PMBus, true remote V_{OUT} sense, prog. V_{OUT} , current limit, and freq.

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) (μ A)	V_{FB} (Typ) (V)	f_{SW} (MHz)	Power Good	External Soft Start	Light-Load Efficiency	Constant-On-Time (COT)	Industrial	Package	Notes
N MP2328	4.5	28	2	0.16	0.5	0.45	✓	✓	✓	✓	-	SOT583 (1.6x2.1)	P2P with the MP233x family
S MP2328C	4.5	28	2	0.56	0.5	0.45	✓	✓	-	✓	-	SOT583 (1.6x2.1)	FCCM
N MP2338	4.5	28	3	0.16	0.45	0.45	✓	✓	✓	✓	-	SOT583 (1.6x2.1)	P2P with MP2328
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

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 _O (Typ) (μ A)	V _{FB} (Typ) (V)	f _{SW} (MHz)	Power Good	External Soft Start	Light-Load Efficiency	Constant-On-Time (COT)	Industrial	Package	Notes
MP8715	4.5	21	4	0.66	0.805	0.5	✓	✓	-	-	-	QFN-14 (3x4), SOIC-8E	100% duty cycle, ext. freq. sync
MP1499	4.5	16	5	0.6	0.807	0.5	-	✓	✓	-	-	QFN-10 (2x3)	Ext. freq. sync range 200kHz to 2MHz, current mode
MP2384	4.5	24	4	0.105	0.6	0.7	✓	-	✓	✓	-	QFN-11 (2x2)	Output discharge, thermal shutdown with auto-retry, P2P with the MP2329/MP2386
MP2384C	4.5	24	4	0.105	0.6	0.7	✓	-	-	✓	-	QFN-11 (2x2)	FCCM
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 cap.
MP2225	4.5	18	5	0.32	0.6	0.5	-	-	✓	-	-	TSOT23-8	External freq. sync, P2P with the MP2236
MPQ8623	4	16	6	0.65	0.9	0.6/1.1/2.2	✓	✓	✓	✓	✓	QFN-14 (2x3)	Prog. current limit, prop. switching loss red., pre-biased start-up start-up, stable w/ zero ESR out cap, excel. load reg.
MP8861	2.85	18	6	0.42	0.6 to 1.108 (Adj)	0.5 to 1.25	✓	✓	✓	✓	-	QFN-14 (3x4)	I ² C prog. FB range, integrated telemetry, accurate V _{OUT} /I _{OUT} readback via I ² C, P2P with the MP8854/69S
MP2236	3	18	6	0.15	0.6	0.6	-	-	✓	✓	-	TSOT23-8	P2P with the MP2225
MP2236C	3	18	6	0.15	0.6	0.6	-	-	-	✓	-	TSOT23-8	FCCM
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 to 1.87 (Adj in 10mV Steps)	0.6 to 1.6 (Selectable)	✓	✓	✓	-	-	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 discharge, thermal shutdown with auto-retry, P2P with the MP2384/MP2386
MP2329C	4.5	24	6.5	0.105	0.6	0.7	✓	-	-	✓	-	QFN-11 (2x2)	FCCM version of the MP2329
MP2386	4.5	24	8	0.105	0.6	0.7	✓	-	✓	✓	-	QFN-11 (2x2)	Output discharge, OCP, OVP, UVP, thermal shutdown with auto-retry, P2P with the MP2384/MP2329
MP2276	2.7	16	8	0.6	0.8	0.6/1.1/2	✓	✓	✓	✓	-	QFN-14 (2x3)	Prog. current limit, forced PWM/ auto-PFM mode
MP8770	3	17	8	0.1	0.6	0.7	✓	✓	✓	✓	-	QFN-16 (3x3)	Fast load transient response, SCP, UVP, OCP, and hiccup
MP8770C	3	17	8	0.1	0.6	0.7	✓	✓	-	✓	-	QFN-16 (3x3)	FCCM, wide V _{IN} range supports 3.3V, 5V, and 12V inputs
MP8867	4.5	17	8	0.56	0.6 to 1.87 (Adj in 10mV Steps)	0.5 to 1.5 (Selectable)	✓	✓	✓	-	-	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

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) (μA)	V_{FB} (Typ) (V)	f_{sw} (MHz)	Power Good	External Soft Start	Light-Load Efficiency	Constant-On-Time (COT)	Industrial	Package	Notes
MP2238	4.2	18	8	0.15	0.6	0.6	-	-	✓	✓	-	QFN-12 (2x3)	1% V_{FB} accuracy, 8A version of the MP2236
MP8771	3	18	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	Ext clock	✓	✓	✓	-	-	QFN-14 (3x4)	Ext. freq. sync 200kHz to 2MHz, current mode
MP8868	4.5	17	10	0.56	0.6 to 1.87 (Adj in 10mV Steps)	0.5 to 1.5 (Selectable)	✓	✓	✓	-	-	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, adj. current limit, FCCM or PSM, over-current limit, latch-off reset
MP8772	3	17	12	0.1	0.6	0.7	✓	✓	✓	✓	-	QFN-16 (3x3)	Fast load transient response, SCP, UVP, OCP, and hiccup
MP8774	3	18	12	0.1	0.6	0.7	✓	✓	✓	✓	-	QFN-16 (3x3)	Wide V_{in} range supports 3.3V, 5V, and 12V inputs
MP8774H	3	18	12	0.1	0.6	1.4	✓	✓	✓	✓	-	QFN-16 (3x3)	High frequency, wide V_{in} range supports 3.3V, 5V, and 12V inputs
MP8869S	2.85	18	12	0.42	0.6 to 1.108 (Adj)	0.5 to 1.25	✓	✓	✓	✓	-	QFN-14 (3x4)	V_{out} adj. up to 5.5V with FB pin, integrated telemetry, accurate V_{out}/I_{out} readback via I ² C, P2P with the MP8861/54
MP8719	4.5	26	12	0.135	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
MP8792	2.7	16	12	0.65	0.6	0.6/0.8/1 (Selectable)	✓	✓	✓	✓	-	QFN-21 (3x4)	Differential V_{out} sense, adj. accurate current limit level, 0.5% FB, selectable PSM/FCCM, V_{out} tracking, pre-biased start-up
MP8794	2.7	16	20	0.65	0.6	0.6/0.8/1 (Selectable)	✓	✓	✓	✓	-	QFN-21 (3x4)	Adj. current limit, prog. freq., differential V_{out} sense
MP8796	4	16	30	0.7	0.6	Prog	✓	✓	✓	✓	-	TQFN25 (4x5)	Prog. current limit, scalable multi-phase operation, remote sense, hiccup or latch-off for OCP, OVP, and OTP, non-PMBus version of the MPQ8645P
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 < 100V

Part Number	V _{IN} (Min) (V)	V _{IN} (Max) (V)	I _{OUT} (Max) (A)	I _Q (Typ) (mA)	V _{FB} (Typ) (V)	f _{SW} (kHz)	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 _Q
MP4568	4.5	45	0.1	0.02	1	Prog	-	✓	-	✓	✓	QFN-10 (3x3)	Programmable peak-current limit
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, step-down
MPQ2459	4.5	55	0.5	0.73	0.812	480	-	-	-	-	✓	TSOT23-6	Built-in power MOSFET
MPQ2456	4.5	50	0.5	0.73	0.85	1200	-	-	✓	-	✓	TSOT23-6	OCF
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)	External frequency sync
MP2457	5	36	0.6	0.065	0.8	2000	-	-	✓	✓	✓	TSOT23-6	-
S MP2460	4.5	45	0.6	0.15	0.8	1600	-	-	✓	✓	-	TSOT23-6	LDO mode, 98% max duty
S MP4541	10	80	0.8	0.015	1	Prog	-	-	✓	✓	✓	SOIC-8EP	-
N MP4581	10	100	0.8	0.015	1	Prog	-	-	✓	✓	✓	SOIC-8EP	High efficiency at light loads
MPQ4458	3.8	36	1	0.12	0.8	Prog	-	-	-	-	-	TQFN-10 (3x3)	Integrated HS-FET
MPQ4558	3.8	55	1	0.14	0.8	Prog	-	-	✓	-	✓	QFN-10 (3x3), SOIC-8E	Current mode control
MP4431 MPQ4431	3.3	36	1	0.01	0.8	Prog	✓	✓	✓	✓	✓	QFN-16 (3x4)	Selectable FCCM or AAM, prog. soft-start time, good EMI, low-dropout mode
MP2269	3.3	30	1	0.012	0.8	Prog	✓	✓	✓	✓	-	QFN-15 (2x3)	Current mode control, low I _Q , forced PWM or auto-PFM/PWM, 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)	Integrated HS-FET
MP4425M MPQ4425M	4	36	1.5	0.5	0.2	2200	-	-	-	-	✓	QFN-13 (2.5x3)	PWM dimming and OCP/SCP protection, ext. freq. sync
MP9942 MP9942A	4	36	2	0.5	0.792	410	✓	-	✓	✓	-	TSOT23-8	Consumer grade, ext. freq. 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
MP4432 MPQ4432	3.3	36	2.2	0.01	0.8	Prog	✓	✓	✓	✓	✓	QFN-16 (3x4)	Selectable FCCM or AAM, prog. soft-start time, good EMI, low-dropout mode
MPQ4460	3.8	36	2.5	0.12	0.8	Prog	-	-	✓	-	-	QFN-10 (3x3)	Programmable 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 HS-FET

SWITCHING REGULATORS | DC/DC POWER CONVERSION

Step-Down Converters (Buck)

Maximum Operating Input Voltage < 100V

Part Number	V_{IN} (Min) (V)	V_{IN} (Max) (V)	I_{OUT} (Max) (A)	I_Q (Typ) (mA)	V_{FB} (Typ) (V)	f_{SW} (kHz)	Power Good	External Soft Start	Light-Load Efficiency	Sync Rectifier	Industrial	Package	Notes
MP2496	7	36	2.5	1.6	-	350/250/150	-	-	-	-	-	QFN-26 (4x4)	Int. 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. freq. sync, output line drop compensation
MP4423H MPQ4423H	4	36	3	0.5	0.79	410	✓	-	-	✓	✓	QFN-8 (3x3)	External frequency sync
MP9943 MP9943A	4	36	3	0.5	0.79	410	✓	-	✓	✓	-	QFN-8 (3x3)	Consumer grade, ext. freq. sync
MP4433 MPQ4433	3.3	36	3	0.01	0.8	Prog	✓	✓	✓	✓	✓	QFN-16 (3x4)	Selectable FCCM or AAM, prog. soft-start time, good EMI, 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	350 to 2500 (Adj)	✓	✓	✓	✓	-	QFN-15 (2x3)	Current mode control, low I_Q , forced PWM or auto-PFM/PWM, low-dropout mode
S MP8883 MPQ8883	3.5	45	3	0.6	-	Prog	✓	-	✓	✓	✓	QFN-16 (3x3)	Current mode, I ² C, OTP, ext. freq. 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 FCCM or AAM, prog. soft-start time, good EMI, low-dropout mode
S MP4423C MPQ4423C	4	36	6	0.75	0.792	420/2200	-	-	✓	✓	✓	QFN-16 (3x4)	Spread spectrum, PFM/PWM mode, ext. sync, output discharge
MP2491C	4	32	6	0.45	0.5	490	✓	-	✓	✓	-	QFN-13 (2.5x3)	Adjustable current limit, V_{OUT} scaling control
S MP8880 MPQ8880	3.5	60	4	-	-	200 to 2500	✓	-	-	✓	-	QFN- (4x5)	Digital prog. sync, AEC-Q100 qualified
MP8675	4.5	42	6	0.9	0.808	420	-	-	-	✓	-	SOIC-8E	Synchronizable gate driver, ext. freq. sync

Step-Down Controllers

Part Number	V_{IN} (Min) (V)	V_{IN} (Max) (V)	I_Q (Typ) (mA)	V_{FB} (V)	f_{SW} (kHz)	Soft Start	Package	Notes
MP2910	5	12	2.7 (I_{CC} UG and LG Open)	0.8	300	Int	SOIC-14, SOIC-8E	Sync PWM DC/DC linear, power good indicator for Intel, Grantsdale FSB_VTT power sequence
MP2905	3	28	0.6	0.6	200 to 500 (Adj)	Ext	MSOP-10	Ideal for applications above 15A
MP9928	4	60	0.75	0.8	Adj via Ext R_{FREQ}	Ext	TSSOP-20EP, QFN-20 (3x4)	Current mode, duty cycle up to 99.5%, prog. freq.
MP2908A	4	60	0.75	0.8	100 to 1000 (Adj)	Ext	TSSOP-20EP, QFN-20 (3x4)	Industrial grade, power good, prog. CCM, AAM, pulse-skip mode

SWITCHING REGULATORS | DC/DC POWER CONVERSION

Step-Up Charge Pump

Part Number	V_{IN} (Min) (V)	V_{IN} (Max) (V)	I_{OUT} (A)	I_Q (Typ) (mA)	f_{SW} (kHz)	Industrial	Package	Notes
MP9361	2.8	5	0.11	2	1350	✓	TSOT23-6	Fixed 5V _{OUT} , high performance, regulated, int. 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_Q (Typ) (mA)	V_{FB} (Typ) (V)	SoftStart	Package	Notes
MP3910	5	35	1	30 to 400 (Adj)	0.288	1.237	Ext	MSOP-10	Supports pulse-skip mode at light loads, 95% max duty cycle
MP3910A	9	14	1	30 to 400 (Adj)	0.288	1.237	Ext	SOIC-8E	Supports pulse-skip mode at light loads, 95% max duty cycle
MP6002	10	100	3	550	1	1.21	Int	SOIC-8E	Flyback/forward DC/DC converter, 30W, int. 150V power switch
MP6001	10	100	2	550	1	1.21	Int	SOIC-8E	Flyback/forward DC/DC converter, 15W, int. 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_Q (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. comp, 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 the 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	0 to V_{IN}	30 to 550	QFN-10 (1.8x1.4)	Dual output, negative charge pump, adj. 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 SS
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	Programmable soft start
MP3414A	1.8	5.5	3	0.022	1.908 to 5.5	1000	TSOT23-8	Wider input version of the MP3414, sync
MP3213	2.5	22	3.5	0.7	3 to 22	700/1300	MSOP-8E	Programmable 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_O (Typ) (mA)	V_{OUT} Range (V)	f_{SW} (kHz)	Package	Notes
MP1530	2.7	5.5	3.6	1.3	2.7 to 22	1400	QFN-16 (3x3), TSSOP16	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	300 to 2000 (Prog)	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	300 to 2000 (Prog)	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)	Prog. current, output disconnect, sync
N MP3437	2.7	16	10	0.1	V_{IN} to 16	600	TSOT23-8, QFN-10 (2x2.5)	PSM, FCCM, and USM in light load
MP3432	2.7	13	10	0.51	V_{IN} to 16	600	QFN-13 (3x4)	Selectable PSM/USM/FCCM, prog. switching 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, UVLO, and hysteresis, sync
MP3428A	3	20	25	0.65	3 to 22	600	QFN-22 (3x4)	Input disconnect, ext. soft start, prog. UVLO and hysteresis, sync

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

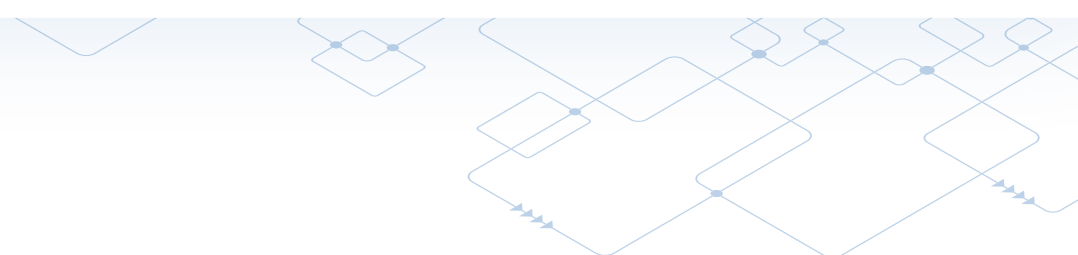
Part Number	V_{IN} (Min) (V)	V_{IN} (Max) (V)	V_{STREG} (Max) (V)	I_{LIMIT} Charging (A)	I_{LIMIT} Dumping (A)	I_O (Typ) (mA)	V_{FB} (V)	Package	Notes
MP5505E	2.7	7	30	0.54	6	2 (Max)	0.801/0.795	QFN-20 (3x4)	Input current limit, adj. dV/dt slew rate, reverse-current protection
MP5455	2.7	7	30	0.5	5	2 (Max)	0.79	QFN-20 (3x4)	For USB Type-C HDMI comm. 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 freq., smaller package version of the 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	Ext	-	QFN-14 (2x3)	Converter with internal switch, low-noise LDO output, line drop compensation, selectable V_{out} comp., adj. SS output
N MP8128	8	14	DiSEqC™ 1.x and DiSEqC™ 2.x	1	Selectable Int or Ext	-	QFN-20 (3x3)	I ² C interface, low-noise LDO output, selectable V_{out}

Buck-Boost

Part Number	V_{in} (Min) (V)	V_{in} (Max) (V)	I_{sw} Limit (Typ) (A)	I_o (Typ) (mA)	V_{reg} (V)	f_{sw} (kHz)	Sync	Package	Notes
MP8860	2.8	22	1	1	-	500	✓	QFN-16 (3x3)	1A I_{out} , 4-switch converter, I ² C, 1V to 20.47V V_{out} range
MP8862	2.8	22	2	1	-	500	✓	QFN-16 (3x3)	2A I_{out} , 4-switch converter, I ² C, 1V to 20.47V V_{out} range
MP2155	2	5.5	2.2	0.08	0.496	1000	✓	QFN-10 (3x3)	Power-save mode, load disconnect, 1.5V to 5V V_{out} range
MP28160	2.5	5.5	2.5	0.22	-	1800	✓	CSP-12 (1.4x1.8)	0.5A I_{out} converter, fixed 3.3V $_{out}$
MP28163	2	5.5	2.9	0.07	0.496	1100	✓	QFN-10 (3x3)	Power-save mode, load disconnect, 1.5V to 5V V_{out} range
MP28167-A	2.8	22	3	1	1	500/750 (Selectable)	✓	QFN-16 (3x3)	3A I_{out} , 4-switch integrated converter, 1V to 20.47V V_{out} range with FB pin, I ² C
MP28167	2.8	22	3	1	-	500	✓	QFN-16 (3x3)	3A I_{out} , 4-switch converter, fixed 5V $_{out}$
MP8859	2.8	22	3	1	-	500	✓	QFN-16 (3x3)	3A I_{out} , 4-switch converter, I ² C, 1V to 20.47V V_{out} range
MP28164	1.2	5.5	4.2	0.025	0.5	2000	✓	QFN-11 (2x3)	Power-save mode, load disconnect
N MP4245	4	36	5	0.18	0.1/0.4/0.72/1.6	250/350/420 (Selectable)	✓	QFN-21 (4x5)	4-switch USB PD solution converter, spread spec. sel., I ² C and 2-time prog. MTP
S MP2980	4	24	Prog	0.07/0.055	Prog	200/300/400/600 (Selectable)	✓	QFN-32 (4x4)	4-switch controller, I ² C, 3V to 20V V_{out} range
S MP2984	5	36	Prog	0.07/0.055	Prog	Selectable: 200/300/400/600	✓	QFN-32 (4x4)	USB Type-C PD controller, I ² C, <50mA step current limit adj. via IPWM pin, 3V to 20V V_{out} range
S MP4247 (hybrid)	3.6	36	5	0.775/0.13	0.33/0.5/2	280/420/600	✓	QFN-20 (3x5)	36V, 100W, int. low-side MTP MOSFETs, I ² C



LDO | DC/DC POWER CONVERSION

Part Number	V_{in} (Min) (V)	V_{in} (Max) (V)	I_{out} (mA)	I_o (Typ) (mA)	Load Regulation (%/mA)	PSRR at 1kHz (dB)	V_{FB} (Typ) (V)	Dropout Voltage (mV)	Package	Notes
MP2000	1.35	6	150	65	0.001	50	0.5	250 (I_o : 100mA) 300 (I_o : 150mA)	TSOT23-5	Low-voltage input (1.35V to 6V)
MP8801	2.7	6.5	150	125	0.001	70	1.22	150 (I_o : 150mA)	TSOT23-5	Low noise, excellent for RF applications, low cost
MP8802	2.7	6.5	250	125	0.001	70	1.22	230 (I_o : 250mA)	TSOT23-5	Excellent for RF applications, low cost
MP20056	2.5	5.5	250	150	0.003	63	0.8	100 (I_o : 250mA)	QFN-8 (2x2), TSOT23-5	Fixed output, current limiting, thermal protection
MP20041	2.5	6	300 (2x)	114	0.003	65	-	75 (I_o : 100mA) 220 (I_o : 300mA)	QFN-8 (2x2)	Dual fixed output, P2P with the RT9012
S MP2002A	1.35	6.5	500	100	0.001	26	0.5	290 (I_o : 500mA)	QFN-8 (2x3)	Adj. V_{out} , PG and EN pins
MP8904	2.5	6.5	500	100	0.001	26	0.496	300 (I_o : 500mA)	QFN-8 (2x3)	Power good output, industrial grade
MP20045	2.5	5.5	1000	110	0.003	56	1.5	140 (I_o : 1000mA)	QFN-8 (3x3), SOIC-8E	High input/output current with fast response, fixed and adj. $+0.252 V_{out}$
MP20051	2.5	5.5	1000	110	0.003	63	0.8	140 (I_o : 1000mA)	QFN-8 (3x3), SOIC8E (4.9x6)	-
MP20046	2.7	5.5	2000	75	0.003	70	-	210 (I_o : 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

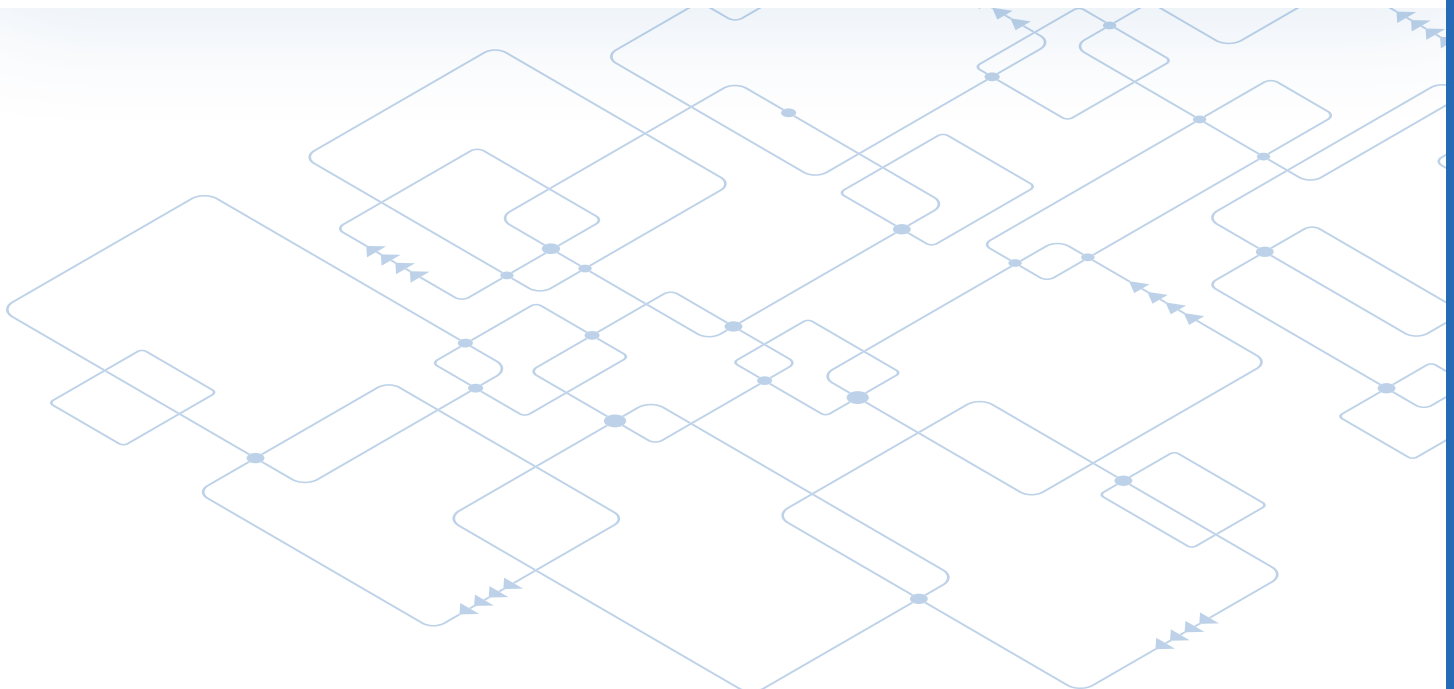
Part Number	V_{in} (Min) (V)	V_{in} (Max) (V)	I_{out} (mA)	I_o (Typ) (mA)	Load Regulation (%/mA)	PSRR at 1kHz (dB)	V_{FB} (Typ) (V)	Dropout Voltage (mV)	Package	Notes
MP2016	4	42	30	12	0.003	50	1.23	700 (I_o : 30mA)	QFN-8 (2x3), TSOT23-5	Ideal for automotive applications
MP2015A	2.5	24	150	3.3	0.005	41	1.215	700 (I_o : 150mA)	TSOT23-4, QFN-6 (2x2), QFN-8 (3x3)	EN pin
MP2019	3	40	300	10	0.04	45	1.25	420 (I_o : 300mA)	SOIC-8EP	Industrial grade
MP2014	3	40	500	10	0.03	45	-	750 (I_o : 500mA)	TO252-5	Low I_o
MP2018	3	16	500	10	0.03	45	-	750 (I_o : 500mA)	TO252-5	Low I_o , fixed V_{out} , power good
MP2005	1	5.5	800	100	0.001	65	0.5	70 (I_o : 800mA)	QFN-8 (2x3)	Fast transient, 48dB PSRR at 1MHz

SUPERVISORY | DC/DC POWER CONVERSION

Part Number	V _{IN} (Min) (V)	V _{IN} (Max) (V)	I _O (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
MP6420	3.6	18	3	0.5	-	3000 to 4600	TSOT23-8	Battery protection IC for two three-series cell Li-ion, int. protective MOSFET, PTC interface
MP6412	2.2	12	1	-	-	-	QFN-10 (1.4x1.8)	Ultra-low I _O load switch controller, reset timer

MOSFET DRIVERS | DC/DC POWER CONVERSION

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	2.5	3.5	12	9	18	20	QFN-10 (3x3)	High frequency
MP18021A	9	18	100	1.5	2.5	12	9	16	16	SOIC-8E, QFN-8 (3x3)	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
N MP1909	4.5	12	50	2	4	10	6	110	30	SOT583	Low I _O , supports 100% duty, 30V, high frequency
S MP1911	2.5	16	-	-	-	30	30	270	350	SOT583	1A, H-bridge solenoid valve driver
MP1917	8	17	115	2.6	4.5	15	15	20	20	QFN-8 (4x4)	105V, 4A, high-frequency, half-bridge gate driver
MP1917A	8	15	115	2.6	4.5	15	15	20	20	QFN-10 (4x4)	100V, 4A, high-frequency, half-bridge gate driver



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} (kHz)	Package	Notes
MP28300	2	5.5	Buck: 0.8/1/1.2/1.5/1.8/2.5/3.3 LDO: 1.3/1.8/3.3	-	0.3	1500	QFN-12 (2x2)	Ultra-low 500nA I_Q , 300mA buck + 100mA LDO, prog. V_{OUT} via CTRL, COT, PG
N MP28310	2	5.5	Buck: 1.2/1.5/1.8/2.5/2.8/3/3.3 LDO: 1.8/2.8/3	-	0.3	1500	CSP-12 (1.2x1.6)	Ultra-low 500nA I_Q , ultra-small package, 300mA buck and 100mA LDO, prog. V_{OUT} via CTRL, COT, PG
MP28301	2	5.5	Buck: 0.8/1/1.2/1.5/1.8/2.5/3.3 LDO: 1.2/2.5/3	-	0.7	1500	QFN-12 (2x2)	Ultra-low 500nA I_Q , 700mA buck + 100mA LDO, prog. V_{OUT} via CTRL, COT, PG
MP5408	6	36	5.1/5.17/5.3	-	USB 1: 3 USB 2: 3	Prog	QFN-26 (5x5)	Integrated, smart, dual USB charging ports, auto-detection, supports USB Type-C 5V at 3A DFP mode
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: 3.5 Ch 2: 2.5	1500	UTQFN-20 (2.5x3)	Configurable mini PMIC, two buck converters (2.5A/3.5A), one load switch (3A)
MP5403B	2.7	6	0.6 to 6	0.6	Ch 1: 5 Ch 2: 4	1500	UTQFN-20 (2.5x3)	Mini PMIC, dual peak buck converter (4A/5A), one load switch (2A)
MP5416	2.8	5.5	Prog	Prog	Prog Buck 1: 4.5 Buck 2: 2.5 Buck 3: 4 Buck 4: 2	Prog	QFN-28 (4x4)	I^2C , one-time prog. (OTP) memory, prog. $V_{OUT}/f_{SW}/I_{SW}$ via I^2C /OTP, config. mini PMIC, four buck converters (4.5A/4A/2.5A/2A), four 300mA LDOs, one 10mA RTC LDO
MP5418	2.3	5	V_{OUT1} : 0 to $-V_{IN}$ V_{OUT2} : 0 to $-CTL$	-	0.2	30 to 550	QFN-10 (1.4x1.8)	Negative charge pump, adj. negative regulator
MP5470	4	16	0.55 to 7	Prog	Prog Buck 1: 3 Buck 2: 3 Buck 3: 2 Buck 4: 2	800	QFN-22 (3x4)	I^2C , four buck converters, parallel mode for higher current, one GPIO pin
S MP5475	3	16	Prog	VFB1: 1.1 VFB2: 1.1 VFB3: 1.1 VFB4: 1.8	Prog Buck 1: 6 Buck 2: 6 Buck 3: 6 Buck 4: 6	Prog	QFN-35 (5x5)	Fully integrated, 12V, 6A, quad-buck, I^2C , telemetry, flexible system configuration
S MP5417	2.8	5.5	Prog	Prog	Prog Buck 1: 4 Buck 2: 2 Buck 3: 4 Buck 4: 2	Prog	QFN-28 (4x4)	I^2C , one-time prog. (OTP) memory, prog. $V_{OUT}/f_{SW}/I_{SW}$ via I^2C /OTP, four buck converters, two LDOs, two GPIO pins
S MP5413	2.7	5.5	Prog	Prog	Prog Buck 1: 3 Buck 2: 2 Buck 3: 3 Buck 4: 2	Prog	WLCSP-38 (2.7x3.1)	Ultra-small package, sleep mode control, I^2C , one-time prog. (OTP) memory, prog. $V_{OUT}/f_{SW}/I_{SW}$ via I^2C /OTP, four buck converters, two LDOs, two GPIO pins
MP5461	V_{IN1} : 4.2 V_{IN2} : 2.5	V_{IN1} : 22 V_{IN2} : 5.5	3.3	-	2.5	1800	CSP-12 (1.4x1.8)	Dual-input 0-ring switches, power path selection input/indication, fast SCP on OROUT, fast reverse block within 2 μ s on OR $_{OUT}$, output OVP for buck-boost

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} (kHz)	Package	Notes
S MP5423	25	100	Buck: 14 LDO 1/2: 5/3.3	-	0.3	200	SOIC-8EP (4.9x6)	300mA buck converter, two LDOs (100mA/40mA)
S MP5424	2.7	5.5	Buck 1/2/3/4: 0.4 to 3.58 (Adj) LDO 2/4/5: 0.65 to 0.3587 (Adj)	$V_{FB1/2/3/4}$: 0.4 to 3.58 (Adj)	Prog Buck 1: 2 Buck 2: 2.5 Buck 3: 4.5 Buck 4: 4.5	1100 to 2750 (Prog)	QFN-26 (3.5x4.5)	Prog. V_{OUT} via I ² C/MTP, config. mini PMIC, four buck converters (2A/2.5A/4.5A/4.5A), three LDOs (0.3A), one load switch (3A), POR output
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	Prog Buck 1: 5 Buck 2: 5	1000	QFN-21 (4x4)	Five-topology selection via the PSEL pin, one buck-boost, two bucks, one interleaving buck, one interleaving boost, one buck + one boost, MTP prog. parameters
MPQ7920-AEC1	2.7	5.5	0.4 to 3.58 or V_{IN}	V_{FB1} : 1.375 V_{FB2} : 1.35 V_{FB3} : 1.375 V_{FB4} : 0.675	Prog Buck 1: 2 Buck 2: 2.5 Buck 3: 4.5 Buck 4: 4.5	Adj	QFN-26 (3.5x4.5)	Four buck converters, RTC dedicated LDO+, four low-noise LDOs, I ² C, two-time prog. MTP
N MP5479	2.7	5.5	Buck 1/2/3: 0.4V to 3.58V/12.5mV Step, or 0.4V to 2.2V/7.4mV Step Buck 4: 0.4V to 3.58V/12.5mV Step LDO: 0.65V to 3.58V/12.5mV Step	V_{FB1} : 1.375 V_{FB2} : 1.35 V_{FB3} : 1.375 V_{FB4} : 0.675	Prog Buck 1: 2 Buck 2: 2.5 Buck 3: 4.5 Buck 4: 4.5	1100 to 2750 (Prog)	QFN-26 (3.5x4.5)	Four buck converters, five LDOs, flexible system settings via I ² C and MTP
S MP5419	2.5	5.5	Buck: 0.6 to 3.1875 Boost: 4.5 to 5.5 LDO: 0.6 to 3.775, or 0.8108 to 5.1015	1.6	Buck: 2.5 Boost: 3	3000 or 1500 set by I ² C	WLCSP-25 (2.25x2.35)	Digital, six channels, 1.2A buck, 1.2A boost, four 300mA LDOs, buck: selectable FCCM and PFM/PWM mode

FLYBACK | DC/DC POWER CONVERSION

Part Number	V_{IN} (Min) (V)	V_{IN} (Max) (V)	I_{SW} Limit (Typ) (A)	I_D (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
N MP6005	8	80	0.8V x 160mV / R_{SENSE}	0.45	2	250	MSOP-10	Flyback/forward controller with PSR or SSR, 2A gate, 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 DMOS	420	✓	802.3af	QFN-20 (4x6)	13W PoE PD interface and PWM converter
MP8007	100V, 0.48 Ω DMOS	840	✓	802.3af	QFN-28 (4x5)	13W primary-side regulated flyback without optocoupler feedback, 200kHz f_{sw}
MP8008	100V, 0.48 Ω DMOS	840	✓	802.3af/at	QFN-28 (4x5)	25.5W PoE PD interface and peak-current mode flyback controller
N MP8009	100V, 0.48 Ω DMOS	840	✓	802.3af/at	QFN-28 (4x5)	PD interface and PSR/SSR controller
MP8007H	100V, 0.48 Ω DMOS	840	✓	802.3af	QFN-28 (4x5)	13W primary-side regulated flyback without optocoupler feedback, 300kHz f_{sw}
S MP8030	100V, 0.35 Ω DMOS	Prog	✓	802.3af/at/bt	QFN-32 (5x6)	High efficiency, supports forward/flyback topology

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_o (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
N MP6005	8	80	0.8V x 160mV / R_{SENSE}	0.45	2	250	MSOP-10	Flyback/forward controller with PSR or SSR, 2A gate, 0.8A sync drivers

POE PSE CONTROLLERS | DC/DC POWER CONVERSION

Part Number	V_{in} (Min) (V)	V_{in} (Max) (V)	I_{OUT}	I_{LIM}	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)	PoE, auto mode, 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, 0.48 Ω DMOS	840	✓	802.3af/at	QFN-10 (3x3)	25.5W PoE PD controller
MP8001	100V, 0.8 Ω DMOS	420	✓	802.3af	SOIC-8	15W PoE PD controller
S MP8020	100V, 0.35 Ω DMOS	Prog	✓	802.3af/at/bt	QFN-18 (3x5)	71W PoE PD controller

DIGITAL REGULATORS | DC/DC POWER CONVERSION

Synchronous Step-Down Converter with I²C/PMBus Interface

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
MP8833	2.7	5.5	1.5	1	2.5	Prog	-	✓	-	-	-	QFN-16 (2x3)	I ² C interface, TEC current monitor, external sync function
MP8854	2.85	18	4	0.42	0.6 to 1.108 (Adj)	500 to 1250	✓	✓	✓	✓	✓	QFN-14 (3x4)	I ² C prog. FB range, int. telemetry, accurate output voltage/current, readback via I ² C
S MP8853	2.85	18	4	0.42	0.6 to 1.108 (Adj)	0.5 to 1.25	✓	✓	✓	✓	✓	QFN-14 (3x3)	I ² C prog. FB range, int. telemetry, accurate output voltage/current, readback via I ² C
MP8861	2.85	18	6	0.42	0.6 to 1.108 (Adj)	500 to 1250	✓	✓	✓	✓	✓	QFN-14 (3x4)	I ² C prog. FB range, int. telemetry, accurate output voltage/current, readback via I ² C
MP8864	4.5	21	4	0.5	0.6 to 1.87V	0.6 to 1.6MHz (Selectable)	✓	✓	✓	✓	-	QFN-15 (3x3)	Prog. V _{OUT} , power-save mode
MP8847	2.7	6	6	0.3	0.6	850 to 2200	✓	-	✓	✓	-	QFN-14 (2x3)	Prog. V _{OUT} , power-save mode
MP8865	4.5	21	6	0.5	0.6 to 1.87V	0.6 to 1.6MHz (Selectable)	✓	✓	✓	✓	-	QFN-15 (3x3)	Prog. V _{OUT} , power-save mode
MP8867	4.5	17	8	0.56	0.6	0.5 to 1.5MHz (Selectable)	✓	✓	✓	✓	-	QFN-14 (3x4)	Prog. V _{OUT} , power-save mode
MP8868	4.5	17	10	0.56	0.6	0.5 to 1.5MHz (Selectable)	✓	✓	✓	✓	-	QFN-14 (3x4)	Prog. V _{OUT} , power-save mode
S MPQ8861	2.85	18	12	0.42	0.6 to 1.108 (Adj)	0.5 to 1.25	✓	✓	✓	✓	✓	QFN-14 (3x4)	Wettable flank package, output adj. in 4mV steps, I ² C
MP8869S	2.85	18	12	0.42	0.6 to 1.108 (Adj)	500 to 1250	✓	✓	✓	✓	✓	QFN-14 (3x4)	V _{OUT} adj. up to 5.5V with FB pin, int. telemetry, accurate output voltage/current, readback via I ² C
MP8796B	4	16	30	2.5	0.6	Prog	✓	-	-	✓	✓	TQFN-25 (4x5)	Digital with PMBus

Synchronous Step-Down Converter with I²C/PMBus Interface

Part Number	V _{IN} (Min) (V)	V _{IN} (Max) (V)	I _{OUT} (mA)	I _D (Typ) (mA)	V _{FB} (Typ) (V)	f _{SW} (MHz)	Sync	Package	Notes
MP8859	2.8	22	3	1	-	500	✓	QFN-16 (3x3)	3A I _{OUT} , 4-switch, I ² C, 1V to 20.47V V _{OUT} range
MP8860	2.8	22	1	1	-	500	✓	QFN-16 (3x3)	1A I _{OUT} , 4-switch, I ² C, 1V to 20.47V V _{OUT} range
MP8862	2.8	22	2	1	-	500	✓	QFN-16 (3x3)	2A I _{OUT} , 4-switch, I ² C, 1V to 20.47V V _{OUT} range
MP28167-A	2.8	22	3	1	1	500/750 (Selectable)	✓	QFN-16 (3x3)	3A I _{OUT} , 4-switch, int. converter, 1V to 20.47V V _{OUT} range with FB pin, I ² C
S MP4247 (hybrid)	3.6	36	5	0.775/0.13	0.33/0.5/2	280/420/600	✓	QFN-20 (3x5)	36V, 100W, low-side, int. MTP MOSFETs, I ² C

SINGLE-OUTPUT BUCK MODULES WITH INTEGRATED INDUCTOR | POWER MODULES

Synchronous

 $V_{IN} \text{ Max} \leq 7V$

Part Number	I_{OUT} (A)	V_{IN} (V)	Light-Load Efficiency	Power Good	PMBus/I ² C Interface	Soft Start	Protection Features (OCP/SCP/UVLO/OVP)	Package	Notes
MPM3804	0.6	2.3 to 5.5	✓	✓	-	Internal	✓	QFN-10 (2x2x0.9)	Adjustable V_{OUT} , excellent load and line regulation
MPM3804-12	0.6	2.3 to 5.5	✓	✓	-	Internal	✓	QFN-10 (2x2x0.9)	1.2V fixed V_{OUT} , ultra-small QFN package
MPM3804-18	0.6	2.3 to 5.5	✓	✓	-	Internal	✓	QFN-10 (2x2x0.9)	1.8V fixed V_{OUT} , ultra-small QFN package
MPM3804-25	0.6	2.3 to 5.5	✓	✓	-	Internal	✓	QFN-10 (2x2x0.9)	2.5V fixed V_{OUT} , ultra-small QFN package
MPM3804-33	0.6	2.3 to 5.5	✓	✓	-	Internal	✓	QFN-10 (2x2x0.9)	3.3V fixed V_{OUT} , ultra-small QFN package
MPM3805	0.6	2.5 to 6	✓	✓	-	Internal	✓	QFN-12 (3x2.5x0.9)	Ultra-low I_Q , adjustable V_{OUT}
MPM3805-12	0.6	2.5 to 6	✓	✓	-	Internal	✓	QFN-12 (3x2.5x0.9)	Ultra-low I_Q , 1.2V fixed V_{OUT}
MPM3805-18	0.6	2.5 to 6	✓	✓	-	Internal	✓	QFN-12 (3x2.5x0.9)	Ultra-low I_Q , 1.8V fixed V_{OUT}
MPM3805-25	0.6	2.5 to 6	✓	✓	-	Internal	✓	QFN-12 (3x2.5x0.9)	Ultra-low I_Q , 2.5V fixed V_{OUT}
MPM3805-33	0.6	2.5 to 6	✓	✓	-	Internal	✓	QFN-12 (3x2.5x0.9)	Ultra-low I_Q , 3.3V fixed V_{OUT}
MPM3811	1	2.3 to 5.5	✓	-	-	Internal	✓	QFN-10 (2x2x1.6)	Peak 1.2A, ultra-small QFN package, excellent load and line regulation
S MPM3814C	1	2.75 to 6	-	✓	-	Internal	✓	LGA-14 (2.5x2.5x1.2)	High efficiency, ultra-small package, ultra-low noise FCCM, adj. from 0.6V
MPM3810	1.2	2.5 to 6	✓	✓	-	Internal	✓	QFN-12 (3x2.5x0.9)	Ultra-low I_Q , adjustable V_{OUT}
MPM3810-12	1.2	2.5 to 6	✓	✓	-	Internal	✓	QFN-12 (3x2.5x0.9)	Ultra-low I_Q , 1.2V fixed V_{OUT}
MPM3810-18	1.2	2.5 to 6	✓	✓	-	Internal	✓	QFN-12 (3x2.5x0.9)	Ultra-low I_Q , 1.8V fixed V_{OUT}
MPM3810-25	1.2	2.5 to 6	✓	✓	-	Internal	✓	QFN-12 (3x2.5x0.9)	Ultra-low I_Q , 2.5V fixed V_{OUT}
MPM3810-33	1.2	2.5 to 6	✓	✓	-	Internal	✓	QFN-12 (3x2.5x0.9)	Ultra-low I_Q , 3.3V fixed V_{OUT}
MPM3822C	2	2.7 to 6	-	✓	-	Internal	✓	QFN-18 (2.5x3.5x1.6)	Ultra-low ripple, adjustable output from 0.6V, FCCM
S MPM3824C	2	2.75 to 6	-	✓	-	Internal	✓	LGA-14 (2.5x2.5x1.2)	High efficiency, ultra-small package, ultra-low noise FCCM, adj. from 0.6V
MPM3820	2	2.7 to 6	✓	✓	-	Internal	✓	QFN-20 (3x5x1.6)	Adj. output from 0.6V, ultra-low I_Q , high light-load efficiency
MPM3830	3	2.7 to 6	✓	✓	-	Internal	✓	QFN-20 (3x5x1.6)	High light-load efficiency
MPM3833C	3	2.7 to 6	-	✓	-	Internal	✓	QFN-18 (2.5x3.5x1.6)	Ultra low ripple, sync, adjustable output from 0.6V, FCCM
S MPM3834C	3	2.75 to 6	-	✓	-	Internal	✓	LGA-14 (2.5x2.5x1.2)	High efficiency, ultra-small package, ultra-low noise FCCM, adj. from 0.6V
MPM3840	4	2.8 to 5.5	✓	✓	-	Internal	✓	QFN-20 (3x5x1.6)	Light-load efficiency, 100% duty cycle, low I_Q
MPM3860	6	2.75 to 7	-	✓	-	Int/Ext	✓	QFN-24 (4x6x1.6)	Adjustable output from 0.6V, FCCM

SINGLE-OUTPUT BUCK MODULES WITH INTEGRATED INDUCTOR | POWER MODULES

Synchronous (7V < V_{IN} Max ≤ 24V)

Part Number	I _{OUT} (A)	V _{IN} (V)	Light-Load Efficiency	Power Good	PMBus/I ² C Interface	Soft Start	Protection Features (OCP/SCP/UVLO/OTP)	Package	Notes
MPM3606	0.6	4.5 to 21	✓	-	-	Internal	✓	QFN-20 (3x5x1.6)	Adjustable output from 0.8V, fast transient response
MPM3606A	0.6	4.5 to 21	✓	✓	-	Internal	✓	QFN-20 (3x5x1.6)	Power good, PSM at light load, adj. output from 0.8V
S MPM3612	1	3 to 22	✓	✓	-	Internal	✓	LGA (3x3x2)	Ultra-low 5μA I _Q
MPM3610	1.2	4.5 to 21	✓	-	-	Internal	✓	QFN-20 (3x5x1.6)	Adjustable output from 0.8V, low I _Q
MPM3610A	1.2	4.5 to 21	✓	✓	-	Internal	✓	QFN-20 (3x5x1.6)	Adjustable output from 0.8V, low I _Q , power good
MPM3620	2	4.5 to 24	✓	-	-	Internal	✓	QFN-20 (3x5x1.6)	Adjustable output from 0.8V
MPM3620A	2	4.5 to 24	✓	✓	-	Internal	✓	QFN-20 (3x5x1.6)	Power good, adjustable output from 0.8V
MPM3632C	3	4 to 18	-	✓	-	Internal	✓	QFN-20 (3x5x1.6)	Adjustable output from 0.8V, FCCM
N MPM3632S	3	4 to 18	-	✓	-	Internal	✓	EC LGA-10 (3x3x1.45)	Ultra-low profile, small package, FCCM, adj. output from 0.8V
N MPM3650	6	2.75 to 17	-	✓	-	Int/Ext	✓	QFN-24 (4x6x1.6)	Adjustable output from 0.6V, high efficiency, ultra-thin
N MPM3650C	6	2.75 to 17	-	✓	-	Int/Ext	✓	QFN-24 (4x6x1.6)	FCCM, adjustable output from 0.6V, high efficiency, ultra-thin
MPM3683-7	8	2.7 to 16	✓	✓	-	Internal	✓	QFN-28 (7x7x4)	Peak 10A, ultra-low ripple, ultra-fast transient response
S MPM3683-10	10	2.7 to 16	✓	✓	✓	Internal	✓	LGA-29 (7x7x4.4)	-
MPM3695-10	10	3.3 to 14	-	✓	✓	Internal	✓	LGA (8x8x2)	0.5V to 5V output, parallelable up to 60A peak, ultra-thin
MPM3695-25	20	3 to 16	-	✓	✓	Internal	✓	QFN-59 (10x12x4)	Peak 25A, 0.5V to 5.5V output, parallelable up to 50A peak
N MPM3690-20B	26	3.2 to 16	-	✓	-	Int/Ext	✓	BGA (16x16x5.18)	Ultra-fast transient
N MPM3690-30B	36	3.2 to 16	-	✓	-	Int/Ext	✓	BGA (16x16x5.18)	Ultra-fast transient
N MPM3690-50B	50	3.2 to 16	-	✓	-	Int/Ext	✓	BGA (16x16x5.18)	Ultra-fast transient
N MPM3695-100	100	3.2 to 16	-	✓	✓	Internal	✓	BGA (15x30x5.18)	Ultra-fast transient, low ripple, parallelable up to 800A

Synchronous (24V < V_{IN} Max ≤ 36V)

Part Number	I _{OUT} (A)	V _{IN} (V)	Light-Load Efficiency	Power Good	PMBus/I ² C Interface	Soft Start	Protection Features (OCP/SCP/UVLO/OTP)	Package	Notes
MPM3506A	0.6	4.5 to 36	-	✓	-	Internal	✓	QFN-19 (3x5x1.6)	Adjustable output from 0.8V
MPM3509	0.9	4 to 36	-	-	-	Internal	✓	QFN-17 (3x5x1.6)	Adjustable output from 0.8V
MPM3510A	1.2	4.5 to 36	-	✓	-	Internal	✓	QFN-19 (3x5x1.6)	Adjustable output from 0.8V
MPM3515	1.5	4 to 36	-	-	-	Internal	✓	QFN-17 (3x5x1.6)	Adjustable output from 0.8V
N MPM3520E	2	4 to 36	-	✓	-	Internal	✓	LGA-8 (10x10x4.2)	Metal can, ultra-low EMI, adj. output from 1V to 5V
MPM3550E	5	4 to 36	-	✓	-	Internal	✓	LGA-18 (12x12x4.2)	Metal can, ultra-low EMI, adj. output from 1V to 12V

SINGLE-OUTPUT BUCK MODULES WITH INTEGRATED INDUCTOR | POWER MODULES

Synchronous (V_{IN} Max > 36V)

Part Number	I_{OUT} (A)	V_{IN} (V)	Light-Load Efficiency	Power Good	PMBus/PC Interface	Soft Start	Protection Features (OCP/SCP/UVLO/OTP)	Package	Notes
MPM3570E	0.3	4.5 to 75	✓	✓	-	Internal	✓	LGA-8 (10x10x4.2)	Metal can power module, ultra-low EMI, adj. output from 1V to 5V
S MPM3593	3	3.5 to 45	✓	✓	✓	Internal	✓	QFN-41 (6x8x1.6)	High efficiency, synchronous buck, OTP
MPM3530	3	4.5 to 55	✓	✓	-	External	✓	QFN-44 (12x10x4)	Continuous output, prog. f_{sw} with external sync function

MULTIPLE-OUTPUT MODULES | POWER MODULES

Synchronous (V_{IN} Max ≤ 45V)

Part Number	I_{OUT} (A)	# of Outputs	V_{IN} (V)	Light-Load Efficiency	Power Good	PMBus/PC Interface	Soft Start	Protection Features (OCP/SCP/UVLO/OTP)	Package	Notes
MPM38111	Dual 1A	2	2.7 to 6	✓	-	-	Internal	✓	QFN-14 (4x4x1.6)	Ultra-low I_Q
MPM38222	Dual 2A	2	2.7 to 6	✓	-	-	Internal	✓	QFN-14 (4x4x1.6)	Ultra-low I_Q
S MPM3596	Dual 3A	2	3.5 to 45	-	-	✓	Internal	✓	QFN-45 (10x10x4)	Single 6A I_{OUT} , parallelable up to 36A
N MPM54304	Quad (3A, 3A, 2A, 2A)	4	3 to 16	-	✓	✓	Internal	✓	LGA-33 (7x7x2)	MTP programmable
N MPM54504	Quad 5A	4	3 to 16	-	✓	-	Int/Ext	✓	BGA (9x15x5)	Ultra-fast transient, low ripple
N MPM81204	Quad (12A, 12A, 5A, 5A)	4	4 to 16	-	✓	-	Internal	✓	BGA (9.5x16x4.98)	Ultra-fast transient, low ripple
N MPM3690-20A	Dual 13A	2	3.2 to 16	-	✓	-	Int/Ext	✓	BGA (16x16x5.18)	Ultra-fast transient
N MPM3690-30A	Dual 18A	2	3.2 to 16	-	✓	-	Int/Ext	✓	BGA (16x16x5.18)	Ultra-fast transient
N MPM3690-50A	Dual 25A	2	3.2 to 16	-	✓	-	Int/Ext	✓	BGA (16x16x5.18)	Ultra-fast transient
N MPM82504	Quad 25A	4	3 to 16	-	✓	✓	Internal	✓	BGA (15x30x5.18)	Ultra-fast transient, low ripple, parallelable up to 800A



mEZ POWER MODULES | POWER MODULES

Boost Boost (V_{IN} Max < 6V)

Part Number	I_{OUT} (A)	V_{IN} (V)	V_{OUT} (V)	I_a (µA)	Light-Load Efficiency	Power Good	Soft Start	Protection Features (OCP/SCP/UVLO/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 Boost (V_{IN} Max \geq 6V)

Part Number	I_{OUT} (A)	V_{IN} (V)	V_{OUT} (V)	I_a (µA)	Light-Load Efficiency	Power Good	Soft Start	Protection Features (OCP/SCP/UVLO/OTP)	Package	Notes
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

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

Part Number	I_{OUT} (A)	V_{IN} (V)	V_{OUT} (V)	I_a (µA)	Light-Load Efficiency	Power Good	Soft Start	Protection Features (OCP/SCP/UVLO/OTP)	Package	Notes
mEZD71201A-A	1	4.5 to 24	1	-	-	-	Int	OCP, OTP, OVP/UVLP, SCP with Hiccup	SiP-3 (10x20)	400kHz f_{SW}
mEZD71201A-B	1	4.5 to 24	1.2	-	-	-	Int	OCP, OTP, OVP/UVLP, SCP with Hiccup	SiP-3 (10x20)	400kHz f_{SW}
mEZD71201A-C	1	4.5 to 24	1.5	-	-	-	Int	OCP, OTP, OVP/UVLP, SCP with Hiccup	SiP-3 (10x20)	400kHz f_{SW}
mEZD71201A-D	1	4.5 to 24	1.8	-	-	-	Int	OCP, OTP, OVP/UVLP, SCP with Hiccup	SiP-3 (10x20)	400kHz f_{SW}
mEZD71201A-E	1	4.5 to 24	2.5	-	-	-	Int	OCP, OTP, OVP/UVLP, SCP with Hiccup	SiP-3 (10x20)	400kHz f_{SW}
mEZD71201A-F	1	4.5 to 24	3.3	-	-	-	Int	OCP, OTP, OVP/UVLP, SCP with Hiccup	SiP-3 (10x20)	400kHz f_{SW}
mEZD71201A-G	1	6.5 to 24	5	-	-	-	Int	OCP, OTP, OVP/UVLP, SCP with Hiccup	SiP-3 (10x20)	400kHz f_{SW}
mEZD71202A-A	2	4.5 to 24	1	-	-	-	Int	OCP, OTP, OVP/UVLP, SCP with Hiccup	SiP-3 (10x20)	400kHz f_{SW}
mEZD71202A-B	2	4.5 to 24	1.2	-	-	-	Int	OCP, OTP, OVP/UVLP, SCP with Hiccup	SiP-3 (10x20)	400kHz f_{SW}
mEZD71202A-C	2	4.5 to 24	1.5	-	-	-	Int	OCP, OTP, OVP/UVLP, SCP with Hiccup	SiP-3 (10x20)	400kHz f_{SW}

mEZ POWER MODULES | POWER MODULES

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

Part Number	I_{OUT} (A)	V_{IN} (V)	V_{OUT} (V)	I_o (μ A)	Light-Load Efficiency	Power Good	Soft Start	Protection Features (OCP/SCP/UVLO/OTP)	Package	Notes
mEZD71202A-D	2	4.5 to 24	1.8	-	-	-	Int	OCP, OTP, OVP/UV, SCP with Hiccup	SiP-3 (10x20)	400kHz f_{sw}
mEZD71202A-E	2	4.5 to 24	2.5	-	-	-	Int	OCP, OTP, OVP/UV, SCP with Hiccup	SiP-3 (10x20)	400kHz f_{sw}
mEZD71202A-F	2	4.5 to 24	3.3	-	-	-	Int	OCP, OTP, OVP/UV, SCP with Hiccup	SiP-3 (10x20)	400kHz f_{sw}
mEZD71202A-G	2	6.5 to 24	5	-	-	-	Int	OCP, OTP, OVP/UV, SCP with Hiccup	SiP-3 (10x20)	400kHz f_{sw}
mEZD71203A-A	3	5 to 16	1	-	-	-	Int	OCP, OTP, OVP/UV, SCP with Hiccup	SiP-3 (10x20)	400kHz f_{sw}
mEZD71203A-B	3	5 to 16	1.2	-	-	-	Int	OCP, OTP, OVP/UV, SCP with Hiccup	SiP-3 (10x20)	400kHz f_{sw}
mEZD71203A-C	3	5 to 16	1.5	-	-	-	Int	OCP, OTP, OVP/UV, SCP with Hiccup	SiP-3 (10x20)	400kHz f_{sw}
mEZD71203A-D	3	5 to 16	1.8	-	-	-	Int	OCP, OTP, OVP/UV, SCP with Hiccup	SiP-3 (10x20)	400kHz f_{sw}
mEZD71203A-E	3	5 to 16	2.5	-	-	-	Int	OCP, OTP, OVP/UV, SCP with Hiccup	SiP-3 (10x20)	400kHz f_{sw}
mEZD71203A-F	3	5 to 16	3.3	-	-	-	Int	OCP, OTP, OVP/UV, SCP with 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}

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

Part Number	I_{OUT} (A)	V_{IN} (V)	V_{OUT} (V)	I_o (μ A)	Light-Load Efficiency	Power Good	Soft Start	Protection Features (OCP/SCP/UVLO/OTP)	Package	Notes
mEZD72401A-A	1	4.5 to 36	1	-	-	-	Int	OCP, OTP, OVP/UV, SCP with Hiccup	SiP-3 (10x20)	400kHz f_{sw}
mEZD72401A-B	1	4.5 to 36	1.2	-	-	-	Int	OCP, OTP, OVP/UV, SCP with Hiccup	SiP-3 (10x20)	400kHz f_{sw}
mEZD72401A-C	1	4.5 to 36	1.5	-	-	-	Int	OCP, OTP, OVP/UV, SCP with Hiccup	SiP-3 (10x20)	400kHz f_{sw}
mEZD72401A-D	1	4.5 to 36	1.8	-	-	-	Int	OCP, OTP, OVP/UV, SCP with Hiccup	SiP-3 (10x20)	400kHz f_{sw}
mEZD72401A-E	1	4.5 to 36	2.5	-	-	-	Int	OCP, OTP, OVP/UV, SCP with Hiccup	SiP-3 (10x20)	400kHz f_{sw}
mEZD72401A-F	1	4.5 to 36	3.3	-	-	-	Int	OCP, OTP, OVP/UV, SCP with Hiccup	SiP-3 (10x20)	400kHz f_{sw}
mEZD72401A-G	1	4.5 to 36	5	-	-	-	Int	OCP, OTP, OVP/UV, SCP with Hiccup	SiP-3 (10x20)	400kHz f_{sw}

mEZ POWER MODULES | POWER MODULES

Buck

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

Part Number	I_{OUT} (A)	V_{IN} (V)	V_{OUT} (V)	I_o (µA)	Light-Load Efficiency	Power Good	Soft Start	Protection Features (OCP/SCP/UV/LO/OTP)	Package	Notes
mEZD72401A-H	1	6.5 to 36	12	-	-	-	Int	OCP, OTP, OVP/UV, SCP with Hiccup	SiP-3 (10x20)	400kHz f_{SW}
mEZD72402A-A	2	4.5 to 36	1	-	-	-	Int	OCP, OTP, OVP/UV, SCP with Hiccup	SiP-3 (10x20)	400kHz f_{SW}
mEZD72402A-B	2	4.5 to 36	1.2	-	-	-	Int	OCP, OTP, OVP/UV, SCP with Hiccup	SiP-3 (10x20)	400kHz f_{SW}
mEZD72402A-C	2	4.5 to 36	1.5	-	-	-	Int	OCP, OTP, OVP/UV, SCP with Hiccup	SiP-3 (10x20)	400kHz f_{SW}
mEZD72402A-D	2	4.5 to 36	1.8	-	-	-	Int	OCP, OTP, OVP/UV, SCP with Hiccup	SiP-3 (10x20)	400kHz f_{SW}
mEZD72402A-E	2	4.5 to 36	2.5	-	-	-	Int	OCP, OTP, OVP/UV, SCP with Hiccup	SiP-3 (10x20)	400kHz f_{SW}
mEZD72402A-F	2	4.5 to 36	3.3	-	-	-	Int	OCP, OTP, OVP/UV, SCP with Hiccup	SiP-3 (10x20)	400kHz f_{SW}
mEZD72402A-G	2	6.5 to 36	5	-	-	-	Int	OCP, OTP, OVP/UV, SCP with Hiccup	SiP-3 (10x20)	400kHz f_{SW}
mEZS91202A	2.5	7 to 36	5	-	-	-	Int	OCP, OTP	SiP-4 (13x45)	USB charger, efficiency up to 95%
mEZDPD3603A-0001	3	4.5 to 36	3.3	-	-	✓	Int	OTP, SCP	SiP-12 (23x16)	Programmable DC/DC power supply
mEZDPD3603AS	3	4.5 to 36	0.6 to 12	-	✓	✓	Int	OTP, SCP	DIP (16x23)	Prog. DC/DC power supply with PMBus
mEZDPD4506A-0001	6	4 to 45	3.3	-	-	✓	Int	OCP, OTP, OVP/UV, SCP	DIP (18.8x18.8x8.54)	Programmable DC/DC power supply
mEZDPD4506AS	6	4 to 45	0.6 to 22	-	✓	✓	Int	OCP, OTP, OVP/UV, SCP	LGA (10x10)	Prog. DC/DC power supply with PMBus
mEZDPD1620A-0001	20	4 to 16	1.8	-	-	✓	Int	OCP, OTP, OVP/UV, SCP	DIP (16x23x14.14)	Programmable DC/DC power supply

mEZ POWER MODULES | POWER MODULES

Buck

Buck (V_{IN} Max > 36V)

Part Number	I_{OUT} (A)	V_{IN} (V)	V_{OUT} (V)	I_o (μ A)	Light-Load Efficiency	Power Good	Soft Start	Protection Features (OCP/SCP/UVLO/OTP)	Package	Notes
mEZDPD1620AS	20	4 to 16	0.6 to 5.5	-	✓	✓	Int	OCP, OTP, OVP/UVLP, 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 with Hiccup	SiP-3 (10x20)	Power supply
mEZD74800A-B	0.3	4.5 to 75	5	-	-	-	Int	OCP, OTP, SCP with Hiccup	SiP-3 (10x20)	Power supply
N mEZD74003L-ADJ	3	5 to 40	1.23 to 15	-	-	-	Int	UVLO, OCP, OTP, OVP	LGA (11x15)	Sync, adj. V_{OUT} , integrated inductor
N mEZD94003A-ADJ	3	5 to 40	1.23 to 15	-	-	-	Int	UVLO, OCP, OTP, OVP	LGA (11x15)	Sync, adj. V_{OUT} , power supply

PoE

Part Number	I_{OUT} (A)	V_{IN} (V)	V_{OUT} (V)	I_o (μ A)	Light-Load Efficiency	Power Good	Soft Start	Protection Features (OCP/SCP/UVLO/OTP)	Package	Notes
mEzS84801A	1	37 to 57	12	-	✓	✓	Int	OCP, OTP, OVP	SiP-20 (45x39)	12W, IEEE 802.3af-compliant, PoE-powered device
S mEzS84802A-A	2	42 to 57	12	-	✓	✓	Int	OCP, OTP, OVP	Small SIL (56x25)	48V, 25W, POE
S mEzS84802A-B	2	42 to 57	12	-	✓	✓	Int	OCP, OTP, OVP	Small SIL (56x25)	48V, 25W, POE
S mEzS84802A-C	2	37 to 57	5	-	✓	✓	Int	OCP, OTP, OVP	Small SIL (56x25)	48V, 25W, POE

Step-Up Boost & Buck-Boost Modules | POWER MODULES

Part Number	Converter Type	I_{OUT} (A)	V_{IN} (V)	I_o (mA)	Power Good	PMBus/I ² C Interface	Soft Start	Protection Features (OCP/SCP/UVLO/OTP)	Package	Notes
S MPM4710	Buck-Boost	0.6	1.8 to 5.5	0.029	-	-	Int	✓	QFN-13 (2.2x2.6x1.6)	High efficiency, 1MHz f_{sw} internal compensation
S MPM4330	Boost	3	3.0 to 22	4	✓	✓	Int	✓	LGA-51 (8x14)	High efficiency
S MPM4730	Buck-Boost	5	3.0 to 22	4	✓	✓	Int	✓	LGA-51 (8x14)	High efficiency

BUCK REGULATORS | AUTOMOTIVE

Buck Regulators 5V 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	FCCM	AAM	COT Control	Fixed Frequency	Wettable Flank QFN Option	Package	Notes
MPM3805A-AEC1	2.6	6	0.6	1.2	485	3500	120/70	-	Int	-	✓	-	✓	✓	-	✓	QFN-12 (2.5x3x0.9)	Module with integrated inductor
MPM3805B-AEC1	2.5	6	0.6	2.1	485	3500	100/60	1.2	Int	-	✓	-	✓	✓	-	✓	QFN-12 (2.5x3x0.9)	Module with integrated inductor
MPQ2171-AEC1	2.5	5.5	1	4	520	2600	90/50	-	Int	-	✓	-	✓	✓	-	-	TSOT23-8	Output discharge
N MPQ2177-AEC1	2.5	5.5	1	2.5	460	2400	90/50	1.2, 1.8	Ext	-	✓	-	✓	✓	✓	✓	QFN-8 (1.5x2)	MPQ2177 scalable series, ultra-compact
S MPQ2177A-AEC1	2.5	5.5	1	2.5	21	2400	90/50	-	Ext	-	-	✓	✓	✓	✓	✓	QFN-8 (1.5x2)	MPQ2177 scalable series, ultra-compact
MPM3810A-AEC1	2.6	6	1.2	2.1	485	3500	110/60	-	Int	-	✓	-	✓	✓	-	✓	QFN-12 (2.5x3x0.9)	Module with integrated inductor
MPQ2172-AEC1	2.5	5.5	2	4.5	520	2600	80/45	-	Int	-	✓	-	✓	✓	-	-	TSOT23-8	Output discharge
N MPQ2178-AEC1	2.5	5.5	2	3.5	460	2400	80/40	1.2, 1.8	Ext	-	✓	-	✓	✓	✓	✓	QFN-8 (1.5x2)	MPQ2177 scalable series, ultra-compact
N MPQ2178A-AEC1	2.5	5.5	2	3.5	21	2400	80/40	-	Ext	-	-	✓	✓	✓	✓	✓	QFN-8 (1.5x2)	MPQ2177 scalable series, ultra-compact
S MPQ2123-AEC1	2.7	6	2	6.3	42	300 to 2200	35/25	-	Ext	✓	✓	✓	-	✓	✓	✓	QFN-11 (2x3)	MPQ2167 scalable series
MPQ2143-AEC1	2.5	5.5	3	4.8	40	1200	65/40	-	Int	-	-	✓	✓	✓	-	-	TSOT23-8	Output discharge
N MPQ2179-AEC1	2.5	5.5	3	5	460	2400	65/35	-	Ext	-	✓	-	✓	✓	✓	✓	QFN-8 (1.5x2)	MPQ2177 scalable series, ultra-compact
N MPQ2179A-AEC1	2.5	5.5	3	5	21	2400	65/35	-	Ext	-	-	✓	✓	✓	✓	✓	QFN-8 (1.5x2)	MPQ2177 scalable series, ultra-compact
MPQ2124-AEC1	2.7	6	3	6.3	42	300 to 2200	35/25	-	Ext	✓	✓	✓	-	✓	✓	✓	QFN-11 (2x3)	MPQ2167 scalable series
MPQ2167-AEC1	2.7	6	4	6.7	42	300 to 2200	35/25	-	Ext	-	✓	✓	-	✓	✓	✓	QFN-11 (2x3)	MPQ2167 scalable series
MPQ2167B-AEC1	2.7	6	4	6.7	42	300 to 2200	35/25	-	Ext	✓	✓	✓	-	✓	✓	✓	QFN-11 (2x3)	MPQ2167 scalable series
S MPQ2180-AEC1	2.7	6	6	12.7	285	850 to 2200	38/21	0.8, 1	Int	-	✓	✓	-	-	-	-	QFN-14 (2.5x3)	-

BUCK REGULATORS | AUTOMOTIVE

Buck Regulators 5V 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	FCCM	AAM	COT Control	Fixed Frequency	Wettable Flank QFN Option	Package	Notes
N	MPQ8847A-AEC1	2.7	6	6	12.7	285	850 to 2200	22/40	-	Int	-	✓	✓	-	-	-	-	QFN-14 (2.5x3)	-
	MPQ2167A-AEC1	2.7	6	6	9	42	300 to 2200	35/25	-	Ext	✓	✓	✓	-	✓	✓	✓	QFN-14 (3x3)	MPQ2167 scalable series
	MPQ2169A-AEC1	2.7	6	2.8 (Dual)	4	65	350 to 3000	60/25	-	Ext	✓	✓	✓	-	✓	✓	✓	QFN-18 (2.5x3.5), QFN-18 (2x3)	Dual output, 2.8A total with 2A single-channel max
S	MPQ2169B-AEC1	2.7	6	2.8 (Dual)	4	65	350 to 3000	60/25	-	Ext	✓	✓	-	-	✓	✓	✓	QFN-18 (2.5x3.5), QFN-18 (2x3)	Dual output, 2.8A total with 2A single-channel max, CCM only
	MPQ2166A-AEC1	2.7	6	4 (Dual)	4.5	65	350 to 3000	55/20	-	Ext	✓	✓	✓	-	✓	✓	✓	QFN-18 (2.5x3.5), QFN-18 (2x3)	Dual output, 4A total with 3A single-channel max
S	MPQ2166B-AEC1	2.7	6	4 (Dual)	4.5	65	350 to 3000	55/20	-	Ext	✓	✓	-	-	✓	✓	✓	QFN-18 (2.5x3.5), QFN-18 (2x3)	Dual output, 4A total with 3A single-channel max, CCM only

Buck Regulators 24V Synchronous Buck

	Part Number	V _{IN} (Min) (V)	V _{IN} (ABS 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	FCCM	AAM	COT Control	Fixed Frequency	Wettable Flank QFN Option	Package	Notes
	MPQ4409-AEC1	4	24	0.9	1	600	0.807	450 to 2200	90/50	-	Int	✓	✓	-	-	✓	✓	QFN-13 (2.5x3)	-
S	MPQ3520-AEC1	3	22	1	2.9	463	0.6	2200	260/120	-	Int	-	✓	-	-	✓	✓	QFN-8 (2x2)	-

Buck Regulators 40V to 50V Synchronous Buck with Frequency Spread Spectrum

	Part Number	V _{IN} (Min) (V)	V _{IN} (ABS 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	FCCM	AAM	Zero Delay PWM	Wettable Flank QFN Option	Package	Notes
S	MPQ4320-AEC1	3.3	42	0.5	1.2	20	0.8	350 to 2500	65/45	3.3, 5	Int	-	✓	✓	✓	-	✓	QFN-12 (2x3)	MPQ4320 series, ultra-compact

BUCK REGULATORS | AUTOMOTIVE

Buck Regulators **40V to 50V Synchronous Buck with Frequency Spread Spectrum**

Part Number	V _{in} (Min) (V)	V _{in} (Abs 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	ECM	AAM	Zero Delay PWM	Wettable Flank QFN Option	Package	Notes
S MPQ4300-AEC1	3.5	48	0.5	2	-	-	470	95/50	3.3, 5	Int	✓	✓	-	✓	-	-	QFN-16 (3x3)	MPQ4300 series
S MPQ4321-AEC1	3.3	42	1	2	20	0.8	350 to 2500	65/45	3.3, 5	Int	-	✓	✓	✓	-	✓	QFN-12 (2x3)	MPQ4320 series, ultra-compact
S MPQ4301-AEC1	3.5	48	1	3	-	-	470	95/50	3.3, 5	Int	✓	✓	-	✓	-	-	QFN-16 (3x3)	MPQ4300 series
S MPQ4345-AEC1	3.3	42	2	5.8	2.5	-	350 to 2500	55/35	3.3, 5	Ext	✓	✓	✓	✓	✓	✓	QFN-17 (3x4)	MPQ4345 series, ultra-low I _o
S MPQ4322-AEC1	3.3	42	2	3.4	20	0.8	350 to 2500	65/45	3.3, 5	Int	-	✓	✓	✓	-	✓	QFN-12 (2x3)	MPQ4320 series, ultra-compact
S MPQ4312-AEC1	3.3	50	2	5.5	18	0.815	350 to 530	48/20	3.3, 5	Ext	✓	✓	✓	✓	-	✓	QFN-20 (4x4)	MPQ4312 series
S MPQ4346-AEC1	3.3	42	3	5.8	2.5	-	350 to 2500	55/35	3.3, 5	Ext	✓	✓	✓	✓	✓	✓	QFN-17 (3x4)	MPQ4345 series, ultra-low I _o
N MPQ4323-AEC1	3.3	42	3	5.8	20	0.8	350 to 2500	65/45	3.3, 5	Int	-	✓	✓	✓	-	✓	QFN-12 (2x3)	MPQ4320 series, ultra-compact
S MPQ4323M-AEC1	3.3	42	3	5.8	20	0.8	350 to 2500	65/45	3.3, 5	Int	-	✓	✓	✓	-	✓	QFN-12 (3.5x3.5)	MPQ4320 series, ultra-compact, int. input capacitors
S MPQ4313-AEC1	3.3	50	3	5.5	18	0.815	350 to 530	48/20	3.3, 5	Ext	✓	✓	✓	✓	-	✓	QFN-20 (4x4)	MPQ4312 series
S MPQ4340-AEC1	3.3	42	4	7.7	2.5	-	350 to 2500	55/35	3.3, 5	Ext	✓	✓	✓	✓	✓	✓	QFN-17 (3x4)	Multi-phase, ultra-low I _o
S MPQ4347-AEC1	3.3	42	4	7.7	2.5	-	350 to 2500	55/35	3.3, 5	Ext	✓	✓	✓	✓	✓	✓	QFN-17 (3x4)	MPQ4345 series, ultra-low I _o
N MPQ4314-AEC1	3.3	50	4	8	18	0.815	350 to 530	48/20	3.3, 5	Ext	✓	✓	✓	✓	-	✓	QFN-20 (4x4)	MPQ4312 series
S MPQ4341-AEC1	3.3	42	5	7.7	2.5	-	350 to 2500	55/35	3.3, 5	Ext	✓	✓	✓	✓	✓	✓	QFN-17 (3x4)	Multi-phase, ultra-low I _o
S MPQ4348-AEC1	3.3	42	5	7.7	2.5	-	350 to 2500	55/35	3.3, 5	Ext	✓	✓	✓	✓	✓	✓	QFN-17 (3x4)	MPQ4345 series, ultra-low I _o
N MPQ4315-AEC1	3.3	50	5	8	18	0.815	350 to 530	48/20	3.3, 5	Ext	✓	✓	✓	✓	-	✓	QFN-20 (4x4)	MPQ4312 series

BUCK REGULATORS | AUTOMOTIVE

Buck Regulators 40V to 50V Synchronous Buck with Frequency Spread Spectrum

Part Number	V _{IN} (Min) (V)	V _{IN} (Abs 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	FCCM	AAM	Zero Delay PWM	Wettable Flank QFN Option	Package	Notes
N MPQ4316-AEC1	3.3	50	6	13	18	0.815	350 to 530	48/20	3.3, 5	Ext	✓	✓	✓	✓	-	✓	QFN-20 (4x4)	MPQ4312 series
N MPQ4436A-AEC1	3.3	50	6	13	18	0.815	420	48/20	3.3, 5	Ext	✓	✓	✓	✓	-	✓	QFN-20 (4x4)	Multi-phase, low I _O
N MPQ4480-AEC1	4.2	40	6	17/22	1000	1	235 to 2200	20/15	-	Int	✓	✓	-	-	-	✓	QFN25 (4x5)	Adjustable line drop compensation
N MPQ4317-AEC1	3.3	50	7	13	18	0.815	350 to 530	48/20	3.3, 5	Ext	✓	✓	✓	✓	-	✓	QFN-20 (4x4)	MPQ4312 series

Buck Regulators 40V to 50V Synchronous Buck without Frequency Spread Spectrum

Part Number	V _{IN} (Min) (V)	V _{IN} (Abs 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	FCCM	AAM	Fixed Frequency	Wettable Flank QFN Option	Package	Notes
MPM3509B-AEC1	4	40	0.6	5	700	0.807	400	90/50	-	Int	✓	-	✓	-	✓	✓	QFN-17 (3x5x1.6)	Ultra-compact module, int. inductor, BST/VCC capacitors
MPQ9846-AEC1	3.3	40	0.6	1.2	14	0.8	350 to 2500	125/115	3.3, 5	Ext	-	-	✓	✓	✓	✓	QFN-16 (3x4)	Compact, low I _O
N MPQ4418-AEC1	4	40	0.6	5.6	600	0.792	410	90/55	-	Int	✓	-	✓	-	✓	-	TSOT23-8	MPQ4420 series
MPM3509-AEC1	4	40	0.9	3	600	0.807	2200	90/50	-	Int	✓	-	✓	-	✓	✓	QFN-17 (3x5x1.6)	Ultra-compact module, int. inductor, BST/VCC capacitors
N MPQ4419-AEC1	4	40	1	5.6	600	0.792	410	90/55	-	Int	✓	-	✓	-	✓	-	TSOT23-8	MPQ4420 series
MPQ4431-AEC1	3.3	40	1	2.5	10	0.8	350 to 2500	90/80	3.3, 5	Ext	✓	-	✓	✓	✓	✓	QFN-16 (3x4)	MPQ4430 series, low I _O , low-dropout mode
MPQ9840-AEC1	3.3	40	1	5.6	14	0.8	350 to 2500	90/40	3.3, 5	Ext	✓	-	✓	✓	✓	✓	QFN-16 (3x4)	MPQ9840 series, low I _O , low-dropout mode
MPM3515-AEC1	4	40	1.5	4	600	0.807	2200	90/50	-	Int	✓	-	✓	-	✓	✓	QFN-17 (3x5x1.6)	Ultra-compact module, int. inductor, BST/VCC capacitors

BUCK REGULATORS | AUTOMOTIVE

Buck Regulators 40V to 50V Synchronous Buck without Frequency Spread Spectrum

Part Number	V _{IN} (Min) (V)	V _{IN} (Abs 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	FCCM	AM	Fixed Frequency	Wettable Flank QFN Option	Package	Notes
MPQ4415M-AEC1	4	40	1.5	4	600	0.8	450 to 2200	90/50	-	Int	✓	-	✓	-	✓	✓	QFN-13 (2.5x3)	Integrated input capacitor
MPQ4415A-AEC1	4	40	1.5	4	600	0.8	450 to 2200	90/50	-	Int	✓	-	✓	-	✓	✓	QFN-13 (2.5x3)	-
MPQ4420H-AEC1	4	40	2	4.2	500	0.792	410	90/55	-	Int	✓	-	-	✓	✓	-	TSOT23-8	MPQ4420 series
MPQ4420A-AEC1	4	40	2	5.6	600	0.792	410	90/55	-	Int	✓	-	✓	-	✓	-	TSOT23-8	MPQ4420 series
MPQ4432-AEC1	3.3	40	2.2	5.2	10	0.8	350 to 2500	90/40	3.8, 5	Ext	✓	-	✓	✓	✓	✓	QFN-16 (3x4)	MPQ4430 series, low I _O , low-dropout mode
MPQ9841-AEC1	3.3	40	2.2	2.5	14	0.8	350 to 2500	90/80	3.3, 5	Ext	✓	-	✓	✓	✓	✓	QFN-16 (3x4)	MPQ9840 series, low I _O , low-dropout mode
MPQ4433-AEC1	3.3	40	3	5.8	10	0.8	350 to 2500	90/40	5	Ext	✓	-	✓	✓	✓	✓	QFN-16 (3x4)	MPQ4430 series, low I _O , low-dropout mode
MPQ9842-AEC1	3.3	40	3	5	14	0.8	350 to 2500	90/40	3.3, 5	Ext	✓	-	✓	✓	✓	✓	QFN-16 (3x4)	MPQ9840 series, low I _O , low-dropout mode
MPQ4423H-AEC1	4	40	3	4.4	500	0.792	410	85/55	-	Int	✓	-	-	✓	✓	✓	QFN-8 (3x3)	-
MPQ4423A-AEC1	4	40	3	5.7	600	0.792	410	85/55	-	Int	✓	-	✓	-	✓	-	QFN-8 (3x3)	-
MPQ4430-AEC1	3.3	40	3.5	5.8	10	0.8	350 to 2500	90/40	3.8, 5	Ext	✓	-	✓	✓	✓	✓	QFN-16 (3x4)	MPQ4430 series, low I _O , low-dropout mode
MPQ9843-AEC1	3.3	40	3.5	5.6	14	0.8	350 to 2500	125/55	3.3, 5	Ext	✓	-	✓	✓	✓	✓	QFN-16 (3x4)	MPQ9840 series, low I _O , low-dropout mode
MPQ4473-AEC1	4.5	40	3.5	6.6	500	0.815	200 to 1000	40/20	-	Ext	-	-	-	-	-	-	QFN-20 (3x4)	Constant-on-time (COT) control
MPQ4470-AEC1	4.5	40	5	8	500	0.815	100 to 1000	40/20	-	Ext	-	-	-	-	-	-	QFN-20 (3x4)	Constant-on-time (COT) control
MPQ4470A-AEC1	4.5	40	5	8	500	0.815	100 to 1000	40/20	-	Ext	-	-	-	-	-	-	QFN-20 (3x4)	Constant-on-time (COT) control
MPQ4436-AEC1	3.3	50	6	13	18	0.815	420	48/20	3.3, 5	Ext	✓	-	✓	✓	✓	✓	QFN-20 (4x4)	Multi-phase, low I _O
N MPQ4436B-AEC1	3.3	50	6	13	18	0.815	2200	48/20	3.3, 5	Ext	✓	-	✓	✓	✓	✓	QFN-20 (4x4)	Multi-phase, low I _O

BUCK REGULATORS | AUTOMOTIVE

Buck Regulators 60V to 80V Synchronous Buck

Part Number	V _{IN} (Min) (V)	V _{IN} (Abs 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	FCCM	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	Prog. soft start	
MPQ4569A-AEC1	4.5	80	0.3	0.72	20	1	-	1200/500	-	Ext	-	✓	✓	-	QFN-10 (3x3)	Prog. soft start, default enable on	
MPQ2420-AEC1	4.5	80	0.3	0.72	20	1	-	1200/450	-	Ext	-	✓	✓	-	TSSOP-16EP	Int. separate windowed watchdog die	
MPQ2420A-AEC1	4.5	80	0.3	0.72	20	1	-	1200/450	-	Ext	-	✓	✓	-	TSSOP-16EP	Int. separate windowed watchdog die, default enable on	
S MPQ4576-AEC1	4.5	65	0.6	1.95	40	0.8	200 to 2200	250/45	-	Int	-	✓	✓	-	✓	QFN-12 (2.5x3)	MPQ4572 series, low I _O , compact
MPQ4571-AEC1	4.5	65	1	1.95	40	0.8	200 to 2200	250/45	-	Int	-	✓	✓	-	✓	QFN-12 (2.5x3)	MPQ4572 series, low I _O , compact
MPQ4572-AEC1	4.5	65	2	3.5	40	0.8	200 to 2200	250/45	-	Int	-	✓	✓	-	✓	QFN-12 (2.5x3)	MPQ4572 series, low I _O , compact
N MPQ4573-AEC1	4.5	65	2.5	3.5	40	0.8	200 to 2200	250/45	-	Int	-	✓	✓	-	✓	QFN-12 (2.5x3)	MPQ4572 series, low I _O , compact
MPQ4570-AEC1	4.5	60	3	5.7	520	1	100 to 1000	90/70	-	Ext	✓	-	✓	-	✓	TSSOP-20EP	Prog. soft-start time, external sync

Buck Regulators >100V Synchronous Buck

Part Number	V _{IN} (Min) (V)	V _{IN} (Abs Max) (V)	I _{OUT} (A)	I _{SW} Limit (Typ) (A)	I _O (Typ) (µA)	V _{FB} (V)	f _{SW} (kHz)	R _{DS(on)} (mΩ)	Soft Start	External Sync	FCCM	AAM	Hysteretic Control	Package	Notes
MPQ4590-AEC1	7.5	700	0.4	0.66	200	2.55	-	13.5	Int	-	✓	-	✓	SOIC-8	Primary-side CV control, supports buck, buck-boost, boost, and flyback topologies

Buck Regulators Buck Controllers

Part Number	V _{IN} (Min) (V)	V _{IN} (Max) (V)	I _O (Typ) (µA)	I _{SD} (Typ) (µA)	V _{FB} (V)	f _{SW} (kHz)	Fixed Output Versions (V)	Soft Start	External Sync	FCCM	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 | AUTOMOTIVE

Buck Regulators Non-Synchronous Buck

Part Number	V _{IN} (Min) (V)	V _{IN} (Abs 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	Soft Start	External Sync	FCCM	Fixed Frequency	Package	Notes
MPQ2459-AEC1	4.5	60	0.5	1.25	730	0.812	480	1000	-	Int	-	✓	✓	TSOT23-6	Superior light-load efficiency
MPQ2451-AEC1	3.3	40	0.6	1	130	0.794	2000	500	3.3, 5	Int	-	-	✓	TSOT23-6L, QFN-6L	Internal comp. and SS
MPQ2454-AEC1	3.3	40	0.6	1.8	60	0.8	350 to 2300	200	-	Ext	✓	-	✓	QFN-10 (3x3), MSOP-10 EP	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), SOIC-8E	Superior light-load efficiency
MPQ4561-AEC1	3.8	60	1.5	2.5	140	0.795	250 to 2000	300	-	Ext	-	-	✓	QFN-10 (3x3)	Superior light-load efficiency
MPQ4560-AEC1	3.8	60	2	3.2	140	0.797	250 to 2000	250	-	Int	-	-	✓	QFN-10 (3x3), SOIC-8E	Superior light-load efficiency
MPQ4462-AEC1	3.8	40	3.5	5.5	120	0.792	250 to 4000	150	-	Int	-	-	✓	QFN-10 (3x3), SOIC-8E	Superior light-load efficiency
MPQ4467-AEC1	3.3	40	2.5	5.8	10	0.8	350 to 2500	90	-	Ext	✓	-	✓	QFN-16 (3x4)	Low-dropout, selectable in-phase or 180° out-of-phase
MPQ4468-AEC1	3.3	40	3.5	5.8	10	0.8	350 to 2500	90	-	Ext	✓	-	✓	QFN-16 (3x4)	Low-dropout, selectable in-phase or 180° out-of-phase
MPQ4469-AEC1	3.3	40	5	7.7	10	0.8	350 to 2500	110	-	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-20	Dual output

BUCK-BOOST REGULATORS | AUTOMOTIVE

Buck-Boost Converters

Part Number	V_{in} (Min) (V)	V_{in} (Max) (V)	V_{out} (Max) (V)	I_{out} (Typ) (A)	I_a (Typ) (µA)	f_{sw} (kHz)	$R_{DS(on)}$ (mΩ)	Interface	Spread Spectrum	Fixed Frequency	Wettable Flank QFN Option	Package	Notes
N MPQ8873-xxxx-AEC1	2.2	36	0.5 to 30	3	180	200 to 1000	2x 10/25	I ² C	✓	✓	✓	QFN-34 (4x5)	20W OTP-prog. 4-switch converter with advanced protection
N MPQ8875A-xxxx-AEC1	2.2	36	0.5 to 30	5	180	200 to 1000	2x 10/25	I ² C	✓	✓	✓	QFN-34 (4x5)	30W OTP-prog. 4-switch converter with advanced protection

BOOST REGULATORS | AUTOMOTIVE

Boost Regulators Synchronous Boost

Part Number	V_{in} (Min) (V)	V_{in} (Max) (V)	I_a (Typ) (µA)	I_{sp} (Typ) (µA)	V_{FB} (V)	f_{sw} (kHz)	Gate Drive (A)	Soft Start	Sync	OVP	Wettable Flank QFN Option	Package	Notes
MPQ3410-AEC1	1.8	6	6	1.3	360	1.19	550	530/300	-	✓	-	TSOT23-5	Output disconnect
S MPQ3413-AEC1	1.8	3.6	5	3.6	8	-	2.2	80/70	-	✓	-	TSOT23-5	-
S MPQ3414B-AEC1	2.8	3.6	5	3.6	8	-	2.2	80/70	5	✓	-	TSOT23-5	-
MPQ3428A-AEC1	3	20	22	25	110	1.225	600	18	-	✓	-	QFN-22 (3x4)	Input disconnect function, external high-side gate drive
MPQ3431A-AEC1	0.8	13	16	21	25	1.0	450	6/9.5	-	✓	✓	QFN-13 (3x4)	Prog. input current limit, supports 40W peak power load from 3.3V, selectable PSM and FCCM, adaptive COT
S MPQ3431C-AEC1	0.8	13	16	Adj	25	1.0	450	6/9.5	-	✓	✓	QFN-13 (3x4)	-
S MPQ3432-AEC1	0.8	13	16	10	25	1.0	600	6/9.5	-	✓	✓	QFN-13 (3x4)	-

Boost Regulators Boost Controllers

Part Number	V_{in} (Min) (V)	V_{in} (Max) (V)	I_a (Typ) (µA)	I_{sp} (Typ) (µA)	V_{FB} (V)	f_{sw} (kHz)	Gate Drive (A)	Soft Start	Sync	OVP	Wettable Flank QFN Option	Package	Notes
MPQ3910A-AEC1	5	35	288	1	1.237	30 to 400	1	Ext	✓	✓	-	MSOP-10	Peak current mode, light-load operation, supports >10A, OVP, SCP, OTP

BUCK-BOOST REGULATORS | AUTOMOTIVE

Boost Regulators Non-Synchronous Boost

Part Number	V _{IN} (Min) (V)	V _{IN} (Max) (V)	I _{OUT} (Max) (V)	I _{SW} Limit (Typ) (A)	I _O (Typ) (µA)	V _{FB} (V)	f _{SW} (kHz)	R _{DS(on)} (mΩ)	Soft Start	OCP	Wettable Flank QFN Option	Package	Notes
MPQ3426-AEC1	3.2	45	35	8.5	650	1.225	300 to 2000	90	Ext	✓	✓	QFN-14 (3x4)	Programmable UVLO and EN hysteresis

PMICS | AUTOMOTIVE

PMICs >18V PMIC

Part Number	V _{IN} (Min) (V)	V _{IN} (Max) (V)	# of Channels	Configuration	Current Ratings (A)	f _{SW} (kHz)	ADC	Frequency Spread Spectrum	MPSafe (Functional Safety) Interface	Wettable Flank QFN Option	Package	Notes
S MPQ70330FS-xxxx-AEC1	4.5	42	3	2 Buck, 1 Boost	Buck: 2/1.5 Boost: 0.25	2.5	-	✓	✓	SPI	✓	QFN-34 (6x6) Targets ASIL-D, independent voltage supervisor, power FET leakage monitoring, extensive protections, batt. failure pre-warning
S MPQ7901-xxxx-AEC1	4.5	42	3	2 Buck, 1 Boost	Buck: 2/1.5 Boost: 0.25	2.5	-	✓	-	SPI	✓	QFN-34 (6x6) Digitally prog. extensive protections
S MPQ7900-xxxx-AEC1	4	40w	3	2 Buck, 1 LDO	Buck: 1.5/0.7 LDO: 0.3	2.3	-	✓	-	I ² C	✓	QFN-16 (2.5x3.5) Digitally prog. extensive protections, COT
S MPQ7900L-xxxx-AEC1	4	18	3	2 Buck, 1 LDO	Buck: 1.5/0.7 LDO: 0.3	2.3	-	✓	-	I ² C	✓	QFN-16 (2.5x3.5) Digitally prog. extensive protections, COT
S MPQ70240FS-xxxx-AEC1	5	18	4	3 Buck, 1 LDO	Buck: 0.6/0.6/1 LDO: 0.2	2.2	-	✓	✓	I ² C	✓	QFN-34 (2.5x3.5) Targets ASIL-B, ideal for camera modules
S MPQ7928-xxxx-AEC1	5	18	4	3 Buck, 1 LDO	Buck: 0.6/0.6/1 LDO: 0.2	2.2	-	✓	-	I ² C	✓	QFN-34 (2.5x3.5) Ultra-compact board layout
S MPQ2026-xxxx-AEC1	3	40	3	2 LDO, 1 Pre-Boost	LDO: 0.3/0.3 Pre-Boost: 2.5	2.2	✓	✓	-	I ² C	✓	QFN-16 (4x4) Powers phantom active antenna supplies and ADAS modules, pre-boost enables cold/warm crank operation, digitally prog. V _{OUT}
S MPQ2024-xxxx-AEC1	3	40	2	2 LDO	LDO: 0.3/0.3	2.2	✓	✓	-	I ² C	✓	QFN-16 (4x4) Digitally prog. V _{OUT}
S MPQ2022-xxxx-AEC1	3	40	2	1 LDO, 1 Pre-Boost	LDO: 0.3 Pre-Boost: 2.5	2.2	✓	✓	-	I ² C	✓	QFN-16 (4x4) Powers phantom active antenna supplies and ADAS modules, pre-boost enables cold/warm crank operation, digitally prog. V _{OUT}

PMICs 5V PMIC

Part Number	V _{IN} (Min) (V)	V _{IN} (Max) (V)	# of Channels	Configuration	Current Ratings (A)	f _{SW} (kHz)	Adj Power Sequencing	Multi-Phase Outputs	MPSafe (Functional Safety) Interface	Wettable Flank QFN Option	Package	Notes
N MPQ7920-xxxx-AEC1	2.7	5.5	9	4 Buck, 5 LDO	Buck: 4.5/4/2.5/2 LDO: 0.3 (4x)/0.01	2.2	✓	✓	-	I ² C	✓	QFN-16 (4x4) Digitally prog. extensive protections, COT

LINEAR REGULATORS | AUTOMOTIVE

5V LDO

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	1.8, 2.5, 3.3	-	QFN-8 (2x2), TSOT23-5	-
MPQ8904-AEC1	2.5	6.5	500	0.005	26	0.496	7	✓	0.5 to 5	-	✓	QFN-8 (2x3)	-
MPQ20051-AEC1	2.5	5.5	1000	0.0003	63	0.8	-	✓	0.8 to 5	-	-	QFN-8 (3x3)	-

40V LDO

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
MPQ2016-AEC1	4	40	30	0.003	65	1.23	12	✓	1.2 to 24	-	-	QFN-8 (2x3)	-
MPQ2013AGJE-C672-AEC1	2.5	40	100	0.005	41	1.215	3.2	✓	1.215 to 15	3.3, 2.5, 5	-	TSOT23-4	-
MPQ2013A-AEC1	2.5	40	150	0.005	41	1.215	3.3	✓	1.215 to 15	QFN-8: 3.3, 2.5, 5, 1.8 QFN-6: 3.3, 5	-	QFN-6 (2x2), QFN-8 (3x3)	-
MPQ2019-AEC1	3	40	300	0.04	45	1.25	10	✓	1.2 to 15	3.3, 5	✓	SOIC-8EP	-
MPQ2029-AEC1	3	40	450	0.04	45	1.25	10	✓	1.2 to 15	-	✓	SOIC-8EP	-

DDR MEMORY POWER | AUTOMOTIVE

Part Number	V _{IN} (Min) (V)	V _{IN} (Max) (V)	I _{OUT} (mA)	Accuracy for VTT _{REF} (mV)	Driver (V)	Package	Notes
MPQ20073-AEC1	1.3	6	2	30	3.3	MSOP-8E	DDR2/3 termination regulator

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	Wettable Flank QFN Option	Package	Notes
MPQ3386-AEC1	4.5	30	Boost	6	30	625 or 1250	PWM, Analog	Open, Short	3%	-	-	QFN-24 (4x4)	3% current-matching accuracy
MPQ3387L-AEC1	3	30	Boost	6	45	500 or 1250	PWM, Mix	Open, Short	3%	-	-	QFN-24 (4x4)	3% current-matching accuracy

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	Wettable Flank QFN Option	Package	Notes
N MPQ3362-AEC1	3	42	Boost	1	-	200 to 2200	PWM, Analog	Open, Short	-	-	-	TSOT23-8	4A current limit, low R _{DS(ON)} soft start
N MPQ3364-AEC1	3.5	42	Boost	4	150	200 to 2200	PWM, Analog, Mix	Open, Short	2.5%	I ² C	-	QFN-24 (4x4)	Three selectable IC addresses
MPQ3367-AEC1	3.5	42	Boost	6	150	200 to 2200	PWM, Analog, Mix	Open, Short	2.5%	I ² C	-	QFN-24 (4x4), TSSOP-28EP	I ² C, spread spectrum, thermal derating, fault pin, rich protection features
N MPQ3367A-AEC1	3.5	42	Boost	6	150	200 to 2200	PWM, Analog, Mix	Open, Short	2.5%	I ² C	-	QFN-24 (4x4)	MPQ3367-AEC1 features, three prog. addresses
MPQ3369-AEC1	3.5	42	Boost	6	100	200 to 2200	PWM, Analog, Mix	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	Wettable Flank QFN Option	Package	Notes
N MPQ3324-AEC1	4	18	Linear	8	100	-	PWM, Analog	Open, Short	2%	I ² C	✓	QFN-24 (4x4)	Independent channel control, daisy-chainable, digital configuration
N MPQ3326-AEC1	4	18	Linear	16	50	-	PWM, Analog	Open, Short	2%	I ² C	✓	QFN-24 (4x4)	Independent channel control, daisy-chainable, digital configuration
S MPQ3326A-AEC1	4	18	Linear	16	80	-	PWM, Analog	Open, Short	2%	I ² C	✓	QFN-24 (4x4)	Independent channel control, daisy-chainable, digital configuration

Illumination & Signaling LED Drivers

Part Number	V _{IN} (Min) (V)	V _{IN} (Abs Max) (V)	Topology	Max Continuous Current (A)	Current Limit (Typ) (A)	R _{DS(ON)} (mΩ)	Dimming Modes	f _{SW} (kHz)	LED Protection	Spread Spectrum	Fault Pin	Wettable Flank QFN Option	Package	Notes
MPQ2489-AEC1	6	55	Low-Side Buck	1.4	Adj	500	PWM, Analog	200 to 600	Open, Short	-	-	-	QFN-6 (3x3)	-
MPQ2483A-AEC1	4.5	55	Buck, Buck-Boost	2.5	3	280	PWM, Analog	250 to 1350	Open, Short	-	-	-	QFN-10 (3x3), SOIC-14	Output short-circuit protection
MPQ24833-B-AEC1	4.5	55	Buck, Buck-Boost, Boost	3	6	150	PWM, Analog	420	Open, Short	-	-	-	SOIC-8E	Output short-circuit protection

LED LIGHTING | AUTOMOTIVE

Illumination & Signaling LED Drivers

Part Number	V _{IN} (Min) (V)	V _{IN} (Abs Max) (V)	Topology	Max Continuous Current (A)	Current Limit (Typ) (A)	R _{DS(on)} (mΩ)	Dimming Modes	f _{sw} (kHz)	LED Protection	Spread Spectrum Fault Pin	Wettable Flank QFN Option	Package	Notes
MPM6010-AEC1	4	40	Buck	1.5	4	85/50	PWM	2200	Open, Short	- ✓ ✓	QFN-17 (3x5x1.6)	Module with int. inductor and BST/VCC capacitors, sync operation, output OCP	
MPQ4425A-AEC1	4	40	Buck	1.5	4	85/50	PWM	2200	Open, Short	- ✓ ✓	QFN-13 (2.5x3)	Synchronous operation, output OCP	
MPQ4425B-AEC1	4	40	Buck	1.5	4	85/50	PWM	410	Open, Short	- ✓ ✓	QFN-13 (2.5x3)	Synchronous operation, output OCP	
S MPQ4425C-AEC1	4	40	Buck	1.5	4	85/50	PWM	2200	Open, Short	- ✓ ✓	QFN-13 (2.5x3)	Alternative fault indicator behavior at EN off and soft-start time	
N MPQ7200-AEC1	6	42	Buck, Buck-Boost	3 Buck/1.2A Buck-Boost	6	44/40	PWM	2300 Buck, 1500 Buck-Boost	Open, Short	✓ ✓ ✓	QFN-19 (3x4)	Int. current sense, prog. 1.2A buck-boost or 3A buck, fast transient operation, thermal derating, two-step dimming, ext. NTC	
N MPQ7200A-AEC1	6	42	Buck, Buck-Boost	3 Buck/1.2A Buck-Boost	6	44/40	PWM	410	Open, Short	✓ ✓ ✓	QFN-19 (3x4)	Int. current sense, prog. 1.2A buck-boost or 3A buck, fast transient operation, thermal derating, two-step dimming, ext. NTC	
N MPQ2484-AEC1	4.5	45	Buck, Boost, Buck-Boost	Controller	Adj	-	PWM, Analog	100 to 2200	Open, Short	✓ - -	TSSOP-28EP	Cycle-by-cycle current limit, output OVP, open LED protection, fault flag output	

Dynamic Lighting & Matrix Dimming

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	Spread Spectrum	Channel Current Matching (%)	Interface	Wettable Flank QFN Option	Package	Notes
MPQ7220-AEC1	3.5	40	Boost + Linear	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 limit	
S MPQ7221-AEC1	4	18	Linear	16	80	-	PWM, Analog	Open, Short	-	2%	I ² C	QFN-24 (4x4)	Six-bit analog dimming per channel, 12-bit PWM dimming per channel, refresh signal output	

LED LIGHTING | AUTOMOTIVE

IR (Infrared) Led Drivers for Driver Monitoring Systems

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	Spread Spectrum	Channel Current Matching (%)	Interface	Wettable Flank QFN Option	Package	Notes
N MPQ7230-AEC1	6	44	Buck, Buck-Boost	1	4 (peak)	410	PWM	Open, Short	✓	5%	-	✓	QFN-19 (3x4)	Fast transient response
S MPQ7235-AEC1	4	40	Buck	1	3 (peak)	2200	PWM	Open, Short	-	5%	-	✓	QFN-13 (2.5x3)	10Hz to 2kHz PWM dimming frequency, compatible with 30FPS/60FPS/120FPS dimming

MONITORING & SUPERVISION | AUTOMOTIVE

Voltage Supervisors (Power Good)

Part Number	V _{IN} (Min) (V)	V _{IN} (Max) (V)	Reset Threshold (V)	Short Window Mode	Long Window Mode	Disable Input	I _O (Typ) (µA)	Package	Notes
MPQ6400-33-AEC1	1.8	5.5	3.3	±1.0	1.6	2ms to 10s	✓	QFN-6 (2x2)	Capacitor-set delay, reset output to MCU
MPQ6400-01-AEC1	1.8	5.5	Adj	±1.0	1.6	2ms to 10s	✓	QFN-6 (2x2)	-

Watchdog Supervisors

Part Number	V _{IN} (Min) (V)	V _{IN} (Max) (V)	Reset Threshold (V)	Short Window Mode	Long Window Mode	Disable Input	I _O (Typ) (µA)	Package	Notes
MPQ6411-AEC1	4.5	5.5	4.5	✓	✓	✓	16	SOIC-8E	Reset output to MCU
MPQ6411-33-AEC1	3	3.6	2.9	✓	✓	✓	10	SOIC-8E	Reset output to MCU

Sequencers

Part Number	# of Channels	V _{IN} (Min) (V)	V _{IN} (Max) (V)	32kHz Crystal Oscillator Driver	RTC	System Reset Signal Interface	Package	Notes	
S MPQ7960-xxxx-AEC1	12	2.7	5.5	✓	✓	✓	I ² C	QFN-24 (4x4)	Time-slot based sequencing, digitally prog.
S MPQ7961-xxxx-AEC1	10	2.7	5.5	✓	✓	✓	I ² C	QFN-24 (4x4)	Time-slot based sequencing, digitally prog.
S MPQ7962-xxxx-AEC1	8	2.7	5.5	✓	✓	✓	I ² C	QFN-24 (4x4)	Time-slot based sequencing, digitally prog.
S MPQ7963-xxxx-AEC1	6	2.7	5.5	✓	✓	✓	I ² C	QFN-24 (4x4)	Time-slot based sequencing, digitally prog.
S MPQ7965-xxxx-AEC1	12	2.7	5.5	-	-	✓	I ² C	QFN-24 (4x4)	Time-slot based sequencing, digitally prog.
S MPQ7966-xxxx-AEC1	10	2.7	5.5	-	-	✓	I ² C	QFN-24 (4x4)	Time-slot based sequencing, digitally prog.
S MPQ7967-xxxx-AEC1	8	2.7	5.5	-	-	✓	I ² C	QFN-24 (4x4)	Time-slot based sequencing, digitally prog.
S MPQ7968-xxxx-AEC1	6	2.7	5.5	-	-	✓	I ² C	QFN-24 (4x4)	Time-slot based sequencing, digitally prog.

MONITORING & SUPERVISION | AUTOMOTIVE

Current-Sense Monitors

	Part Number	V_{IN} (Min) (V)	V_{IN} (Max) (V)	Output Mode Gain	Gain	I_O (Typ) (μ A)	PSRR (dB)	Bandwidth (kHz)	Package	Notes
N	MPQ8112-AEC1	2.7	60	Voltage	Fixed 50V/V	300	90	700	TSOT-23	-
N	MPQ8112A-AEC1	2.7	60	Current	Adj	300	90	700	TSOT-23	-
N	MPQ8113-AEC1	2.7	60	Voltage	Fixed 50V/V	300	90	700	TSOT-23	Reduced max V_{OUT}
N	MPQ8113A-AEC1	2.7	60	Current	Adj	300	90	700	TSOT-23	Reduced max V_{OUT}

USB & WIRELESS CHARGING | AUTOMOTIVE

USB PD Solutions Buck-Boost for USB PD

	Part Number	V_{IN} (Min) (V)	V_{IN} (Abs Max) (V)	I_{OUT} (A)	I_O (Typ) (mA)	f_{SW} (kHz)	Supports USB PD	Battery Short Protection	Frequency Spread Spectrum	Int USB Switch	Line Drop Compensation	I ² C Interface	EN Shutdown	Load-Shedding Send Alert	Package	Notes
	MPQ4214-AEC1 (Controller)	4	45	-	-	Selectable	✓	✓	✓	-	-	✓	✓	-	QFN-27 (5x5)	Sync, FCCM
	MPQ4210-AEC1 (Controller)	4	45	-	-	Selectable	✓	✓	✓	-	-	✓	✓	-	QFN-27 (5x5)	Output current monitoring
S	MPQ4262-AEC1 (hybrid)	3.6	40	5	0.13	Selectable	✓	✓	✓	-	✓	✓	✓	✓	QFN-20 (3x5)	-

USB PD Solutions Buck for USB PD

	Part Number	V_{IN} (Min) (V)	V_{IN} (Abs Max) (V)	I_{OUT} (A)	I_O (Typ) (mA)	f_{SW} (kHz)	Supports USB PD	Battery Short Protection	Frequency Spread Spectrum	Int USB Switch	Line Drop Compensation	I ² C Interface	EN Shutdown	Load-Shedding Send Alert	Package	Notes
N	MPQ4272-AEC1 (Dual)	1	40	2x (3A)	0.3	Selectable	✓	✓	✓	-	✓	✓	P	QFN-21 (4x5)	V_{OUT} range with 12.6mV resolution, accurate adj. CC I_{OUT} limit 50mA/step via I ² C	

USB PD Solutions Controllers for USB PD

	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	QC2.0DC3.0	Type-C DFP (w/o PD)	Type-A Mode	Load-Shedding	Battery Short Protection	Int USB Switch	Line Drop Compensation	USB Discharge	Fault Indication	Client Mode	Wearable Flank QFN Option	Package	Notes
N	MPQ5031-AEC1 (PD)	4.5	5.5	Single	5	0.1	✓	✓	✓	✓	✓	✓	✓	✓	-	✓	✓	-	-	✓	QFN-20 (4x4)	USB PD 3.0+ PPS controller, meets PowerShare specs	

USB & WIRELESS CHARGING | AUTOMOTIVE

USB PD Solutions

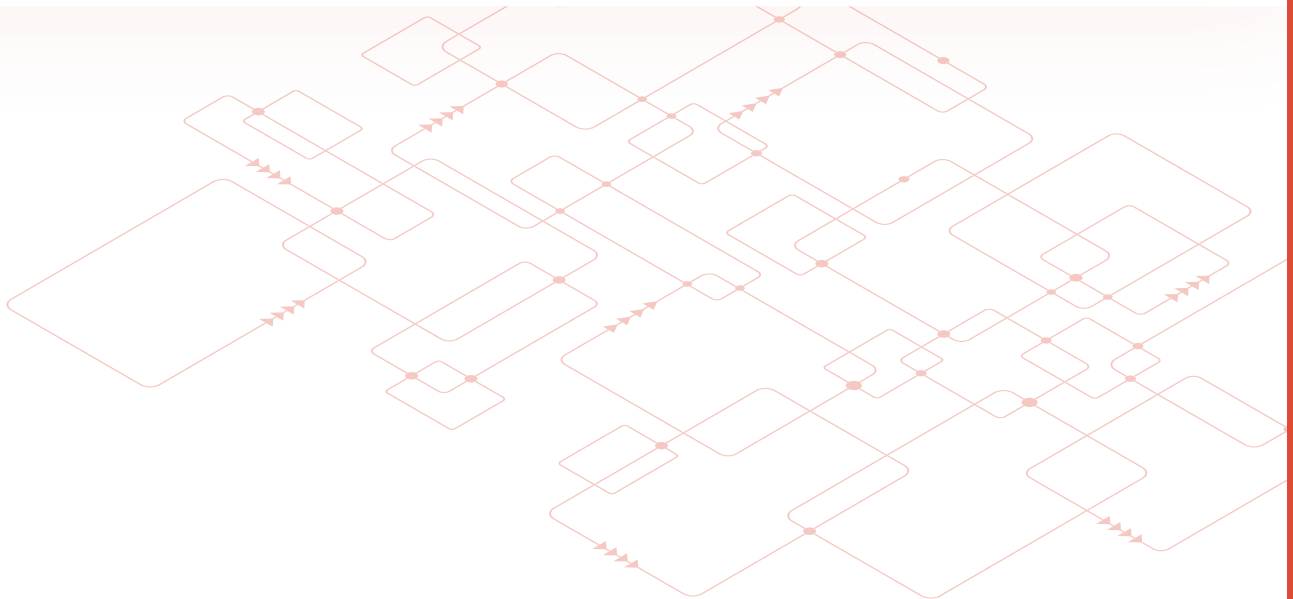
All-In-One USB PD Solutions (Integrated Buck-Boost & PD Controllers)

Part Number	V _{IN} (Min) (V)	V _{IN} (Abs 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	QC2.0/QC3.0 FCP Mode	Type-C DFP Huawei	Type-C DFP (w/o PD)	Load-Shedding	Battery Short Protection	Int USB Switch	Line Drop Protection	USB Discharge	Package	Notes
S MPQ4242-AEC1	4	40	Single	3	0.1	Selectable	✓	✓	✓	✓	✓	-	✓	✓	✓	✓	✓	QFN-22 (4x5)	Supports PD3.0/QC4+ BC1.2/QC3+FCP protocols

All-In-One USB Type-C/A Charging-Only Port Solutions

Dual USB Type-C/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 _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 Switch	Line Drop Compensation	USB Discharge	Package	Notes
N MPQ4487A-AEC1	6	40	Dual	3 (x2)	1	Selectable	-	-	-	✓	✓	✓	✓	✓	✓	✓	QFN-26 (5x5)	Meets latest MFI3.3 specs
N MPQ4488B-AEC1	6	40	Dual	3 (x2)	1	Adjustable	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	QFN-26 (5x5)	Meets latest MFI3.3 specs
N MPQ4488T-AEC1	6	40	Dual	3 (x2)	1	Adjustable	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	QFN-26 (5x5)	135°C load-shedding temp
N MPQ4253-AEC1	6	40	Dual	3 (x2)	0.054	Selectable	✓	✓	✓	✓	✓ (Type-C)	-	✓	✓	✓	✓	QFN-26 (5x5)	Low I _Q
N MPQ4276-AEC1	6	40	Dual	3 (x2)	0.8	Adjustable	-	-	-	✓	-	✓	✓	✓	✓	✓	QFN-26 (5x5)	USB 1/2 fault indication, PFM mode, EN and FAULT pins for USB 1/2
N MPQ4253B-AEC1	6	40	Dual	3 (x2)	0.054	Selectable	✓	✓	✓	✓	✓ (Type-C)	-	✓	✓	✓	✓	QFN-26 (5x5)	MFI OCP current > 4.8A

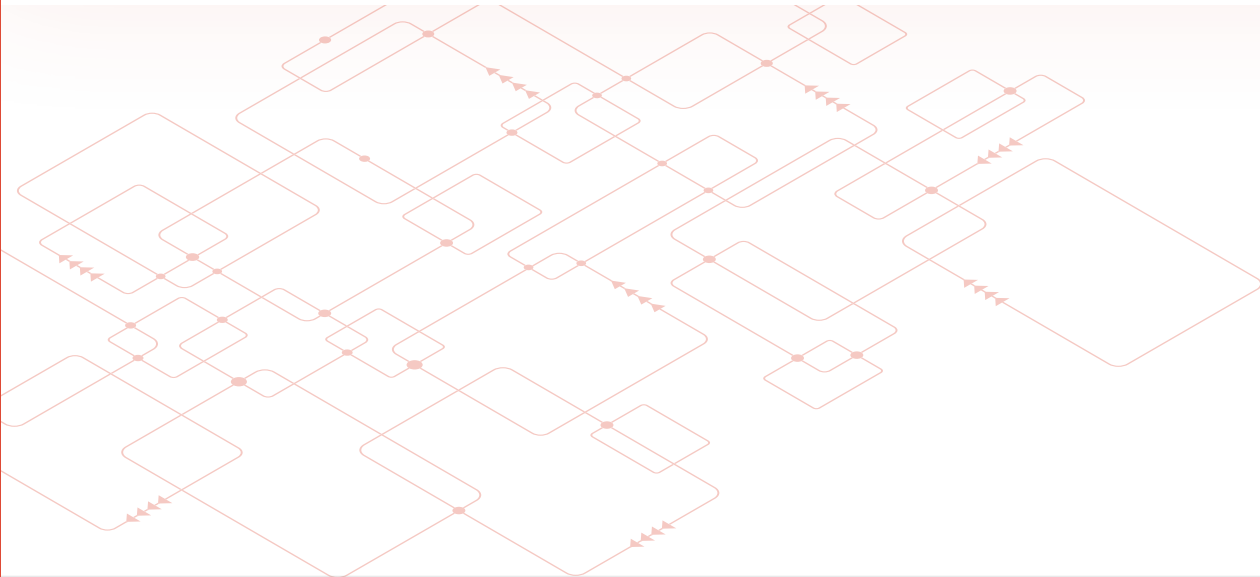


USB & WIRELESS CHARGING | AUTOMOTIVE

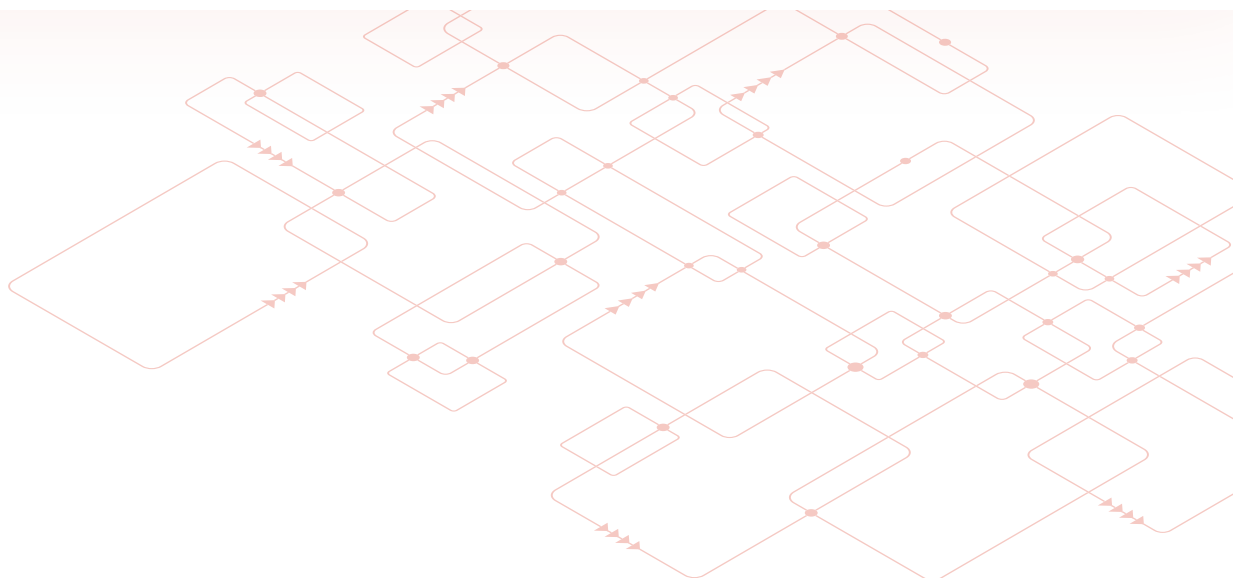
All-In-One USB Type-C/A Charging-Only Port Solutions

Single USB Type-C/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 _O (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 Pp)
MPQ4475-E-AEC1	7	40	Single	2.5	1.6	Selectable	✓	✓	✓	-	-	-
MPQ4491-AEC1	7	40	Single	2.5	1.6	Selectable	✓	✓	✓	-	-	-
MPQ4481-AEC1	6	40	Single	3	0.7	Selectable	✓	✓	✓	-	-	✓
MPQ4481-FD-AEC1	6	40	Single	3	0.7	Selectable	✓	✓	✓	-	-	✓
MPQ4481-FD2-AEC1	6	40	Single	3	0.7	Selectable	✓	✓	✓	-	-	✓
N MPQ4228-AEC1	4.2	40	Single	3	-	Selectable	✓	✓	✓	-	-	✓
N MPQ4228-Q-AEC1	4.2	40	Single	3	-	Selectable	✓	✓	✓	✓	✓	✓
MPQ4482-AEC1	4	40	Single	3	0.8	Selectable	✓	✓	✓	-	-	✓
MPQ4482-Q-AEC1	4	40	Single	3	0.8	Selectable	✓	✓	✓	✓	✓	✓



Type-A Mode	Load Shedding	Battery Short Protection	Low-Dropout Mode	Frequency Spread Spectrum	Inr USB Switch	Line Drop Compensation	EN Shutdown Discharge	USB Discharge	Fault Indication	Wettable Flank QFN Option	Package	Notes
✓	-	-	-	✓	✓	✓	✓	✓	✓	-	QFN-25 (4x4)	Prog. line drop compensation
✓	-	-	-	-	✓	✓	✓	✓	-	-	QFN-25 (4x4)	Auto-detection, cable compensation
✓	✓	-	✓	-	✓	✓	-	✓	✓	-	QFN-26 (5x5)	EN and FAULT pins support Hub
✓	✓	-	✓	✓	✓	✓	-	✓	✓	-	QFN-26 (5x5)	EN and FAULT pins support Hub
✓	✓	-	✓	✓	✓	✓	-	✓	✓	-	QFN-26 (5x5)	EN and FAULT pins support Hub, prog. freq. and spread spectrum with 250kHz
✓	✓	✓	-	✓	✓	✓	✓	✓	✓	✓	QFN-22 (4x4)	Type-C 5V/3A , DFP port
✓	✓	✓	-	✓	✓	✓	✓	✓	✓	✓	QFN-22 (4x4)	Supports QC2.0/3.0
✓	✓	✓	-	-	✓	✓	-	✓	-	✓	QFN-22 (4x4)	3.55A/2.75A USB current limit with FCCM
✓	✓	✓	-	-	✓	✓	-	✓	-	✓	QFN-22 (4x4)	Accurate USB current limit with FCCM



USB & WIRELESS CHARGING | AUTOMOTIVE

All-In-One Data Port Products

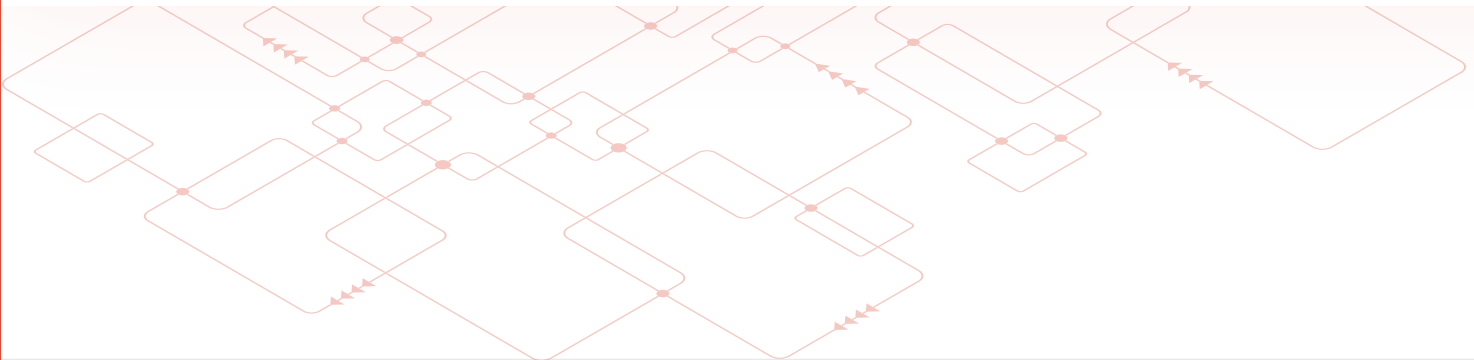
Dual USB Type-C/A Charging Data Ports (Buck with Integrated CLS, USB 2.0 Data Switch, Protocol Detection)

Part Number	V _{IN} (Min) (V)	V _{IN} (Abs Max)	Dual/Single Ports	I _{OUT} (A)	I _O (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	Int USB Switch	Line Drop Compensation	USB Discharge	Package	Notes
MPQ4485-AEC1	6	40	Dual	3 (x2)	-	450	✓ (USB2)	✓	✓	✓	✓	✓	✓	✓	✓	✓	QFN-26 (5x5)	FCCM

All-In-One Data Port Products

Single USB Type-C/A Charging Data Ports (Buck + 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 _O (Typ) (mA)	f _{SW} (KHz)	BC 1.2 DCP	BC 1.2 DCP	1.2V/1.2V Mode	Divider Mode 3	Type-C DFP (w/o PD)
N MPQ4228-C-AEC1	4.2	40	Single	3	-	Selectable	✓	-	-	-	✓
MPQ4483-AEC1	4.2	40	Single	3	-	Selectable	✓	✓	-	-	-
MPQ4483-FD-AEC1	4.2	40	Single	3	-	Adjustable	✓	✓	-	-	-

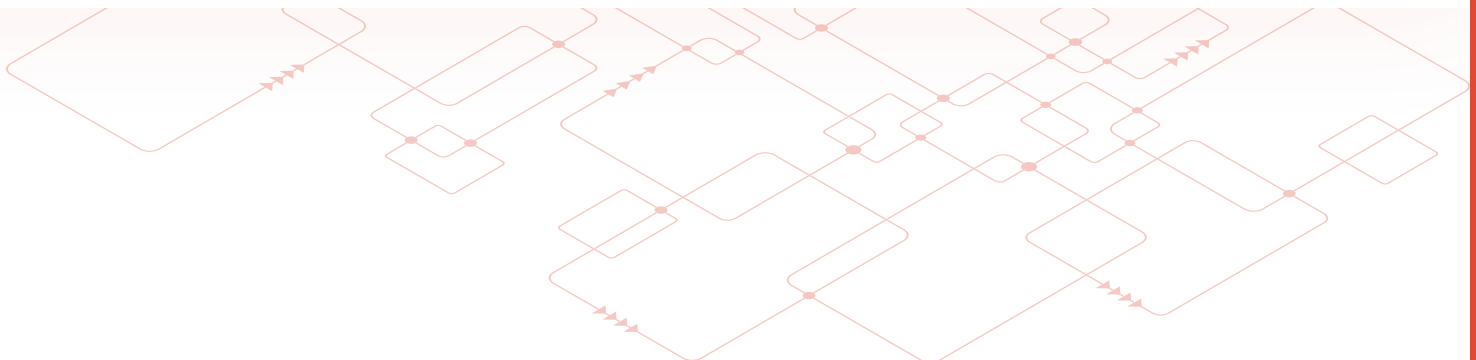


USB & WIRELESS CHARGING | AUTOMOTIVE

USB Type-C/A Port Controllers & Buck Products Buck Only

Part Number	V_{in} (Min) (V)	V_{in} (Abs Max)	I_{out} (A)	I_o (Typ) (mA)	f_{sw} (kHz)	Battery Short Protection	Low-Dropout Mode	Int USB Switch	Line Drop Compensation	EN Shutdown Discharge	Wettable Flank QFN Option	Package	Notes
MPQ4480-AEC1	4.2	40	6	1	Selectable	✓	✓	✓ (Adj CC Limit)	✓	✓	✓	QFN-25 (4x5)	-
N MPQ4423C-AEC1	4	40	6	0.75	Selectable	-	-	-	-	✓	✓	QFN-16 (3x4)	-

Type-A Mode	Load-Shedding	Battery Short Protection	Low-Dropout Mode	Frequency-Spread Spectrum	Int USB Switch	Line Drop Compensation	EN Shutdown Discharge	USB Discharge	Wettable Flank QFN Option	Package	Notes
✓	✓	✓	-	✓	✓	(Adj)	✓	✓	✓	QFN-22 (4x4)	Supports CDP mode
✓	-	✓	✓	-	✓	(Adj CC Limit)	✓	(Adj)	✓	QFN-25 (4x5)	Supports BC1.2 DCP and CDP modes, bidirectional USB 2.0 high-speed data switch, LDO mode, 3.55A/3.75A CC I_{out} limit
✓	-	✓	✓	✓	✓	(Adj CC Limit)	✓	(Adj)	✓	QFN-25 (4x5)	Supports BC1.2 DCP and CDP modes, bidirectional USB 2.0 high-speed data switch, LDO mode, 3.55A/3.75A CC I_{out} limit



USB & WIRELESS CHARGING | AUTOMOTIVE

USB Type-C/A Port Controllers & Buck Products

USB Type-C/A Charging Port Controllers

Part Number	V _{IN} (Min) (V)	V _{IN} (Abs Max)	Dual/Single Ports	I _{OUT} (A)	I _O (Typ) (mA)	BC 1.2 DCP (Data)	BC 1.2 DCP	1.2V/1.2V Mode	Divider Mode 3	OC2_OC3_0	Type-C DFP (w/o P1)	Type-A Mode	Load Shedding	Battery Short Protection	Int USB Switch	Line Drop Compensation	USB Discharge	Fault Indication	Client Mode	Wettable Flank Option	Package	Notes
MPQ5029-AEC1	2.7	24	Single	3	0.155	-	✓	✓	✓	✓	✓	✓	✓	✓	(Adj)	(Adj)	✓	-	-	✓	QFN-14 (2x3)	NTC pin for thermal management, adj. OVP threshold, input OV shutdown protection
MPQ5029-C-AEC1	3	24	Single	3	0.175	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	QFN-14 (2x3)	-

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
S MPQ1922-AEC1	4	15	100	15	1	3	4	20	20	20	✓	SOIC-8E, QFN-10 (4x4)	Gate driver, int. current-sense amp, 9ns to 15ns rise/fall (2.2nF load)
S MPQ1923-AEC1	5	17	100	17	1	7	8	0.0072	0.0055	0.02	✓	QFN-10 (4x4), QFN-8 (4x4), SOIC-8	High-frequency gate driver
S MPQ6528-AEC1	5	60	60	60	2	0.8	1	-	-	700	✓	QFN-28 (4x5)	H-bridge gate driver

Three-Phase Pre-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 MPQ6531-AEC1	5	60	60	60	3	0.8	1	-	-	880	✓	QFN-28 (4x5)	For BLDC motors
S MPQ6532-AEC1	5	60	60	60	3	0.8	1	-	-	880	✓	QFN-28 (4x5)	Hall inputs, for BLDC
S MPQ6533-AEC1	6	40	-	-	3U	0.8	1	-	-	-	✓	QFN-32 (5x5)	Three-channel, automotive, LDO regulator, current-sense amp

MOTOR DRIVERS | AUTOMOTIVE

Half-Bridge Drivers (Integrated MOSFET)

	Part Number	V _{IN} (Min) (V)	V _{IN} (Abs Max) (V)	# of Channels	R _{DS(on)} (mΩ)	Standby I _Q (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	1	100	2.5	9	0.02	0.02	0.07	-	-	✓	SOIC-8E	General-purpose, high frequency, for audio amps wireless charging, etc.
S	MPQ6519-AEC1	3	28	2	130	370	5	0.2	0.2	-	✓	-	-	QFN-19 (4x4)	H-bridge current regulator
	MPQ6523-AEC1	7	40	3	1100	1.5	0.9	20	20	60	✓	✓	✓	QFN-24 (4x4)	Independent half-bridge control, comprehensive protections, daisy-chainable, serial data interface up to 3MHz
	MPQ6524-AEC1	7	40	4	1100	1.5	0.9	20	20	60	✓	✓	✓	QFN-24 (4x4)	Independent half-bridge control, comprehensive protections, daisy-chainable
	MPQ6526-AEC1	7	40	6	1100	1.8	0.9	20	20	60	✓	✓	✓	QFN-24 (4x4), QFN-24 (5x5)	Independent half-bridge control, comprehensive protections, daisy-chainable
S	MPQ6527-AEC1	5.5	40	10	1300	1	0.8	27	20	75	✓	✓	-	TSSOP-28EP	Independent half-bridge control, comprehensive protections, daisy-chainable, SPI interface up to 5MHz
N	MPQ6610-AEC1	4	55	1	220	1300	3	-	-	-	✓	-	-	TSOT23-8, SOIC-8	Power driver
S	MPQ6612A-AEC1	4	45	2	100	20	5	0.2	0.2	0.1	-	-	✓	QFN-18 (3x4)	H-bridge with current sense, IN1 and IN2 inputs
S	MPQ6615-AEC1	4.75	45	2	18	3000	12	-	-	-	-	-	✓	TQFN-26 (6x6)	H-bridge motor driver, int. current sense
S	MPQ6626-AEC1	5.5	40	6	1300	1	0.8	27	20	75	✓	✓	-	TSSOP-28EP	Independent half-bridge control, comprehensive protections, daisy-chainable, SPI interface up to 5MHz
S	MPQ6628-AEC1	5.5	40	8	1300	1	0.8	27	20	75	✓	✓	-	TSSOP-28EP	Independent half-bridge control, comprehensive protections, daisy-chainable, SPI interface up to 5MHz

Stepper Motor Drivers

	Part Number	V _{IN} (Min) (V)	V _{IN} (Abs Max) (V)	# of Channels	R _{DS(on)} (mΩ)	Standby I _Q (Typ)	Peak Output Current (A)	Step Mode	Control Interface	Wettable Flank Option	Package	Notes
S	MPQ6600L-AEC1	4.5	35	2	365	1500	1.5	1, 1/2, 1/4, 1/8	Indexer	✓	QFN-24 (4x4)	Bipolar, microstepping, int. current sense and latch-off

Integrated BLDC Motor Drivers

	Part Number	V _{IN} (Min) (V)	V _{IN} (Abs Max) (V)	# of Channels	R _{DS(on)} (mΩ)	Standby I _Q (Typ)	Peak Output Current (A)	Control Interface	Wettable Flank Option	Package	Notes
S	MPQ6541-AEC1	4.75	45	3	29	4000	8	PWM/ENBL	✓	TQFN-26 (6x6)	Three-phase power stage, PWM/ENBL inputs, int. current sense
S	MPQ6541A-AEC1	4.5	35	3	29	4000	8	HS/LS	✓	TQFN-26 (6x6)	Three-phase power stage, HS/LS inputs, int. current sense

LOAD SWITCHES | AUTOMOTIVE

Load Switches 5V Load Switches

	Part Number	$V_{CC}(\text{Min})$ (V)	$V_{CC}(\text{Max})$ (V)	Load Current (A)	$R_{DS(ON)}$ (m Ω)	I_Q (Typ) (mA)	Adj Current Limit	Power Good	Wettable Flank QFN Option	Package	Notes
N	MPQ5071-AEC1	3	5.5	0.5	50	0.18	✓	✓	-	QFN-12 (2x2)	-
N	MPQ5072-AEC1	3	5.5	1	50	0.18	✓	✓	-	QFN-12 (2x2)	-
	MPQ5073-AEC1	3	5.5	2	50	0.18	✓	✓	-	QFN-12 (2x2)	-
S	MPQ5074-AEC1	3	5.5	3	10	0.22	✓	✓	✓	QFN-12 (2.5x3)	-
S	MPQ5075A-AEC1	3	5.5	5	10	0.22	✓	✓	✓	QFN-12 (2.5x3)	-
S	MPQ5077A-AEC1	3	5.5	7	10	0.22	✓	✓	✓	QFN-12 (2.5x3)	-

Load Switches 40V Load Switches

	Part Number	$V_{IN}(\text{Min})$ (V)	$V_{IN}(\text{Max})$ (V)	Load Current (A)	$R_{DS(ON)}$ (m Ω)	I_Q (Typ) (mA)	Adj Current Limit	Fault Pin	Wettable Flank QFN Option	Package	Notes
	MPQ5066-AEC1	6	38	6	7	1	✓	✓	-	QFN-22 (3x5)	ISO16750-1 compliant
	MPQ5068-AEC1	6	38	8	7	1	✓	✓	-	QFN-22 (3x5)	ISO16750-1 compliant
	MPQ5069-AEC1	6	38	10	7	1	✓	✓	-	QFN-22 (3x5)	ISO16750-1 compliant

Reverse Battery Protection Controllers

	Part Number	$V_{IN}(\text{Min})$ (V)	$V_{IN}(\text{Max})$ (V)	Reverse Battery (V)	Gate Drive Current (mA)	Forward Voltage Drop (mV)	Shutdown I_Q (Typ) (μ A)	Power Good	Int Boost Converter	Package	Notes
S	MPQ5850-AEC1	3	42	-40	100/400	20	3	✓	✓	TSOT23-8	Low-voltage start-stop transient operation, AC rectification up to 100kHz, ISO16750-1 compliant

Analog Switches

	Part Number	$V_{IN}(\text{Min})$ (V)	$V_{IN}(\text{Max})$ (V)	Switcher Current (A)	$R_{DS(ON)}$ (m Ω)	I_Q (Typ) (mA)	t_{ON}/t_{OFF} (ns)	Bandwidth (MHz)	Wettable Flank QFN Option	Package	Notes
	MPQ2735-AEC1	1.65	5.5	0.1	0.25	1	29/23	50	-	QFN-10 (2x2)	Low-voltage 0.45 Ω dual SPDT analog switches, separate control inputs

CLASS-D AUDIO AMPLIFIERS | AUTOMOTIVE

Class-D Audio Amplifiers

Part Number	V _{IN} (Min) (V)	V _{IN} (Max) (V)	P _{OUT} (W)	R _{DS(on)} (mΩ)	Idle Current (Typ) (mA)	f _{SW} (Max) (kHz)	Efficiency (%)	THD+N at 1kHz Input (%)	PSRR (dB)	SNR (dB)	Output Noise (μV)	Type	Load Diagnostic	Selectable Power Limiter	Digital Interface	Wettable Flank QFN Option	Package	Notes	
S MPQ7795-AEC1	4.5	42	24.5 @ 14.4V, 4Ω Load	150	6.5	330kHz to 2.2MHz	92 @ 470kHz, 90 @ 2MHz	0.09 @ 1W, 470kHz	71 @ 100Hz	102	115	Mono, BTL	✓	✓	✓	I ² C	✓	QFN-24 (4x4)	2.2MHz, low EMI, mono BTL with diagnostics
MPQ7790-AEC1	5.5	18	9 @ 12V, 8Ω Load	300	5	300kHz	90	0.15 @ 5W (8Ω), 300kHz	50	102	115	Mono, BTL	-	✓	✓	-	-	TSSOP-20EP	Low EMI, analog input, for mono speaker in bridge-tied load configuration

POSITION SENSORS | AUTOMOTIVE

Part Number	V _{IN} (Min) (V)	V _{IN} (Max) (V)	Supply Current (mA)	Resolution	Output Format	ABZ Resolution (Bits)	PWM Frequency (Hz)	Latency (μs)	Start-Up Time (ms)	Refresh Rate (kHz)	Filter Cutoff Frequency (kHz)	Magnetic Field Detection	Magnetic Field Range (mT)	Wettable Flank QFN Option	Package	Notes
S MAQ430-AEC1	3	3.6	11.7	12-bit	SPI, ABZ, UVW	10	-	8	12	980	390	✓	30 to 150	✓	QFN-16 (3x3)	Supports end-of-shaft, side-shaft topologies
MAQ470-AEC1	3	3.6	11.7	12-bit	SPI, SSI, ABZ, PWM	10	240	8	12	980	390	✓	30 to 150	✓	QFN-16 (3x3)	Supports end-of-shaft, side-shaft topologies
N MAQ473-AEC1	3	3.6	11.7	14-bit	SPI, SSI, ABZ, PWM	12	970	8	0.6/12/260	980	23 to 6k	✓	30 to 150	✓	QFN-16 (3x3)	Supports end-of-shaft, side-shaft topologies

CURRENT SENSORS | AUTOMOTIVE

Part Number	V _{IN} (Min) (V)	V _{IN} (Max) (V)	Supply Current (mA)	Current Range (A)	Output Format	Accuracy (from 25°C to 125°C) (%)	Bandwidth (kHz)	Response Time (μs)	Temperature Range (°C)	Start-Up Time (μs)	FILT Unconnected Resistance (mΩ)	Primary Conductor Resistance (mΩ)	Package	Notes
S MCQ1802-xx-AEC	3	3.6	8.5	±5, ±10, ±20, ±30, ±40, ±50	Analog, Ratiometric	2.5	100	5	-40 to +150	90	0.9	SOIC-8	Coreless, analog output, immune to ext. magnetic fields	
S MCQ1803-xx-AEC	4.5	5.5	8.5	±5, ±10, ±20, ±30, ±40, ±50	Analog, Ratiometric	2.5	100	5	-40 to +150	90	0.9	SOIC-8	Coreless, analog output, immune to ext. magnetic fields	

EASYPower™ | AC/DC POWER CONVERSION

AC Buck

Part Number	Typ Max Power (W)		Control Method	$R_{DS(on)}$ (Ω)	Breakdown Voltage (V)	No-Load Power (mW)	Package	Notes
	V_{IN} (Min) (V)	V_{IN} (Max) (V)						
MP100L	0.5	85 305	Smart LDO	9.5	700	100	SOIC-8E	Inductorless regulator for low-power applications, up to 0.5W
MP103	1	85 305	Smart LDO	NA	700	100	SOIC-8E	Inductorless controller for low-power applications, up to 1W
MP150	2	20 265	Non-Isolated	30	500	150	TSOT23-5, SOIC-8	Offline regulator, up to 200mA output current
MP155	3	20 265	Non-Isolated	20	500	100	TSOT23-5, SOIC-8	Offline regulator, up to 220mA output current
MP157	6	20 265	Non-Isolated	10	500	100	TSOT23-5, SOIC-8	Offline regulator, up to 360mA output current
MP158	3	20 265	Non-Isolated	20	500	100	TSOT23-5, SOIC-8	Offline regulator, up to 70mA output current
MP171A	2	20 305	Non-Isolated	20	700	30	TSOT23-5, SOIC-8	Improved EMI performance from the MP171 (up to 60mA output current)
MP172A	3	20 305	Non-Isolated	16	700	30	TSOT23-5, SOIC-8	Improved EMI performance from the MP172 (up to 120mA output current)
MP173A	4	20 305	Non-Isolated	14	700	30	TSOT23-5, SOIC-8	Improved EMI performance from the MP173 (up to 280mA output current)
MP174A	5	20 305	Non-Isolated	13.5	700	30	TSOT23-5, SOIC-8	Improved EMI performance from the MP174 (up to 400mA output current)
MP175	10	30 265	Non-Isolated	4.5	700	30	SOIC-8	Offline regulator, up to 600mA output current
S MP175L	7.5	30 265	Non-Isolated	4.5	700	30	SOIC-8	Offline regulator, up to 600mA output current, for lower output applications than the MP175
MP163A	2	20 265	Non-Isolated	16	700	30	SOIC-8-7B, SOIC-16	Offline regulator with integrated LDO, 210mA current-limited switching regulator
MP163B	3	20 265	Non-Isolated	14	700	30	SOIC-8-7B, SOIC-16	Offline regulator with integrated LDO, 420mA current-limited switching regulator
MP163C	4	20 265	Non-Isolated	13.5	700	30	SOIC-8-7B, SOIC-16	Offline regulator with integrated LDO, 660mA current-limited switching regulator
MP161A	2	30 265	Non-Isolated	17	700	10	SOIC-16	Integrated 240mA current-limited switching regulator, linear regulator, and relay driver
MP161B	3	30 265	Non-Isolated	14	700	10	SOIC-16	Integrated 420mA current-limited switching regulator, linear regulator, and relay driver
P MP161C	4	30 265	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
HFC0300	Ext FET	85	305	Controller	-	Variable Frequency	700	-	SOIC-7	Variable off-time
HFC0310	Ext FET	85	305	Controller	600	Fixed Frequency	-	-	SOIC-8	Prog. fixed frequency

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
HFC0500	Ext FET	85	305	Controller	65	Fixed Frequency	700	-	SOIC8-7A	HV start-up, X-capacitor discharge, brown-in/out
S HFC0502	Ext FET	85	305	Controller	65	Fixed Frequency	700	-	SOIC8-7A	Supports DC input, HV start-up, X-capacitor discharge, brown-in/out
HFC0511	Ext FET	85	305	Controller	130	Fixed Frequency	700	-	SOIC8-7A	Ultra-low no-load power consumption
P HFC0650	Ext FET	85	305	Controller	1000	Variable Frequency	650	-	SOIC8-7A	QRZVS flyback controller for high-efficiency high-density adapters
HF900	10	85	440	Regulator	300	Peak Current	900	13	PDIP8-7EP, SOIC14-11	Integrated 900V MOSFET
HF920	10	85	440	Regulator	150	Peak Current	900	15	SOIC14-11, SOIC8-7A	Integrated 900V MOSFET
HF920A	10	85	440	Regulator	150	Peak Current	900	15	SOIC14-11, SOIC8-7A	HF920 with AC UV protection
HF920B	10	85	440	Regulator	150	Peak Current	900	15	SOIC14-11, SOIC8-7A	Improved EMI performance from the HF920
HF500-7	7	85	305	Regulator	65	Fixed Frequency	700	12	SOIC8-7B	Integrated 700V MOSFET
HF500-15	15	85	305	Regulator	65	Fixed Frequency	700	4.5	SOIC8-7B	Integrated 700V MOSFET
HF500-30	30	85	305	Regulator	65	Fixed Frequency	700	1.4	PDIP8-7B	Integrated 700V MOSFET
S HF500A-20	20	85	305	Regulator	65	Fixed Frequency	700	3	PDIP8-7B	Int. 700V MOSFET, covers 12W to 20W home appliance applications
N HF500A-30	30	85	305	Regulator	65	Fixed Frequency	700	1.4	PDIP8-7B	Improved EMI performance from the HF500-30
HF500-40	40	85	305	Regulator	65	Fixed Frequency	700	0.9	PDIP8-7B	Integrated 700V MOSFET

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

All-In-One Flyback with Primary-Side & Secondary-Side Controllers

MPX2001	Ext FET	85	305	Controller	85	Variable/CCM	650	-	SOICW-20	200V integrated SR controller with capacitive isolation
S MPX2002	Ext FET	85	305	Controller	85	CCM/QR	650	-	SOICW-16	150V integrated SR controller with capacitive isolation
P MPX2003	Ext FET	85	305	Controller	140	CCM/QR	650	-	SOICW-16	Higher-frequency version of the MPX2002

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	85	305	Voltage Mode	Ext FET	LLC Resonant	-	-	SOIC-16	Variable frequency, high-power applications
HR1001A	85	305	Voltage Mode	Ext FET	LLC Resonant	✓	✓	SOIC-16	Two-level OCP via frequency shift and auto-restart, other features same as the HR1001B
HR1001B	85	305	Voltage Mode	Ext FET	LLC Resonant	✓	✓	SOIC-16	Variable freq. two-level OCP (1st level auto-restart, 2nd level latch)
HR1001C	85	305	Voltage Mode	Ext FET	LLC Resonant	✓	✓	SOIC-16	Improved surge performance compared to the HR1001B
HR1001L	85	305	Voltage Mode	Ext FET	LLC Resonant	✓	✓	SOIC-16	Two-level OCP via freq. shift and latch, other features same as the HR1001B
N HR1002	85	305	Voltage Mode	Ext FET	LLC Resonant	✓	✓	SOIC-16	Higher switching freq. applications than the HR1001C (up to 400kHz to 500kHz)
N HR1002A	85	305	Voltage Mode	Ext FET	LLC Resonant	✓	✓	SOIC16-15	Alternate package option of HR1002 without N/C pin

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
HR1203	Voltage Mode	Digital CCM/DCM Multi-Mode	<150	I ² C/GUI	PFC + LLC	✓	TSSOP-28, SOIC-28	Digital PFC + analog LLC with GUI, replaces the HR1200
HR1204	Voltage Mode	Digital CCM/DCM Multi-Mode	<150	I ² C/GUI	PFC + LLC	-	TSSOP-28, SOIC-28	Digital PFC + analog LLC with GUI, 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
N HR1211	Digital Current Mode	Digital CCM/DCM Multi-Mode	<100	UART/GUI	PFC + LLC	✓	TSSOP-20, SOIC-20	High performance, fully digital
S HR1213	Digital Current Mode	Digital CCM/DCM Multi-Mode	<100	UART/GUI	PFC + LLC	✓	TSSOP-20, SOIC-20	AC and DC input, with or without aux, selectable via GUI
S HR1215	Digital Current Mode	Digital CCM/DCM Multi-Mode	<100	UART/GUI	PFC + LLC	✓	TSSOP-20, SOIC-20	Keeps the output regulated when AC turns off

PFC | AC/DC POWER CONVERSION

Part Number	V _{IN} (Min) (V)	V _{IN} (Max) (V)	I _{O, MAX} / I _{CC, MAX} (mA)	I _{GATE_SRC} / I _{GATE_SINK} (mA)	Control Scheme	Topology	Package	Notes
MP44010	85	305	0.65/2.5	-350/+600	Boundary Mode	Boost/Buck-Boost	SOIC-8	Boundary mode, general purpose
MP44011	85	305	0.65/2.5	-350/+600	Boundary Mode	Boost/Buck-Boost	SOIC-8	Boundary mode, harmonic injection function, reduced capacitor value and inductor size compared to the MP44010
MP44014	85	305	3.2/4.5	-750/+800	Boundary Mode	Boost/Buck-Boost	SOIC-8	Boundary mode
MP44014A	85	305	3.2/4.5	-750/+800	Boundary Mode	Boost/Buck-Boost	SOIC-8	Boundary mode, adj. open-loop protection

PFC | AC/DC POWER CONVERSION

	Part Number	V _{IN} (Min) (V)	V _{IN} (Max) (V)	I _{O, MAX} / I _{DC, MAX} (mA)	I _{GATE_SRC} / I _{GATE_SINK} (mA)	Control Scheme	Topology	Package	Notes
S	MP44017	85	305	0.2/1.5	-600/+1000	CrM/DCM Multi-Mode	Boost	SOIC-8	Based on the MP44018, optimized burst thresholds for lighting applications with deep dimming requirements
N	MP44018A	85	305	0.2/1.5	-600/+1000	CrM/DCM Multi-Mode	Boost	SOIC-8	CrM/DCM multi-mode, enhanced light-load efficiency
P	MP44019	85	305	0.2/1.5	-600/+1000	CrM/DCM Multi-Mode	Boost	SOIC-8	Based on the MP44018, implements second OVP function for TV applications
S	MP44060	85	305	0.25/5	-600/+1000	CrM/DCM Multi-Mode	Boost	SOIC-8	High frequency, based on the MP44018A
N	MP4078	85	305	0.4/5	35V/0.27Ω Source-Driven	DCM	Flyback/Buck-Boost/Buck	SOIC-8	Primary-side control for constant voltage power

SYNCHRONOUS RECTIFIERS | AC/DC POWER CONVERSION

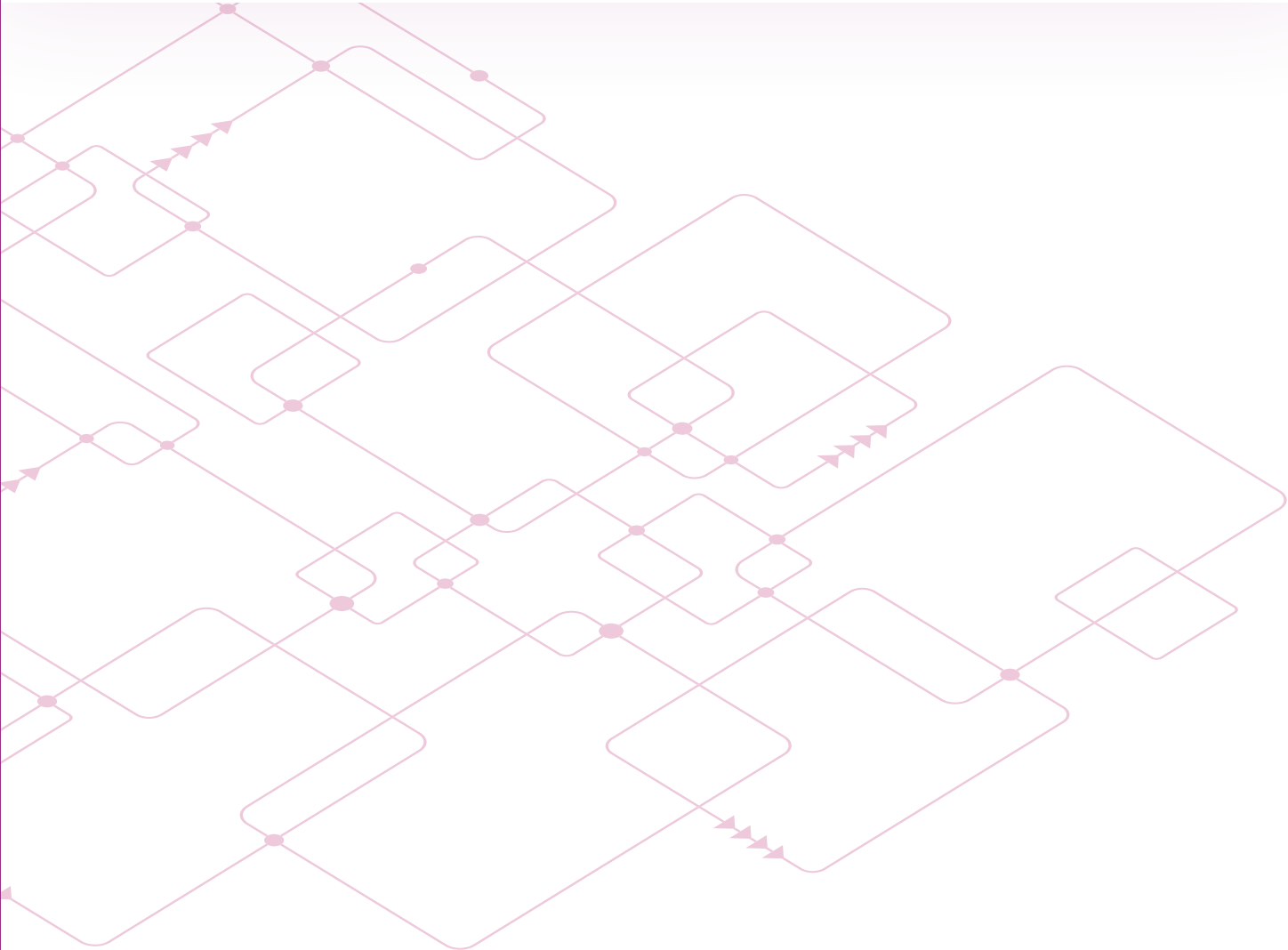
Flyback Topology (Fast Turn-Off, Intelligent)

	Part Number	Type	V _{OH} (Min) (V)	V _{OH} (Max) (V)	f _{SW} (Max) (kHz)	Drain Rating (V)	Regulation Voltage (mV)	Total R _{DS(on)} (mΩ)	Package	Notes
	MP6902	Controller	8	24	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	70	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)
	MP6908A	Controller	4	13	600	180	40	Ext FET	TSOT23-6	High-frequency, fast turn-off intelligent rectifier, slew rate detection, self-biased (no need for auxiliary winding)
	MP6908L	Controller	4.5	13	150	180	40	Ext FET	TSOT23-6	Optimized for 65kHz
N	MP6908S	Controller	4.5	13	400	180	40	Ext FET	TSOT23-6	Zero MOT
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	70	15	SOIC-8	MP6902 based ideal diode
N	MP6910B	Ideal diode	8	24	250	100	70	13	SOIC-8	MP6902 based ideal diode
	MP6919	Ideal diode	4.5	13	150	100	40	13	SOIC-8	MP6908 based ideal diode
	MP9989	Ideal diode	4.5	13	150	100	40	10	SOIC-8, QFN-8 (4x5)	MP6908 based ideal diode
P	MP9989A	Ideal diode	4	13	300	100	40	10	SOIC-8, QFN-8 (4x5)	MP6908A based ideal diode
	MP6953	Ideal diode	8	24	250	100	70	17	SOIC-8	12V, 2.5A, new ideal diode
	MP6954	Ideal diode	8	24	250	100	70	14	SOIC-8	12V, 3A, new ideal diode
S	MP6971	Ideal diode	4.5	13	150	100	40	20	SOIC-8	12V, 2A, MP6908 based ideal diode
N	MP6972	Ideal diode	4.5	13	150	100	40	17	SOIC-8	12V, 2.5A, new ideal diode with slew rate detection
N	MP6973	Ideal diode	4.5	13	150	100	40	14	SOIC-8	12V, 3A, new ideal diode with slew rate detection
S	MP6975	Ideal diode	4.5	13	150	100	40	12	SOIC-8	12V, 3.5A, MP6908 based ideal diode
S	MP6976	Ideal diode	4.5	13	150	100	40	10.5	SOIC-8	20V, 3.5A, MP6908 based ideal diode
P	MP6980	Controller	4	13	150	180	40	Ext FET	TSOT23-6	Thermally improved version based on the MP6908A

SYNCHRONOUS RECTIFIERS | AC/DC POWER CONVERSION

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
MP6925	Controller	500	180	45	Dual	SOIC-8	Enhanced light-load performance, compatible with the MP6924A
MP6925A	Controller	500	180	45	Dual	SOIC-8	Enhanced light-load performance, compatible with the MP6924
S MP6926	Controller	600	180	29	Dual	SOIC-8	High-frequency LLC SR based on the MP6925
N MP6928A	Controller	500	200	35	Dual	SOIC-8	LL mode configuration to avoid ripple at 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	85	305	Ext FET	Flyback	SOT23-6	Primary-side control, active PFC
MP4027	85	305	Ext FET	Flyback	SOT23-8	Primary-side control, PFC, NTC, and PWM dimming
MP4031	85	305	Ext FET	Flyback	SOIC-8	TRIAC and analog dimming, deep dimming, primary-side control, active PFC
MP4033	85	305	Ext FET	Flyback	SOIC-8, MSOP-10, SOIC-14	Enhanced TRIAC dimming, primary-side control, active PFC
N MP4057A	85	305	Ext FET	Buck-Boost	MSOP-10, SOIC-14	Single-chip/single-stage solution for smart LED/wireless modules
N MP4059	85	305	Ext FET	Buck-Boost	SOIC-8	3% analog dimming
MP4060	85	305	Ext FET	Buck-Boost	SOIC-8, MSOP-10, SOIC-14	Improved trailing-edge dimmer performance at high line over the MP4056
N MP4078	85	305	Ext FET	Flyback/Buck-Boost/ Buck	SOIC-8	Primary-side control and PFC controller for constant voltage power
HR1001A	85	305	Ext FET	LLC Resonant	SOIC-16	Resonant half-bridge, variable frequency, high-power application, auto-restart at over-current for street lighting applications
HR1001B	85	305	Ext FET	LLC Resonant	SOIC-16	Resonant half-bridge, variable frequency, high-power application, two-level OCP
HR1001C	85	305	Ext FET	LLC Resonant	SOIC-16	Enhanced LLC controller with adaptive dead-time control, OCP, auto-restart, latch, enhanced surge
HR1001L	85	305	Ext FET	LLC Resonant	SOIC-16	Enhanced LLC controller with adaptive dead-time control, OCP, latch-off
MP44010	85	305	Ext FET	PFC Boost/Buck-Boost	SOIC-8, DIP-8	Offline PFC, boundary conduction, ultra-low start-up current (15 μ A)
MP44011	85	305	Ext FET	PFC Boost/Buck-Boost	SOIC-8	Offline PFC, boundary conduction, harmonic injection function (reduced capacitor value and inductor size compared to the MP44010)
MP44014	85	305	Ext FET	PFC Boost/Buck-Boost	SOIC-8	Offline PFC, boundary conduction
MP44014A	85	305	Ext FET	PFC Boost/Buck-Boost	SOIC-8	Boundary-mode PFC controller with adjusted open-loop protection
N MP44018A	85	305	Ext FET	PFC Boost/Buck-Boost	SOIC-8	CrM/DCM multi-mode boost PFC controller with enhanced light-load efficiency

Regulators

Part Number	V_{in} (Min) (V)	V_{in} (Max) (V)	Power (W)	Topology	Package	Notes
MP4032-1	85	132	7	Flyback	SOIC8-7A	Integrated 500V FET, TRIAC dimming, deep dimming, primary-side control, active PFC
MP4034	85	305	7	Flyback	SOIC-8, MSOP-10, SOIC-14	Integrated 700V FET, primary-side control, no dimming or PFC

AC/DC NON-ISOLATED | LED LIGHTING

Controllers

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

Regulators

Part Number	V _{IN} (Min) (V)	V _{IN} (Max) (V)	Power (W)	Configuration	Package	Notes
MP4050A	85	265	8	Buck	SOIC-8, SOT23-5	Integrated 500V FET, offline driver, enhanced thermals, no PFC or dimming
MP4068	85	305 (Recommend Low-Line Only)	10	Buck/Buck-Boost	SOIC8-7A, SOIC-8EP	Integrated 500V FET, PFC driver with TRIAC dimming
MP4088	85 (Recommend High-Line Only)	305	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	Hysteresis 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	Hysteresis 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	Hysteresis 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
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	QFN-6 (3x3), TSOT23-5	Hysteresis control, analog and PWM dimming
MP24895A	6	36	Low-Side Buck	-	-	-	MSOP-8EP	The MP24895 in an MSOP-8EP package, analog and PWM 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
MP4688	4.5	80	Buck	1	95	2MHz	SOIC-8, SOIC-8E	Hysteresis control, PWM dimming
N MP4689A	4.5	100	Buck	1	95	1MHz	SOIC-8EP	Hysteresis current-mode control, dedicated PWM dimming control input
MP2410	4.2	24	Buck	2	97	1MHz	TSOT23-6, TSOT23-8	Synchronous buck, analog dimming only
MP2410A	4.2	24	Buck	2	97	1MHz	TSOT23-6, TSOT23-8	Synchronous buck, analog and PWM dimming
MP2489	6	60	Low-Side Buck	1	95	600kHz	QFN-6 (3x3), TSOT23-5, SOIC-8E	Hysteresis control

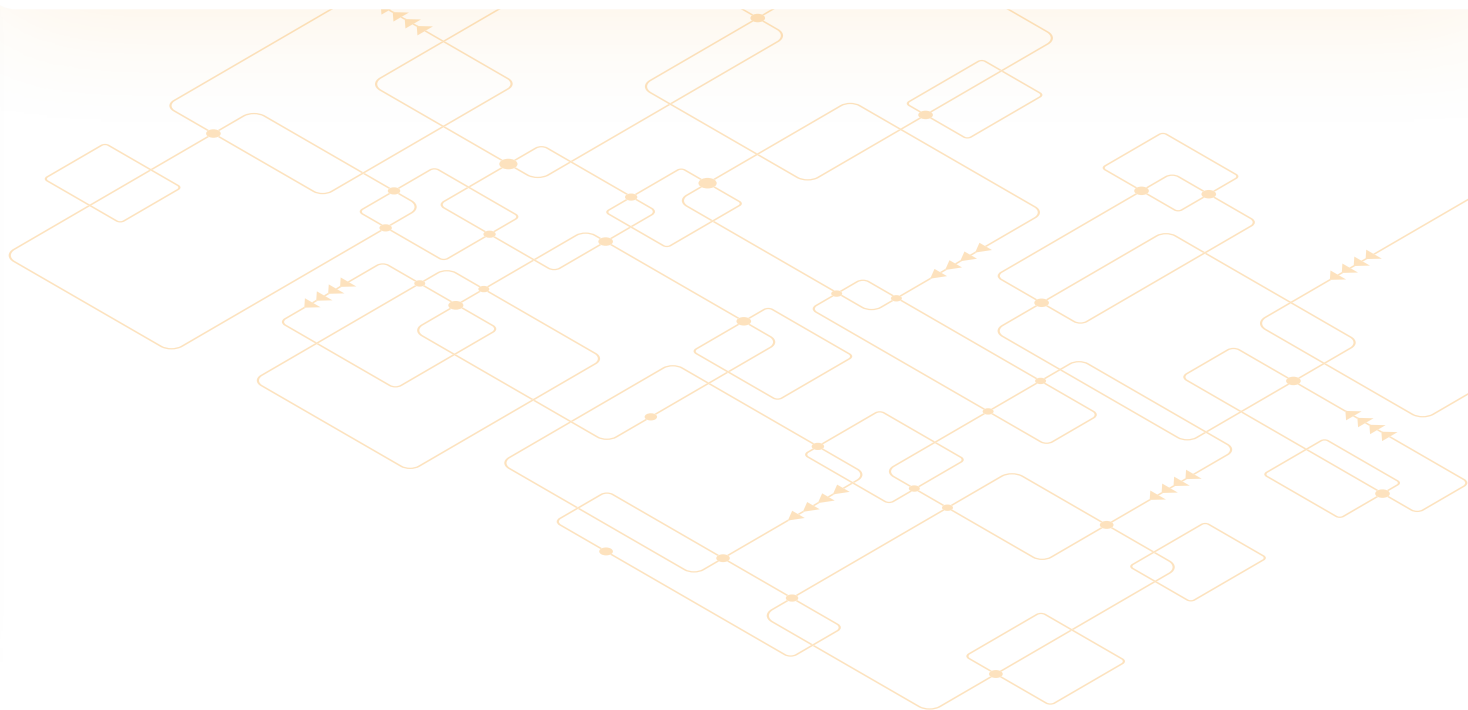
Controllers

Part Number	V_{IN} (Min) (V)	V_{IN} (Max) (V)	Power (W)	Configuration	Max Efficiency (%)	Package	Notes
MP24894	6	60	Ext FET	Low-Side Buck	95	TSOT-6	Buck controller, hysteresis control

PROTECTION | LED LIGHTING

Regulators

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



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
MP2610	5	24	26	2	4.2/8.4	-	1100	Standalone	-	Li-Ion, Li-Polymer	QFN-16 (4x4)	NTC battery temp monitor
MP2611	3.95	6	7.5	2	4.2	-	1500	Standalone	-	Li-Ion, Li-Polymer	QFN-14 (3x4)	Dual-input, NTC battery temp monitor
MP2615	3.95	18	23	2	4.1/8.4	-	600	Standalone	-	Li-Ion, Li-Polymer	QFN-16 (3x3)	NTC battery temp monitor
MP2615A	3.95	18	23	2	4.2/8.7	-	600	Standalone	-	Li-Ion, Li-Polymer	QFN-16 (3x3)	NTC battery temp monitor
MP2615B	3.95	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	2.1	4.1 to 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
MP26101	5	24	26	2	4.1/8.2	-	1100	Standalone	-	Li-Ion, Li-Polymer	QFN-16 (4x4)	NTC battery temp monitor
MP2623	3.5	24	26	2	3.6/7.2	-	1100	Standalone	-	LiFePO4	QFN-16 (4x4)	NTC battery temp monitor
MP2626	4.2	6.5	20	2	4.2/4.35	1	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
MP2635A	4.2	6.5	20	2	4.2/3.6	1.5	1200/600	Standalone	-	Li-Ion, Li-Polymer, LiFePO4	QFN-24 (4x4)	Power-path management, NTC batt. temp monitor, adj. boost V_{OUT}
MP2633A	4.2	6.5	20	1.5	4.2/3.6	1	1200/600	Standalone	-	Li-Ion, Li-Polymer, LiFePO4	QFN-24 (4x4)	Power-path management, NTC batt. temp monitor, adj. boost V_{OUT}
MP2690	3.6	5.8	14	2.5	4.2/4.35/4.45	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
MP2635B	4.2	6.5	20	2	4.2/4.35	1.5	1200/600	Standalone	-	Li-Ion, Li-Polymer	QFN-24 (4x4)	Power-path management, NTC batt. temp monitor, adj. boost V_{OUT}
MP2637	4.5	6	20	2.5	4.2/4.35	2.4	600	Standalone	-	Li-Ion, Li-Polymer	QFN-24 (4x4)	Power-path management, NTC batt. temp monitor, adj. boost V_{OUT}
MP2637A	4.5	6	20	2.5	4.055/4.2	2.4	620	Standalone	-	Li-Ion, Li-Polymer	QFN-24 (4x4)	Power-path management, NTC batt temp monitor, adj. boost V_{OUT}
MP2632B	3.6	5.8	20	3	4.2/4.35/4.45	3	600	Standalone	-	Li-Ion, Li-Polymer	QFN-26 (4x4)	Power-path management, BC1.2 detection, LED fuel gauge, NTC batt. temp monitor, all-in-one autonomous mode
MP2636	4.5	6.5	16	3	4.2/4.3/4.35	3	600	Standalone	-	Li-Ion, Li-Polymer	QFN-30 (4x4)	Power-path management, NTC battery temp monitor, adj. boost V_{OUT} , batt. current monitor

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
MP2696A	4	11	16	3.6	3.6 to 4.45	3.6	700/1200	I ² C	-	Li-Ion, Li-Polymer	QFN-21 (3x3)	JEITA batt. NTC monitor, power-path management, OTP prog. charging parameters, batt. current monitor, prog. boost V_{OUT}
N MP2696B	4	11	16	3.6	3.6 to 4.45	3.6	700/1200	I ² C	-	Li-Ion, Li-Polymer	QFN-21 (3x3)	3.5A max input current, JEITA batt. NTC monitor, power-path management, OTP prog. charging parameters, batt. current monitor, prog. boost V_{OUT}
MP2695	4	11	16	3.6	3.6 to 4.45	-	600	I ² C	-	Li-Ion, Li-Polymer	QFN-21 (3x3)	JEITA batt. NTC monitor, OTP prog. charging parameters, batt. 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 batt. 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 batt. NTC monitor, BC1.2 detection, shipping mode, OTG OCP latch-off function
N MP2629	3.7	6.3	22	4.5	3.4 to 4.67	3	750/1500	I ² C/ Standalone	✓	Li-Ion, Li-Polymer	QFN-20 (3.5x3.5)	Batt. OCP/UVP, input current reg., V_{IN} reg., integrated ADC, JEITA batt. NTC monitor, NVDC power path, OTP memory, shipping mode, thermal reg., USB BC1.2 input det., USB OTG
MP2639B	3.6	16	20	5	4.35	3	1300	Standalone	-	Li-Ion, Li-Polymer	QFN-26 (4x4)	JEITA batt. NTC monitor, LED fuel gauge, batt. current monitor
N MP2731	3.7	16	22	4.5	3.4 to 4.67	3	1000/1350	I ² C/ Standalone	✓	Li-ion, Li-Polymer, LiFePO ₄	QFN-26 (3.5x3.5)	Input current reg., V_{IN} reg., integrated ADC, JEITA batt. NTC monitor, NVDC power path, OTP memory, shipping mode, thermal reg., USB BC1.2 input det., USB OTG
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, LiFePO ₄	QFN-26 (3.5x3.5)	Input current reg., V_{IN} reg., integrated ADC, JEITA batt. NTC monitor, NVDC power path, OTP memory, shipping mode, thermal reg., USB BC1.2 input det., USB OTG
N MP2733	3.7	16	22	4.5	3.4 to 4.67	3	1000/1350	I ² C/ Standalone	✓	Li-ion, Li-Polymer, LiFePO ₄	QFN-26 (3.5x3.5)	Input current reg., V_{IN} reg., integrated ADC (always available), JEITA batt. NTC monitor, NVDC power path, OTP memory, shipping mode, thermal reg., USB BC1.2 input det., USB OTG
N MP2723A	3.7	5.5	22	3	3.4 to 4.67	1.5	1000/1350	I ² C/ Standalone	✓	Li-ion, Li-Polymer, LiFePO ₄	QFN-26 (3.5x3.5)	Input current reg., V_{IN} reg., integrated ADC (always available), JEITA batt. NTC monitor, NVDC power path, OTP memory, shipping mode, thermal reg., USB BC1.2 input det., USB OTG
N MP2759	3.9	36	45	3	3.6 to 26.4	-	450/700	Standalone	-	Li-ion, Li-Polymer, LiFePO ₄	QFN-19 (3x3)	JEITA batt. NTC monitor, input bypass power path, V_{IN} reg., input current reg., OTP memory, input status/charging indication
N MP2759A	3.9	36	45	3	3.6 to 26.4	-	450/700	Standalone	-	Li-ion, Li-Polymer, LiFePO ₄	QFN-19 (3x3)	Batt. NTC monitor, input bypass power path, V_{IN} reg., input current regulation, OTP memory, input status/charging indication

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 buck regulator and load switch, USB compatible
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, LiFePO ₄	WCSP-9 (1.55x1.55)	Batt. OCP/UVLP, batt. NTC monitor, V_{IN} reg., NVDC power path, OTP memory, shipping mode, thermal reg., USB compatible
MP2661	4	5.85	13	8 to 500	3.6 to 4.565	✓	I ² C		Li-Ion, Li-Polymer, LiFePO ₄	WCSP-9 (1.55x1.55)	Batt. OCP/UVLP, batt. NTC monitor, V_{IN} reg., NVDC power path, OTP memory, shipping mode, thermal reg., USB compatible
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)	Batt. OCP/UVLP, batt. NTC monitor, V_{IN} reg., NVDC power path, OTP memory, shipping mode, thermal reg., USB compatible
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)	Batt. OCP/UVLP, batt. NTC monitor, V_{IN} reg., NVDC power path, OTP memory, shipping mode, thermal reg., USB compatible
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)	Batt. OCP/UVLP, batt. NTC monitor, V_{IN} reg., NVDC power path, OTP memory, shipping mode, thermal reg., USB compatible
MP2602	3.2	5.8	28	85 to 1000	4.20	-	Standalone		Li-Ion, Li-Polymer	QFN-10 (3x3)	NTC batt. temp monitor, adapter present, charging indication, prog. termination current
MP26028	3.2	6.8	20	85 to 1000	4.20	-	Standalone		Li-Ion, Li-Polymer	QFN-10 (3x3)	Adapter present, charging indication, prog. 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)	Batt. NTC monitor, OTP memory, thermal reg., USB compatible
MP2604	3.2	6.7	28	85 to 1000	4.2	-	Standalone		Li-Ion, Li-Polymer	QFN-10 (3x3)	Adapter present, charging indication, prog. termination current, NTC batt. temp monitor
MP2605	2.5	6.7	28	200 to 1000	4.20	-	Standalone		Li-Ion, Li-Polymer	QFN-10 (3x3)	Adapter present, charging indication, NTC batt. temp monitor
MP26053	2.5	6.7	28	200 to 1000	4.20	-	Standalone		Li-Ion, Li-Polymer	QFN-10 (3x3)	Adapter present, charging indication, NTC batt. temp monitor
MP26056	2.5	6.8	28	200 to 1000	4.20	-	Standalone		Li-Ion, Li-Polymer	QFN-10 (3x3)	Dual-mode USB/AC adapter current limits, adapter present, charging indication, prog. termination current
MP26057	3.5	6.8	28	200 to 1000	4.20	-	Standalone		Li-Ion, Li-Polymer	QFN-10 (3x3)	Adapter present, charging indication, prog. termination current, NTC batt. temp monitor

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
MP26058	2.8	6.7	28	200 to 1000	4.20	-	Standalone	Li-Ion, Li-Polymer	QFN-10 (3x3)	Adapter present, charging indication, prog. termination current, NTC batt. temp monitor
MP2606	3.2	6.8	28	85 to 1000	4.20	-	Standalone	Li-Ion, Li-Polymer	QFN-10 (3x3)	Adapter present, charging indication, prog. termination current
MP26060	3.2	6.8	24	85 to 1000	4.15	-	Standalone	Li-Ion, Li-Polymer	QFN-10 (3x3)	Adapter present, charging indication, prog. 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/AC adapter current limits, low $R_{DS(ON)}$, adapter present, charging indication, NTC batt. temp monitor
MP2608	4.25	5.8	28	100 to 1000	4.20	-	Standalone	Li-Ion, Li-Polymer	QFN-10 (3x3)	Dual-input, fault and charging indication, prog. termination current
MP26121	2.5	6.7	28	200 to 1000	4.20	-	Standalone	Li-Ion, Li-Polymer	QFN-10 (3x3)	Adapter present, charging indication, NTC batt. 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, charging indication
MP2667	4	5.85	13	16 to 1000	3.6 to 4.5	✓	I ² C	Li-Ion, Li-Polymer, LiFePO ₄	QFN-10 (2x2)	Batt. OCP/UVP, batt. NTC monitor, V_{IN} reg., NVDC power path, OTP memory, shipping mode, thermal reg., USB compatible
S MP2665	3.7	6	21	50 to 1000	3.6 to 4.5	✓	I ² C	Li-Ion, Li-Polymer, LiFePO ₄	QFN-12 (2.5x3.0)	Batt. OCP/UVP, batt. NTC monitor, V_{IN} reg., NVDC power path, OTP memory, shipping mode, thermal reg., USB compatible

CC & CV CONTROLLERS | 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	-	-	CV/CC Controller	Prog	SOT23-8	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

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)	Batt. NTC monitor			
MP26101	5	24	26	2	4.1/8.2		1100		Non-Sync Buck	1, 2	Standalone	Li-Ion, Li-Polymer	QFN-16 (4x4)	Batt. NTC monitor			
MP26123	9	24	26	2	8.4/12.6		600		Non-Sync Buck	2, 3	Standalone	Li-Ion, Li-Polymer	QFN-16 (4x4)	Batt. NTC monitor			
MP26124	18	24	28	2	16.8		600		Non-Sync Buck	4	Standalone	Li-Ion, Li-Polymer	QFN-16 (4x4)	Batt. NTC monitor			
MP2615	3.95	18	23	2	4.1/8.4		600		Sync Buck	1, 2	Standalone	Li-Ion, Li-Polymer	QFN-16 (3x3)	Batt. NTC monitor, input status/charging indication			
MP2615A	3.95	18	23	2	4.2/8.7		600		Sync Buck	1, 2	Standalone	Li-Ion, Li-Polymer	QFN-16 (3x3)	Batt. NTC monitor, input status/charging indication			
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, batt. NTC monitor			
MP2623	3.5	24	26	2	3.6/7.2		1100		Non-Sync Buck	1, 2	Standalone	LiFePO4	QFN-16 (4x4)	Batt. NTC monitor			
MP2672	3.75	5.75	14	2	8.3 to 9		600/1200		Sync Boost	2	I ² C/ Standalone	Li-Ion, Li-Polymer	QFN-18 (2x3)	NVDC power-path management, JEITA batt. NTC monitor, OTP prog. charging parameters, integrated cell balancing			
MP2639A	4.05	5.75	20	2.5	8.4		1300		Sync Boost	2	Standalone	Li-Ion, Li-Polymer	QFN-26 (4x4)	JEITA batt. NTC monitor, LED fuel gauge, batt. current monitor, integrated cell balancing, USB OTG			
MP2639C	4.05	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 batt. NTC monitor, thermal reg., V_{IN} reg., LED fuel gauge			
MP2659	4.2	36	45	3	10.8 to 26.4		700/350		Sync Buck	3, 4, 5, 6	Standalone	Li-Ion, Li-Polymer	QFN-19 (3x3)	Batt. NTC monitor, V_{IN} reg., input current reg. OTP prog. charging parameters, integrated power FETs, input status/charging indication			
N MP2615C	3.95	18	23	2.1	4.1 to 8.4		760		Buck	1,2	Standalone	Li-Ion, Li-Polymer	QFN-16 (3x3)	Batt. NTC monitor, 25m Ω R_{SNS}			
N MP2672A	3.65	5.75	14	2	8.2 to 8.9		600/1200		Boost	2	I ² C/ Standalone	Li-Ion, Li-Polymer	QFN-18 (2x3)	JEITA batt. NTC monitor, NVDC power path, thermal reg., V_{IN} reg., integrated cell balancing, OTP memory			
N MP2762A	4	21	28	6	7.425 to 9		600/800/1000		Buck or Boost	2	I ² C/ Standalone	Li-Ion, Li-Polymer	QFN-30 (4x5)	JEITA batt. NTC monitor, NVDC power path, V_{IN} reg., input current reg., OTP memory, dual-phase operation, batt. current monitor, integrated ADC			

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
N	MP2759	3.9	36	45	3	3.6 to 26.4	450/700	Buck	1, 2, 3, 4, 5, 6	Standalone	Li-ion, Li-Polymer, LiFePO4	QFN-19 (3x3)	JEITA batt. NTC monitor, input bypass power path, V_{IN} reg., input current reg., OTP memory, input status/charging indication		
N	MP2759A	3.9	36	45	3	3.6 to 26.4	450/700	Buck	1, 2, 3, 4, 5, 6	Standalone	Li-ion, Li-Polymer, LiFePO4	QFN-19 (3x3)	Batt. NTC monitor, input bypass power path, V_{IN} reg., input current reg., OTP memory, input status/charging indication		
S	MP2650	4	21	28	5	7.425 to 18	600/800/1000	Buck or Boost	2, 3, 4	I ² C/ Standalone	Li-Ion, Li-Polymer	QFN-30 (4x5)	JEITA batt. NTC monitor, NVDC power path, V_{IN} reg., input current reg., OTP memory, batt. current monitor, integrated ADC		

INPUT PROTECTION | BATTERY MANAGEMENT

	Part Number	Operating V_{IN} (Min) (V)		Operating V_{IN} (Max) (V)		Absolute V_{IN} (Max) (V)	Current (Max) (A)	Charge Type	Package	Notes
	MP2670	3	5.55	30	1.5	Battery Protection	QFN-10 (3x3)	Input OVP/OCp, batt. OVP, OTP, fault indication		
	MP2671	2.7	5.65	30	1.5	Battery Protection	QFN-12 (3x4)	Input OVP/OCp, batt. OVP, OTP, prog. current limit		
	MP2676	2.8	5.8	30	1.6	Battery Protection	QFN-8 (2x2)	Input OVP/OCp, batt. OVP, OTP, integrated charging FET		
	MP2678	2.8	9.9	30	1.7	Battery Protection	QFN-8 (2x2)	Input OVP/OCp, batt. OVP, OTP, 5V LDO mode		

FUEL GAUGES | BATTERY MANAGEMENT

	Part Number	Nominal Battery Pack Voltage Range (V)	Implementation	Control Interface	Average Discharge Rate	External Capacity Indication	Cell Chemistry	Package	# of Series Cells	Notes
N	MPF42790	7.4 to 60	Pack-Side	I ² C + CRC	<2C	5-Level LED	Li-Ion, Li-Polymer	TQFN-32 (4x4)	2 to 16	Lifetime logging function, fuel gauge algorithm, prog. batt. pack topology, prog. pack empty level, prog. full level, state-of-charge level, state-of-health, available power
N	MPF42792	7.4 to 60	Pack-Side	I ² C + CRC	<2C	-	Li-Ion, Li-Polymer	TQFN-32 (4x4)	2 to 16	Lifetime logging function, fuel gauge algorithm, prog. batt. pack topology, prog. pack empty level, prog. full level, state-of-charge level, state-of-health, available power
N	MPF42795	7.4 to 37	Pack-Side	I ² C + CRC	<2C	5-Level LED	Li-Ion, Li-Polymer	TQFN-32 (4x4)	2 to 10	Lifetime logging function, fuel gauge algorithm, prog. batt. pack topology, prog. pack empty level, prog. full level, state-of-charge level, state-of-health, available power
N	MPF42797	7.4 to 37	Pack-Side	I ² C + CRC	<2C	-	Li-Ion, Li-Polymer	TQFN-32 (4x4)	2 to 10	Lifetime logging function, fuel gauge algorithm, prog. batt. pack topology, prog. pack empty level, prog. full level, state-of-charge level, state-of-health, available power

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 _{FSD} (V)	f _{SW} (kHz)	Open LED Protection	Type	Package	Notes
MP1488	2.5	6	25	1	0.8	0.104	1300	-	Boost	TSOT23-6	Fixed frequency
MP1517	2.6	25	25	1	4	0.7	1100	✓	Boost	QFN-16 (4x4)	UVLO, external compensation
MP1518	2.5	6	25	1	0.35	0.104	1300	-	Boost	QFN-8 (2x2), TSOT23-6	External current-sense resistor
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 nine series white LED drivers
MP23701	4.2	24	-	1	5	0.1	1500	✓	Buck	UTQFN-8 (1.5x2.5)	2A, synchronous LED driver
N MP2341	4.2	24	20	1	4	0.1	1000	✓	Buck	SOT583 (2x1.5)	High efficiency, forced PWM mode, 50:1 dimming ratio via analog dimming, 1000:1 dimming ratio via PWM dimming
MP24830 -C470	4.5	90	Ext FET	1	Ext FET	0.201	50 to 365	✓	Buck-Boost	SOIC-14, QFN-14 (3x4)	Power leverage in 2.5 power stages, low BOM cost, high efficiency
MP3202	2.5	6	25	1	1.33	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 0V pin
MP3301	2.5	6	36	1	1	0.2	1300	✓	Boost	TSOT23-5	Up to 10 series LED
MP3302	2.5	6	36	1	1.33	0.2	1300	✓	Boost	QFN-8 (2x3), TSOT23-5	UVLO, low EMI, thermal shutdown
MP3304B	3	6	24	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, adj. OVP threshold
MP3306	3	12	30	1	1.8	0.2	700	✓	Boost	QFN-12 (2x2)	Sync boost, integrated disconnect FET
MP3307	2.7	5.5	35	1	1.6 (Min)	0.2	300 to 2200, Prog	✓	Boost	TSOT23-8	For automotive infotainment LCDs
MP3308	3	6	36	1	1.33	0.2	2200	✓	Boost	QFN-14 (3x4)	Supports CABC dimming
MP3309	2.7	5.5	35	1	1.5	0.2	300 to 2200, Prog	✓	Boost	QFN-10 (1.4x1.8)	Sync boost
MP3309A	2.7	5.5	35	1	1.5	0.2	300 to 2200, Prog	✓	Boost	QFN-10 (3x3)	Sync boost
MP3309C	2.7	5.5	35	1	1.5	0.2	300 to 2200, Prog	✓	Boost	QFN-10 (1.4x1.8)	Sync 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)	Sync boost
MP3310	4.5	25	50	1	1.3	0.5	1200, Prog	✓	Boost	QFN-10 (3x3)	Wide input range, true PWM dimming
MP3312	2.7	5.5	36	2	1.8	0.24	1200	✓	Boost	WLCSPP-9 (1.3x1.3)	30mA/string, balanced LED current

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
MP3313	2.7	5.5	38	3	1.5	-	250/500/1000	✓	Boost	WLCSP-12	Linear/exponential analog dimming, 100mA LED current in flash mode, I ² C
S MP3314	2.7	30	43	6	0.9 to 2.4	-	312/625/1250	✓	Boost	CSP-20	50mA, 50V absolute max rating, I ² C interface
MP3318	2.7	5.5	38	3	1.5	-	250/500/1000	✓	Boost	WLCSP-12	Linear/exponential analog dimming, 100mA LED current in flash mode, I ² C
N MP3326	4	16	16	16	-	-	-	✓	Current Source	QFN4-24 (4x4)	10 prog. IC addresses, LED current slew rate, phase shift
N MP3362	3	36	36	1	4	0.2	200 to 2200, Prog	✓	Boost	TSOT23-8	Low R _{DS(ON)} , soft start
N MP3363	1.8	36	36	1	1	0.2	200 to 2200, Prog	✓	Boost	TSOT23-8	Low R _{DS(ON)} , soft start
N MP3364	3.5	36	45	4	3	-	200 to 2200	✓	Boost/SEPIC	QFN4-24 (4x4)	150mA/ch, I ² C, high dimming ratio, prog. LED short threshold, OVP threshold, and IC address
MP3366	3	25	50	6	2.5	0.5	600	✓	Boost	WLCSP-18 (1.3x2.5)	Smart dimming
MP3367	3.5	36	45	6	3	0.4	200 to 2200	✓	Boost/SEPIC	QFN4-24 (4x4), TSSOP-28EP	I ² C, 15000:1 dimming ratio, prog. LED short threshold and OVP threshold
MP3370	3.5	36	38	1	3	-	400	✓	Boost	SOIC-8E	Current source
N MP3371	2.7	30	45	8	1.8 to 2.5	-	350/500/650 /800/950/1200	✓	Boost	QFN4-24 (4x4)	Sync boost, I ² C, linear smooth dimming, multi-dimming mode
MP3372	2.7	30	45	8	1.8 to 2.5	-	350/500/650 /800/950/1200	✓	Boost	QFN4-24 (4x4)	Sync boost, I ² C, linear smooth dimming, multi-dimming mode, phase shift during PWM dimming
MP3373	9	40	Ext FET	8	Ext FET	0.2	100 to 1000	✓	Boost	SOIC-28, TSSOP-28	Phases 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)	Sync boost, max 50mA/string, I ² C interface
MP3376A	3	30	37.5	8	2.5	-	350 to 2400	✓	Boost	QFN-24 (4x4)	Sync boost, max 50mA/string, I ² C interface
S MP3377	3	30	36	8	1.8 to 2.5	-	350/500/650 /800/950/1200 /1800/2400	✓	Boost	CSP-25 (2.6x2.6)	Sync boost, four I ² C addresses, linear smooth dimming, multi-dimming mode
MP3378	5	24	55	4	-	-	Prog	✓	Boost + Buck	SOIC-28, TSSOP-28EP	Integrated boost controller and DC/DC buck converter, AAM power-save mode
MP3378E	5	24	55	4	-	-	Prog	✓	Boost + Buck	TSSOP-28EP	Integrated boost controller and DC/DC buck converter, separate EN pin

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
MP3384L	3	25	50	4	1.3	0.6	1250 or 625	✓	Boost	QFN-16 (3x3)	-
S MP3383	4.5	33	80	4	Ext FET	-	100 to 900	✓	Boost	SOIC-16, TSSOP-16EP, PDIP-16	Max 350mA/string, analog and PWM dimming
MP3385A	4.5	33	80	4	Ext FET	-	100 to 900	✓	Boost	QFN-20	I^2C , abs. 80V LED V_{FB} rating, max 300mA/channel, replaces the MP3385
MP3387A	3	26	50	6	2.5	-	500 to 1250	✓	Boost	TQFN-24 (4x4)	Max 80mA/string, combined analog and PWM dimming
MP3387L	3	26	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 PWM dimming
MP3389	5	28	Ext FET	12	Ext FET	0.6	100 to 500	✓	Boost	TSSOP-28EP, SOIC-28	External MOSFET, PWM or DC input burst, PWM dimming
MP3391	9	35	Ext FET	8	Ext FET	0.45	150 to 500	✓	Boost	SOIC-28, TSSOP-28EP	80mA/channel, ideal for 18" to 24" LCD panels/TVs
MP3394S	5	28	55	4	Ext FET	0.3	150 to 500	✓	Boost	TSSOP-16EP, SOIC-16	Replaces the MP3394
MP3398A	5	28	Ext FET	4	Ext FET	0.6	100 to 500	✓	Boost	TSSOP-16EP, SOIC-16, SOIC-20	Inductor short protection, separate ADIM pin
MP3398D	5	28	55	4	Ext FET	-	100 to 500	✓	Boost	SOIC-16, SOIC-20	Max 350mA/string, analog and PWM dimming
MP3398L	4.5	28	Ext FET	4	Ext FET	0.6	100 to 500	✓	Boost	SOIC-16	Lower V_{IN} (min) than the MP3398A
N MP3398E	4.5	33	80	4	Ext FET	-	100 to 500	✓	Boost	SOIC-16, TSSOP-16EP, PDIP-16	Max 400mA/string, analog and PWM dimming
MP3412	0.8	4.4	5	1	1.1	0.2	1000	✓	Boost	TSOT23-6	High efficiency
MP4013B	8	26	Ext FET	1	Ext FET	0.6	100 to 600	✓	Boost	SOIC-16	More features and better protection, replaces the MP4012 and MP4013 in new designs
MP4653	Offline	Offline	Ext FET	1	Ext FET	0.2	20 to 250	✓	LLC	SOIC-20	LIPS CC/CV mode, low BOM cost, high efficiency
MP4655	Offline	Offline	Ext FET	1	Ext FET	0.2	40 to 130	✓	LLC	SOIC-28	Single-stage LED driver and system voltage regulator
N MP4657A	4	16	80	4	-	1.2	20 to 350	✓	Pre-Flyback	SOIC-16	Pure single-stage, flyback LED driver and system voltage controller
S MP4657B	4	16	80	4	-	1.2	20 to 350	✓	Pre-Flyback	SOIC-16	Improves audible noise reduction performance
S MP4658	6	36	80	4	-	1.2	20 to 350	✓	Pre-Flyback	SOIC-16	AC/DC feedback
MP4700	Offline	Offline	Ext FET	1	Ext FET	0.3	Up to 160	✓	Buck	SOIC-8E	BCM zero-current and valley voltage switching >97% efficiency, low BOM cost, low-power stress

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
MP9361	2.8	5	5	1	-	-	1350	✓	Reg Charge Pump	TSOT23-6	Internal soft start
MP5610	2.7	5.5	5.8	2	0.3	0.6	1200	-	Boost	QFN-10 (1.4x1.8)	LCD bias power supply
S MP5611	2.9	5.5	-	3	1.5/3 /0.5	-	1500/1700 /1500	-	Boost, Buck-Boost	TQFN-16 (3x3)	Triple-output AMOLED display power supply
N MPQ3324-AEC1	4	16	-	8	-	-	-	✓	LED Driver with Current Source	QFN4-24 (4x4)	Max 100mA/ch, I ² C interface, phase shift, AEC-Q100
N MPQ3326-AEC1	4	16	-	16	-	-	-	✓	LED Driver with Current Source	QFN4-24 (4x4)	50mA/ch, 10 prog. addresses, prog. LED current slew rate, phase shift, AEC-Q100
S MPQ3326A-AEC1	4	16	-	16	-	-	-	✓	LED Driver with Current Source	QFN4-24 (4x4)	80mA/ch, 10 prog. addresses, prog. LED current slew rate, phase shift, AEC-Q100
N MPQ3362-AEC1	3	36	36	1	4	0.2	200 to 2200, Prog	✓	Boost	FCTSOT23-8	Low R _{DS(on)} , soft start, AEC-Q100 qualified
N MPQ3364-AEC1	3.5	36	45	4	3	-	200 to 2200	✓	Boost/SEPIC	QFN4-24 (4x4)	150mA/ch, I ² C, high dimming ratio, prog. LED short threshold, OVP threshold, and IC address
MPQ3367-AEC1	3.5	36	45	6	3	-	200 to 2200	✓	Boost/SEPIC	QFN4-24 (4x4), TSSOP-28EP	150mA/ch, I ² C, high dimming ratio, prog. LED short threshold and OVP threshold
N MPQ3367A-AEC1	3.5	36	45	6	3	-	200 to 2200	✓	Boost/SEPIC	QFN4-24 (4x4)	150mA/ch, I ² C, high dimming ratio, prog. LED short threshold, OVP threshold, and IC address
MPQ3369-AEC1	3.5	36	45	6	3	-	200 to 2200	✓	Boost/SEPIC	QFN4-24 (4x4), TSSOP-28EP	100mA/ch, I ² C, high dimming ratio, prog. LED short threshold and OVP threshold
MPQ3386-AEC1	4.5	25	50	6	2.5	0.6	1250	✓	Boost	QFN-24 (4x4)	Industrial grade, 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
MP3336	2.7	5.5	6.0	2	4	1/2/3/4	Boost	WLCSP-20 (1.6x2.0)	2A/channel, I ² C interface
N MP3336A	2.7	5.5	5.2	2	4	1/2/3/4	Boost	WLCSP-20 (1.6x2.0)	2A/channel, I ² C interface, NFC applications

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 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 amplifier

Stereo

MP7720	9.5	24	20	93	0.04 @ 1W	60	SOIC-8, PDIP-8	20W amplifier
MP7722	9.5	24	20 (2x)	93	0.06 @ 1W	60	TSSOP-20F	Single-ended amplifier, exposed pad
MP7748S	9.5	36	30 (2x)	94	0.02 @ 1W	59	TSSOP-28EP	2x 30W single-ended or 1x 60W BTL amplifier
MP7751	5	26	20 (2x)	92	0.06 @ 1W	60	TSSOP-28EP	BTL amplifier
MP7752	5	18	15 (2x)	90	0.06 @ 1W	60	TSSOP-28EP	Filterless BTL amplifier
N MP7758	5	18	15 (2x)	90	0.06 @ 1W	60	TSSOP-28EP	Idle channel I _q <10mA analog input options
MP7770	9.5	36	45 (2x)	95	0.03 @ 1W	60	TSSOP-28F	2x 45W single-ended or 1x 90W BTL amplifier, 8.5A peak, exposed pad

PWM INPUT | CLASS-D AUDIO

Part Number	V _{in} (Min) (V)	V _{in} (Max) (V)	# of Half-Bridges	I _{out} (Max) (A)	Control Interface	Package	Notes
MP8040	7.5	24	1	9	PWM	SOIC-8EP	Half-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
MPQ8039-AEC1	7.5	24	1	9	PWM	SOIC-8EP	Half-bridge driver, AEC-Q100 qualified

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)	Dual H-bridges
MP6508	2.7	18	4	1.2	PWM	TSSOP-16EP, QFN-16 (4x4)	Dual H-bridges
MP6513	2.5	21	2	0.8	PWM	TSOT23-6	Simple H-bridge
MP6513L	2.5	5.5	2	0.6	PWM	TSOT23-6	Low-power H-bridge
MP6515	5.4	35	2	2.8	Phase/Enable	QFN-20 (3x4), TSSOP-16EP	H-bridge motor driver
MP6516	5.4	35	2	2.8	PWM	TSSOP-16EP	H-bridge
MP6519	2.5	28	2	5	PWM	QFN-19 (3x3)	H-bridge current regulator
MP6522	5.4	35	2	3.2	PWM	QFN-24 (5x5)	Simple H-bridge motor driver
MP6523	7	28	3	0.9	SPI	QFN-24 (4x4)	Motor driver with serial input control
MP6526	7	28	6	0.9	SPI	SOIC-28, QFN-24(4x4), QFN-24 (5x5)	Serial input control
S MP6527	5.5	40	10	0.8	SPI	TSSOP-28EP	Serial input control
MP6550	1.8	22	2	2	PWM	QFN-12 (2x2)	H-bridge
N MP6551	2.5	14	2	5	PWM	QFN-14 (2.5x3)	Low-voltage H-bridge
N MP6610	4	55	1	3	PWM	TSOT23-8, SOIC-8	Half-bridge, IN/EN control inputs
S MP6612	4	45	2	5	PWM	TSSOP-20EP	H-bridge with current sense, IN1 and IN2 inputs
S MP6612D	4	45	2	5	DIR/ENBL	TSSOP-20EP	H-bridge with current sense, ENBL and DIR inputs
S MP6615	4.75	45	2	12	PWM	QFN-26 (6x6)	H-bridge
N MP6619	5.4	28	2	5	PWM	QFN-19 (3x3)	H-bridge
MP8040	7.5	24	1	9	PWM	SOIC-8EP	H-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-AEC1	2.5	28	2	5	PWM	QFN-19 (3x3)	H-bridge current regulator, AEC-Q100 qualified
MPQ6523-AEC1	7	28	3	0.9	SPI	QFN-24 (4x4)	Serial input control, AEC-Q100 qualified
MPQ6524-AEC1	7	28	4	0.9	PWM	QFN-24 (4x4)	Serial input control, AEC-Q100 qualified
MPQ6526-AEC1	7	28	6	0.9	SPI	QFN-24 (4x4), QFN-24 (5x5)	Serial input control, AEC-Q100 qualified
S MPQ6527-AEC1	5.5	40	10	0.8	SPI	TSSOP-28EP	Serial input control, AEC-Q100 qualified
N MPQ6610-AEC1	4	55	1	3	PWM	TSOT23-8, SOIC-8	Half-bridge, AEC-Q100 qualified
S MPQ6612A-AEC1	4	45	2	5	PWM	QFN-18 (3x4)	H-bridge with current sense, IN1 and IN2 inputs, AEC-Q100 qualified
S MPQ6615-AEC1	4.75	45	2	12	PWM	QFN-26 (6x6)	H-bridge, AEC-Q100 qualified
S MPQ6626-AEC1	5.5	40	6	0.8	SPI	TSSOP-28EP	Serial input control, AEC-Q100 qualified
S MPQ6628-AEC1	5.5	40	8	0.8	SPI	TSSOP-28EP	Serial input control, AEC-Q100 qualified

BRUSHLESS DC PRE-DRIVERS | MOTOR DRIVERS

	Part Number	Supply Voltage (Min) (V)		Supply Voltage (Max) (V)		# of Half-Bridges	I_{SHM} / I_{SOURCE} (A)	Hall Input	Package	Notes
		V_{IN}	V_{OUT}	V_{IN}	V_{OUT}					
	MP1921A	9	18	100	1	2.5/1.5	-	SOIC-8EP, QFN-8 (3x3), QFN-9 (3x3), QFN-10 (4x4)	Half-bridge gate driver	
	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, current-sense amplifier, slew rate control	
S	MP1923	5	17	100	1	8/7	-	QFN-8 (4x4)	High-frequency half-bridge gate driver	
	MP1924A	8	15	100	1	4.5/3	-	QFN-10 (4x4), SOIC-8	Half-bridge gate driver	
	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)	H-bridge pre-driver	
	MP6530	5	60	60	3	1/0.8	-	QFN-28 (4x4), TSSOP-28EP	3-phase pre-driver with PWM/EN control	
	MP6531A	5	60	60	3	1/0.8	-	QFN-28 (4x4), TSSOP-28EP	3-phase pre-driver with HS/LS inputs	
	MP6532	5	60	60	3	1/0.8	✓	QFN-28 (4x4), TSSOP-28EP	3-phase pre-driver with commutation logic	
	MP6534	5	55	55	3	1/0.8	-	QFN-40 (5x5)	3-phase pre-driver with commutation logic and buck regulator	
	MP6535	5	55	55	3	1/0.8	✓	QFN-40 (5x5)	3-phase pre-driver with buck regulator	
	MP6537	8	100	-	3	1/0.8	-	QFN-28 (4x5)	3-phase pre-driver, PWM/EN inputs	
	MP6538	8	100	-	3	1/0.8	✓	QFN-28 (4x5)	3-phase pre-driver with Hall commutation logic	
	MP6539	8	100	-	3	1/0.8	-	QFN-28 (4x5), TSSOP-2EP	3-phase pre-driver with HS/LS inputs	
	MP6539B	8	100	-	3	1/0.8	-	QFN-28 (4x5), TSSOP-28EP	3-phase pre-driver	
S	MP6539C	8	100	-	3	1/0.8	-	QFN-28 (4x5)	3-phase pre-driver with HS/LS inputs	
S	MPQ1922-AEC1	4	15	100	1	4/3	-	QFN-22 (4x5)	Half-bridge pre-driver, current-sense amplifier, slew rate control	
S	MPQ1923-AEC1	5	17	100	1	8/7	-	QFN-8(4x4)	High-frequency half-bridge gate driver	
S	MPQ6528-AEC1	5	60	60	2	1/0.8	-	QFN-28 (4x5)	H-bridge pre-driver, AEC-Q100 qualified	
N	MPQ6531-AEC1	5	60	60	3	1/0.8	-	QFN-28 (4x5)	3-phase pre-driver, AEC-Q100 qualified	
S	MPQ6532-AEC1	5	60	60	3	1/0.8	✓	QFN-28 (4x5)	3-phase pre-driver with commutation logic, AEC-Q100 qualified	
S	MPQ6533-AEC1	6	40	-	3	1/0.8	-	QFN-32 (5x5)	3-channel pre-driver, AEC-Q100 qualified	

STEPPER MOTOR DRIVERS | MOTOR DRIVERS

	Part Number	V_{IN} (Min) (V)		V_{IN} (Max) (V)		I_{OUT} (Max) (A)	Step Mode	Control Interface	Package	Notes
		V_{IN}	V_{OUT}	V_{IN}	V_{OUT}					
	MP6500	4.5	35	2.5	1, 1/2, 1/4, 1/8	Indexer	QFN-24 (5x5), TSSOP-28	Bipolar stepper, microstepping, internal current sense		
	MP6500A	4.5	35	2.5	1, 1/2, 1/4, 1/8	Indexer	TSSOP-28EP	Bipolar stepper, microstepping, internal current sense, prog. voltage		
N	MP6500L	4.5	35	2.5	1, 1/2, 1/4, 1/8	Indexer	QFN-24 (5x5)	Bipolar stepper, microstepping, internal current sense, latch-off function		
	MP6501A	8	35	2.5	1, 1/2, 1/4, 1/8	Indexer	TSSOP-28EP	Bipolar stepper, microstepping		
	MP6504	8	32	2	1, 1/2, 1/4, 1/8	Indexer	QFN-28 (4x5)	Bipolar stepper, microstepping		
	MP6506	2.7	15	0.5	1, 1/2	Parallel	QFN-16 (3x3)	Bipolar stepper		

STEPPER MOTOR DRIVERS | MOTOR DRIVERS

Part Number	V _{IN} (Min) (V)	V _{IN} (Max) (V)	I _{OUT} (Max) (A)	Step Mode	Control Interface	Package	Notes
MP6507	2.7	15	0.7	1, 1/2	Parallel	TSSOP16EP, 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
MP6518	8	35	1.5	1, 1/2, 1/4, 1/8	Indexer	TSSOP-28EP	Bipolar stepper, microstepping
MP6520	8	32	1.5	1, 1/2, 1/4, 1/8	Indexer	QFN-28 (4x5)	Stepper, integrated MOSFETs
MP6600	4.5	35	1.5	1, 1/2, 1/4, 1/8	Indexer	QFN-24 (4x4)	Bipolar stepper, microstepping, internal current sense
N MP6600L	4.5	35	1.5	1, 1/2, 1/4, 1/8	Indexer	QFN-24 (4x4)	Bipolar stepper, microstepping, internal current sense, latch-off function
MP6601	4.5	35	2.5	1, 1/2, 1/4	Parallel	QFN-24 (5x5), TSSOP-28EP	Stepper, internal current sense
S MP6604A	4.5	45	2.5	-	IN/EN	QFN-28 (4x5), TSSOP-28EP	Simple dual H-bridge driver, IN/EN interface
S MP6604B	4.5	45	2.5	-	PHASE/ENBL	QFN-28 (4x5), TSSOP-28EP	Simple dual H-bridge driver, PHASE/ENBL interface
S MP6604C	4.5	45	2.5	-	HS/LS	QFN-28 (4x5), TSSOP-28EP	Simple dual H-bridge driver, HS/LS interface
S MPQ6600L-AEC1	4.5	35	1.5	1, 1/2, 1/4, 1/8	Indexer	QFN-24 (4x4)	Bipolar stepper, microstepping, internal current sense, latch-off, AEC-Q100 qualified

INTEGRATED BLDC MOTOR DRIVERS | MOTOR DRIVERS

Part Number	V _{IN} (Min) (V)	V _{IN} (Max) (V)	# of Half-Bridges	I _{OUT} (Max) (A)	Hall Input	Package	Notes
MP6536	5	26	3	5.5	-	QFN-40 (5x5)	3-channel half-bridge driver
MP6540	5.5	35	3	3	-	QFN-26 (5x5)	3-phase power stage, PWM/ENBL inputs
MP6540A	5.5	35	3	3	-	QFN-26 (5x5)	3-phase power stage, HS/LS inputs
MP6540H	5.5	50	3	5	-	QFN-26 (5x5)	3-phase power stage, PWM/ENBL inputs
MP6540HA	5.5	50	3	5	-	QFN-26 (5x5)	3-phase power stage, HS/LS inputs
S MP6541	4.75	45	3	8	-	QFN-26 (6x6)	3-phase power stage, PWM/ENBL inputs
S MP6541A	4.75	45	3	8	-	QFN-26 (6x6)	3-phase power stage, HS/LS inputs
N MP6543	3	12	3	2	-	QFN-24 (3x4)	3-phase power stage, PWM/ENBL inputs
N MP6543A	3	12	3	2	-	QFN-24 (3x4)	3-phase power stage, HS/LS inputs
N MP6543B	3	12	3	2	-	QFN-24 (3x4)	3-phase power stage, Hall signal inputs
N MP6543H	3	22	3	2	-	QFN-24 (3x4)	3-phase power stage, PWM/ENBL inputs
N MP6543H-A	3	22	3	2	-	QFN-24 (3x4)	3-phase power stage, HS/LS inputs
N MP6543H-B	3	22	3	2	-	QFN-24 (3x4)	3-phase power stage, Hall signal inputs
S MP6543C	3	22	3	1.2	-	QFN-24 (3x4)	3-phase power stage, PWM/ENBL inputs
S MP6545	4.5	45	3	2.5	-	QFN-28 (4x5), TSSOP-28EP	3-channel power stage, HS/LS inputs
S MPQ6541-AEC1	4.75	45	3	8	-	TQFN-26 (6x6)	3-phase power stage, PWM/ENBL inputs, AEC-Q100 qualified
S MPQ6541A-AEC1	4.75	45	3	8	-	TQFN-26 (6x6)	3-phase power stage, HS/LS inputs, AEC-Q100 qualified

FAN DRIVERS | 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	✓	TSSOP-16EP	Single-phase BLDC
	MP6510	4.5	16	2	1.2	✓	TSSOP-16EP	Single-phase BLDC
	MP6517	3.3	18	2	1.2	✓	TSOT23-6, TSOT23-6-SL	Prog. single-phase BLDC, integrated Hall sensor
	MP6517A	3.3	16	2	2	✓	TSOT23-6, TSOT23-6-SL	Prog. single-phase BLDC, integrated Hall sensor
	MP6517B	3.3	16	2	2	✓	TSOT23-6-L, TSOT23-6-R, TSOT23-6-SL, TSOT23-6-RSL	Prog. single-phase BLDC, integrated Hall sensor
N	MP6616	3.3	18	2	4	✓	QFN-10 (2x3)	Single-phase BLDC, for closed-loop applications
S	MP6616A	3.3	18	2	4	✓	QFN-10 (2x3)	I _{STB} ≤ 0.5mA compared to the MP6616
N	MP6616L	3.3	18	2	3	✓	QFN-10 (2x3)	Single-phase BLDC, for closed-loop applications
	MP6650	3.3	18	2	2	✓	TSOT23-6-L, TSOT23-6-R, TSOT23-6-SL, TSOT23-6-RSL	Single-phase BLDC, integrated Hall sensor
S	MP6651	3.3	18	2	3	✓	QFN-10 (2x3), SOIC-8SL	Single-phase BLDC, for open-loop applications
S	MP6652	3	18	2	1.3	✓	TSOT23-6-L, TSOT23-6-SL	Single-phase BLDC, integrated Hall sensor
S	MP6652A	3	18	2	1.1	✓	TSOT23-6-L, TSOT23-6-SL	Single-phase BLDC, integrated Hall sensor, enhanced ESD
S	MP6654	3	18	2	1.1	✓	TSOT23-6-L, TSOT23-6-SL	Single-phase BLDC, integrated Hall sensor, enhanced ESD
	MP9517	3.3	18	2	2	✓	TSOT23-6-L, TSOT23-6-SL	Single-phase BLDC, integrated Hall sensor
	MP9518	3.3	18	2	1.2	✓	TSOT23-6, TSOT23-6-SL	Single-phase BLDC, integrated Hall sensor
	MP6630	2	5.5	3	1.4	✓	UTQFN-8 (2x3)	3-phase, for notebook applications, integrated Hall sensor
	MP6630H	2	16	3	1.4	✓	UTQFN-8 (2x3)	3-phase, for notebook applications, integrated Hall sensor
S	MP6631	3.5	24	3	3	✓	QFN-26 (3x4)	3-phase BLDC, external Hall sensor

MOTOR CONTROLLERS | MOTOR DRIVERS

	Part Number	V _{IN} (Min) (V)	V _{IN} (Max) (V)	f _{SW} (Max) (kHz)	Interface	ADC	Special Features	Grade	Package	Note
	MP6570	3	3.6	80	SPI, I ² C, RS485	10-bit	Up to 32 Prog Slave Addresses	Catalog	QFN-32 (4x4)	3-phase BLDC, high-accuracy angle sensor
N	MP6710	3	3.6	80	RS485, External I/O	12-bit	Up to 127 Prog Slave Addresses	Catalog	TQFN-32 (4x4)	eMotion System™

SMART MOTOR MODULES & KITS | MOTOR DRIVERS

Smart Motor Module Evaluation Kits

Part Number	V _{IN} (Nom) (V)	V _{IN} (Min) (V)	V _{IN} (Max) (V)	Continuous Power (W)	Nominal Speed (RPM)	Operation Mode	Nominal Torque (Nm)	Peak Torque (Nm)	Position Resolution (deg)	Control Interface	Diameter (mm)	Length (mm)
EVKT-MSM957188-36	36	18	70	188	3000	Position & Speed Control	0.6	1.8	0.3	RS485	57	116
EVKT-MSM957141-36	36	18	70	141	3000	Position & Speed Control	0.45	1.35	0.3	RS485	57	96
EVKT-MSM957094-36	36	18	70	94	3000	Position & Speed Control	0.3	0.9	0.3	RS485	57	76
EVKT-MSM942038-24	24	18	36	38	3000	Position & Speed Control	0.12	0.36	0.3	RS485	42	40
EVKT-MSM942052-24	24	18	36	52	4000	Position & Speed Control	0.125	0.375	0.3	RS485	42	60
EVKT-MSM942077-24	24	18	36	77	4000	Position & Speed Control	0.185	0.555	0.3	RS485	42	80
EVKT-MSM942105-24	24	18	36	105	4000	Position & Speed Control	0.25	0.75	0.3	RS485	42	100

Smart Motor Modules

Part Number	V _{IN} (Nom) (V)	V _{IN} (Min) (V)	V _{IN} (Max) (V)	Continuous Power (W)	Nominal Speed (RPM)	Operation Mode	Position Resolution (deg)	Diameter (mm)
MMP757188-36-C	36	18	70	188	3000	Position & Speed Control	0.3	57
MMP757141-36-C	36	18	70	141	3000	Position & Speed Control	0.3	57
MMP757094-36-C	36	18	70	94	3000	Position & Speed Control	0.3	57
MMP742038-24-C	24	18	36	38	3000	Position & Speed Control	0.3	42
MMP742052-24-C	24	18	36	52	4000	Position & Speed Control	0.3	42
MMP742077-24-C	24	18	36	77	4000	Position & Speed Control	0.3	42
MMP742105-24-C	24	18	36	105	4000	Position & Speed Control	0.3	42

MAGALPHA SERIES | POSITION SENSORS

Position Sensor Magnets

Part Number	Magnetization	Geometry	Material	OD (mm)	ID (mm)	Height (mm)	Air Gap Min (mm)	Air Gap Max (mm)	Radial Tolerance (mm)	Notes
N MAG10-2C-30.25	Diametrical	Cylinder	NdFeB, Grade N35SH	3	-	2.5	0	2	0.1	-
N MAG10-2C-40.25	Diametrical	Cylinder	NdFeB, Grade N35SH	4	-	2.5	0	2.6	0.2	Standard-size, cost-effective
N MAG10-2C-50.25	Diametrical	Cylinder	NdFeB, Grade N35SH	5	-	2.5	0	3.1	0.2	Standard-size, cost-effective
N MAG10-2C-60.25	Diametrical	Cylinder	NdFeB, Grade N35SH	6	-	2.5	0	3.6	0.3	-
N MAG10-2C-80.25	Diametrical	Cylinder	NdFeB, Grade N35SH	8	-	2.5	0	4.5	0.4	-
N MAG10-2R-50.12.25	Diametrical	Ring	NdFeB, Grade N35SH	5	1.25	2.5	1	1.4	0.4	Accurate application
N MAG10-2R-60.15.25	Diametrical	Ring	NdFeB, Grade N35SH	6	1.5	2.5	1.3	1.6	0.6	Accurate application
N MAG10-2R-80.20.25	Diametrical	Ring	NdFeB, Grade N35SH	8	2	2.5	2	2.5	0.8	Accurate application
N MAG10-2B-40.25	Axial	Half-Cylinder	NdFeB, Grade N35SH	4	-	2.5	0	2.1	<0.1	Low field emission
N MAG10-2B-50.25	Axial	Half-Cylinder	NdFeB, Grade N35SH	5	-	2.5	0	2.7	<0.1	Low field emission
N MAG10-2B-60.25	Axial	Half-Cylinder	NdFeB, Grade N35SH	6	-	2.5	0	3.2	<0.1	Low field emission
N MAG10-2B-80.25	Axial	Half-Cylinder	NdFeB, Grade N35SH	8	-	2.5	0	4.2	0.1	Low field emission

MAGALPHA SERIES | POSITION SENSORS

MagAlpha Series

Part Number	Resolution	Interface	Supply Voltage (V)	Supply Current (mA)	Sensing Range (mT)	Cutoff Frequency (Hz)	Latency at Constant Speed (µs)	Temperature Range (°C)	Package	Notes
MA102	12-bit	SPI, UVW	3 to 3.6	11.7	30+ (No Upper Limit)	390	8	-40 to +125	QFN-16 (3x3)	Motor commutation angle sensor, UVW multi-pole pair, differential outputs
MA302	12-bit	SPI, UVW, ABZ	3 to 3.6	11.7	30+ (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	11.7	15+ (No Upper Limit)	93	8	-40 to +125	QFN-16 (3x3)	Contactless angle sensor, ABZ & UVW incremental outputs
MA330	10-bit to 14-bit	SPI, UVW, ABZ	3 to 3.6	11.7	30+ (No Upper Limit)	23 to 6k	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	11.7	30+ (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	11.7	30+ (No Upper Limit)	2970	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	11.7	15+ (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	11.7	40+ (No Upper Limit)	23	8	-40 to +125	QFN-16 (3x3)	Contactless angle sensor, ABZ incremental & PWM outputs
MA732	10-bit to 14-bit	SPI, SSI, PWM, ABZ	3 to 3.6	11.7	30+ (No Upper Limit)	23 to 6k	8	-40 to +125	QFN-16 (3x3)	Contactless angle sensor, ABZ incremental & PWM outputs
MA800	8-bit	SPI, SSI	3 to 3.6	11.7	30+ (No Upper Limit)	90	4000	-40 to +125	QFN-16 (3x3)	Contactless angle sensor, SSI output, push-button function
MA820	8-bit	SPI, ABZ	3 to 3.6	11.7	30+ (No Upper Limit)	90	4000	-40 to +125	QFN-16 (3x3)	Contactless angle sensor, ABZ output, push-button function
MA850	8-bit	SPI, PWM	3 to 3.6	11.7	30+ (No Upper Limit)	90	4000	-40 to +125	QFN-16 (3x3)	Contactless angle sensor, PWM output, push-button function
N MA780	8-bit to 12-bit	SPI, VDDIO = 1.8V to V _{DD}	3 to 3.6	10	30+ (No Upper Limit)	5 to 160k	4 to 16000	-40 to +125	QFN-16 (3x3)	Contactless low-power angle sensor, integrated wake-up and IRQ
N MA782	8-bit to 12-bit	SPI, VDDIO = 1.8V to V _{DD}	3 to 3.6	10	30+ (No Upper Limit)	5 to 160k	4 to 16000	-40 to +125	QFN-14 (2x2)	Contactless low-power angle sensor, integrated wake-up and IRQ
MAQ430	12-bit	SPI, UVW, ABZ	3 to 3.6	11.7	30+ (No Upper Limit)	390	8	-40 to +150	QFN-16 (3x3)	Automotive angle sensor, wettable flanks
MAQ470	12-bit	SPI, SSI, PWM, ABZ	3 to 3.6	11.7	30+ (No Upper Limit)	390	8	-40 to +150	QFN-16 (3x3)	Automotive angle sensor, wettable flanks
N MAQ473	10-bit to 14-bit	SPI, SSI, PWM, ABZ	3 to 3.6	11.7	30+ (No Upper Limit)	390	8	-40 to +150	QFN-16 (3x3)	Automotive angle sensor, wettable flanks

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	1000	1.2	SOIC-8	Coreless, analog output, immune to external magnetic fields
S MCS1801	±12.5, ±25	5	3%	-40 to +125	100	1000	1.2	SOIC-8	Coreless, analog output, immune to external magnetic fields
N MCS1802	±5, ±10, ±20, ±30, ±40, ±50	3.3	2.5%	-40 to +125	100	2200	0.9	SOIC-8	Coreless, analog output, immune to external magnetic fields
N MCS1803	±5, ±10, ±20, ±30, ±40, ±50	5	2.5%	-40 to +125	100	2200	0.9	SOIC-8	Coreless, analog output, immune to external magnetic fields
S MCQ1802 -AEC1	±5, ±10, ±20, ±30, ±40, ±50	3.3	2.5%	-40 to +150	100	2200	0.9	SOIC-8	AEC-Q100, coreless, analog output, immune to external magnetic fields
S MCQ1803 -AEC1	±5, ±10, ±20, ±30, ±40, ±50	5	2.5%	-40 to +150	100	2200	0.9	SOIC-8	AEC-Q100, 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 _Q (Typ) (μA)	PSRR (dB)	Slow Rate (V/μs)	Offset Voltage (mV)	Package	Notes
MP8102	1.8	5.5	200	7.5	80	0.1	1	TSOT23-5	Ultra-low power, 600kHz
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	0.06 to 20	1	SOT23	Precision adj., shunt voltage regulator, 1V shunt reference

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

USB/Load Switches

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 adj. current-limited power distribution switch, 88/100mΩ at 100mA, 1.5μA max $I_{SHUTDOWN}$
MP5073	0.5	5.5	2	2	Active High	-	✓	QFN-12 (2x2)	Prog. 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	13	Active High	-	✓	TQFN-12 (2x2)	Prog. 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
MP5087A	0.5	5.5	7	7	Active High	-	✓	TQFN-12 (2x2)	Prog. current limit, slew rate control, fast-off protection
S MP5096	0.65	5.5	2	5	Active High	-	✓	CSP-4 (0.8x1)	Wide input
S MP5097	0.65	5.5	2	5	Active High	-	✓	SOT563 (1.6x1.6)	Wide input

USB/Load Switches

Dual-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
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, prog. current limit, slew rate control, fast-off protection

USB PD Controllers

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
S MP5031	4.5	5.5	5	-	Active High	-	✓	QFN-20 (4x4)	Supports USB Type-C and PD3.0 PPS, USB2.0 BC1.2 CDP and DCP mode, QC2.0/3.0/4.0, BC1.2 short mode, Apple charging, and Huawei FCP

USB Port Controllers

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
MP5034	3.6	14	-	6	Active High	-	-	TSOT23-8	Integrates QC 3.0 protocol
MP5030C	-	14	3	6	-	-	-	QFN-10 (1.5x2)	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
MP5030D	-	14	3	6	Active High	-	-	QFN-10 (1.5x2)	Load detection, supports CDP and DCP modes
MP5029-C	3	22	3	3.65	Active High	✓	✓	QFN-14 (2x3)	Current-limit switch; supports CDP, DCP, and QC 3.0 modes
MPQ5029-C	3	24	3	3.65	Active High	✓	✓	QFN-14 (2x3)	Current-limit switch; supports CDP, DCP, and QC 3.0 modes, AEC-Q100

E-Fuses (Int. Hot-Swap)

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
MP5094	5/12	16/24	3/4	8	-	-	TSOT23-8	Dual-channel, over-voltage clamp, OCP hiccup mode
S MP5098	4.6	13.8	4/3	8	Active Low	-	TQFN-10 (2x3)	Dual-channel current-limit switch with current monitor
MP5013A	3	18	4.2	Prog	Short-/Over-Current, Under-Voltage, Over-Voltage, Thermal Shutdown	-	TSOT23-8	5V, 1A to 5A, 36mΩ R _{DS(ON)} , prog. current limit and slew-rate control, 5A/2.8A trip/hold current
MP5014A	10	13.8	5	Prog	Short-/Over-Current, Under-Voltage, Over-Voltage, Thermal Shutdown	-	TSOT23-8	12V, 36mΩ R _{DS(ON)} , prog. current limit, over-voltage clamp, slew-rate control
MP5016	2.7	15	5	8	-	✓	QFN-10 (1.5x2)	Over-voltage clamp, reverse-current blocking, thermal shutdown, auto-retry
MP5016-L	2.7	22	5	8	-	✓	QFN-10 (1.5x2)	Latch-off OCP, over-voltage clamp, reverse-current blocking
MP5016H	2.7	22	5	8	-	✓	QFN-10 (1.5x2)	UL certified, over-voltage clamp, reverse-current blocking, thermal shutdown, auto-retry
S MP5018	4.5	5.5	5	Prog	Thermal Fault = Tri-State	-	QFN-12 (2x3)	Reverse-current blocking, 45mΩ R _{DS(ON)} , prog. current limit, latch-off OTP
MP5017A	3	5.5	5	7.5	Over-Current, Over-Temperature, Output Over-Voltage	✓	QFN-12 (2x3)	Current-limit switch, over-voltage clamp, reverse-current blocking
S MP5035	2.9	22	2	8	-	✓	TSOT23-6	Current-limit switch
MP5036	2.9	14	5	8	-	✓	TSOT23-6	Fixed 15V over-voltage clamp, 0.4A to 5A prog. current limit, fast output OVP response
MP5036A	2.9	5.5	5	8	-	✓	TSOT23-6	Fixed 5.75V over-voltage clamp, 0.4A to 5A prog. current limit, fast output OVP response
MP5021B	4.8	16	10	Prog	Current Limit, Thermal Shutdown, Damaged MOSFET	✓	QFN-22 (3x5)	12V, 7mΩ R _{DS(ON)} hot-swap protection device, current monitoring
MP5022A	8	16	15	Prog	Current Limit, Thermal Shutdown, Damaged MOSFET	✓	QFN-22 (3x5)	12V, 3mΩ R _{DS(ON)} hot-swap protection device, current monitoring, controlled R _{ON} mode

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

E-Fuses (Int. Hot-Swap)

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
MP5022C	4.5	16	15	36	Current Limit, Thermal Shutdown, Damaged MOSFET Detection	-	QFN-22 (3x5)	3mΩ R _{DS(ON)} hot-swap protection device, current monitoring
MP5061	4.5	28	15	25	Current Limit Protection, Thermal Shutdown, Under-Voltage Protection, Damaged MOSFET	✓	QFN-22 (3x5)	Enable blanking time set and 36V input transient before V _{OUT} start-up, current monitoring
MP5921	4	16	50	120	GOK Fault Flag, Current Limit, Thermal Shutdown, Damaged MOSFET Detection	-	QFN-28 (4x5)	1mΩ R _{DS(ON)} hot-swap Intelli-Fuse solution, current monitoring, fault reporting
MP5023	4	16	50	110	Current Limit, Thermal Shutdown, Damaged MOSFET Detection	✓	FCQFN-24 (4x5)	1.1mΩ hot-swap protection device, PMBus interface, current monitoring
N MP5048	24	60	15	26	Current Limit, Thermal Shutdown, Damaged MOSFET Detection	-	QFN-30 (5x5)	7mΩ R _{DS(ON)} hot-swap Intelli-Fuse solution, power-down control, current monitoring, prog. operation mode (latch-off/hiccup)

Hot-Swap Controllers

Part Number	# of Channels	Interface	Package	Notes
N MP5920	1	PMBus	TQFN-32 (4x4)	Parallel config., prog. via PMBus; built-in ADC for current, voltage, or temp reading, reports power and energy consumption

48V Modules

Part Number	V _{IN} (Min) (V)	V _{IN} (Max) (V)	I _{OUT} (Max) (A)	V _{OUT} (Min) (V)	V _{OUT} (Max) (V)	Output Power (Max) (W)	Isolated/ Non-Isolated	Notes
N MPC1100A-54-0000	40	60	60	4	6	300	Non-Isolated	PMBus/I ² C compatible, high efficiency, fixed ratio

HIGH-VOLTAGE ANALOG SWITCHES | ULTRASOUND MUX

Serial Shift Register Control

Part Number	# of Channels	V _{DD} Bias (V)	V _{DS} (Max) (V)	R _{SWITCH} (Ω)	Output Bleed Resistor	Switch Configuration	Bandwidth (MHz)	Package	Notes
MP4816A	16	9.5	±90	12.5	✓	SPST	80	TQFP-48 (7x7)	16-bit
N MP4816	16	9.5	±90	12.5	-	SPST	80	TQFP-48 (7x7)	16-bit
N MP4832A	32	12	±90	14	✓	SPST	80	QFN-72 (10x10)	32-bit with bank switching
S MP4833A	32	9.5	±90	12.5	✓	SPST	80	BGA-80 (7x7)	32-bit
S MP4835A	32	5	±100	14	✓	SPST	80	QFN-72 (10x10)	32-bit with bank switching
S MP4864A	64	12	±90	14	✓	SPST	80	BGA-144 (10x10)	64-bit

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
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
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
MPL-SE2512-1R0	1	45	3.35	4.2	125	2512	2.5	2	1.2	SMD	Low profile, external epoxy resin for better magnetic characteristics
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
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
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
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
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
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
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
MPL-SE4030-1R0	1	12.5	6.3	7.5	125	4030	4	4	3	SMD	External epoxy resin for better magnetic characteristics
MPL-SE4030-2R2	2.2	30	3.9	5.5	125	4030	4	4	3	SMD	External epoxy resin for better magnetic characteristics
MPL-SE4030-3R3	3.3	39.8	3.45	4.1	125	4030	4	4	3	SMD	External epoxy resin for better magnetic characteristics
MPL-SE4030-4R7	4.7	63	2.6	3.7	125	4030	4	4	3	SMD	External epoxy resin for better magnetic characteristics
MPL-SE4030-6R8	6.8	83	2.4	3.3	125	4030	4	4	3	SMD	External epoxy resin for better magnetic characteristics
MPL-SE4030-100	10	97	2.2	2.4	125	4030	4	4	3	SMD	External epoxy resin for better magnetic characteristics
MPL-SE4030-150	15	185	1.6	1.95	125	4030	4	4	3	SMD	External epoxy resin for better magnetic characteristics
MPL-SE4030-220	22	219	1.5	1.65	125	4030	4	4	3	SMD	External epoxy resin for better magnetic characteristics
MPL-SE5040-R47	0.47	7.3	8	16	125	5040	4.9	4.9	4	SMD	External epoxy resin for better magnetic characteristics
MPL-SE5040-1R0	1	9.4	7.6	10.5	125	5040	4.9	4.9	4	SMD	External epoxy resin for better magnetic characteristics
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
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
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
MPL-SE5040-4R7	4.7	33	4.3	5	125	5040	4.9	4.9	4	SMD	External epoxy resin for better magnetic characteristics
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
MPL-SE5040-100	10	56	3.2	3.6	125	5040	4.9	4.9	4	SMD	External epoxy resin for better magnetic characteristics
MPL-SE5040-150	15	83	2.5	2.9	125	5040	4.9	4.9	4	SMD	External epoxy resin for better magnetic characteristics
MPL-SE5040-220	22	124	2.1	2.4	125	5040	4.9	4.9	4	SMD	External epoxy resin for better magnetic characteristics
MPL-SE6040-1R5	1.5	11.5	6.8	8.9	125	6040	6	6	4	SMD	External epoxy resin for better magnetic characteristics
MPL-SE6040-2R2	2.2	14.5	6.3	7.2	125	6040	6	6	4	SMD	External epoxy resin for better magnetic characteristics
MPL-SE6040-3R3	3.3	19.5	5.6	5.6	125	6040	6	6	4	SMD	External epoxy resin for better magnetic characteristics
MPL-SE6040-4R7	4.7	23	5.2	5	125	6040	6	6	4	SMD	External epoxy resin for better magnetic characteristics
MPL-SE6040-6R8	6.8	33	4.4	4.1	125	6040	6	6	4	SMD	External epoxy resin for better magnetic characteristics
MPL-SE6040-8R2	8.2	39	4	3.6	125	6040	6	6	4	SMD	External epoxy resin for better magnetic characteristics
MPL-SE6040-100	10	41	3.8	3.4	125	6040	6	6	4	SMD	External epoxy resin for better magnetic characteristics

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
MPL-SE6040-150	15	70	2.8	2.7	125	6040	6	6	4	SMD	External epoxy resin for better magnetic characteristics
MPL-SE6040-220	22	97	2.35	2.25	125	6040	6	6	4	SMD	External epoxy resin for better magnetic characteristics

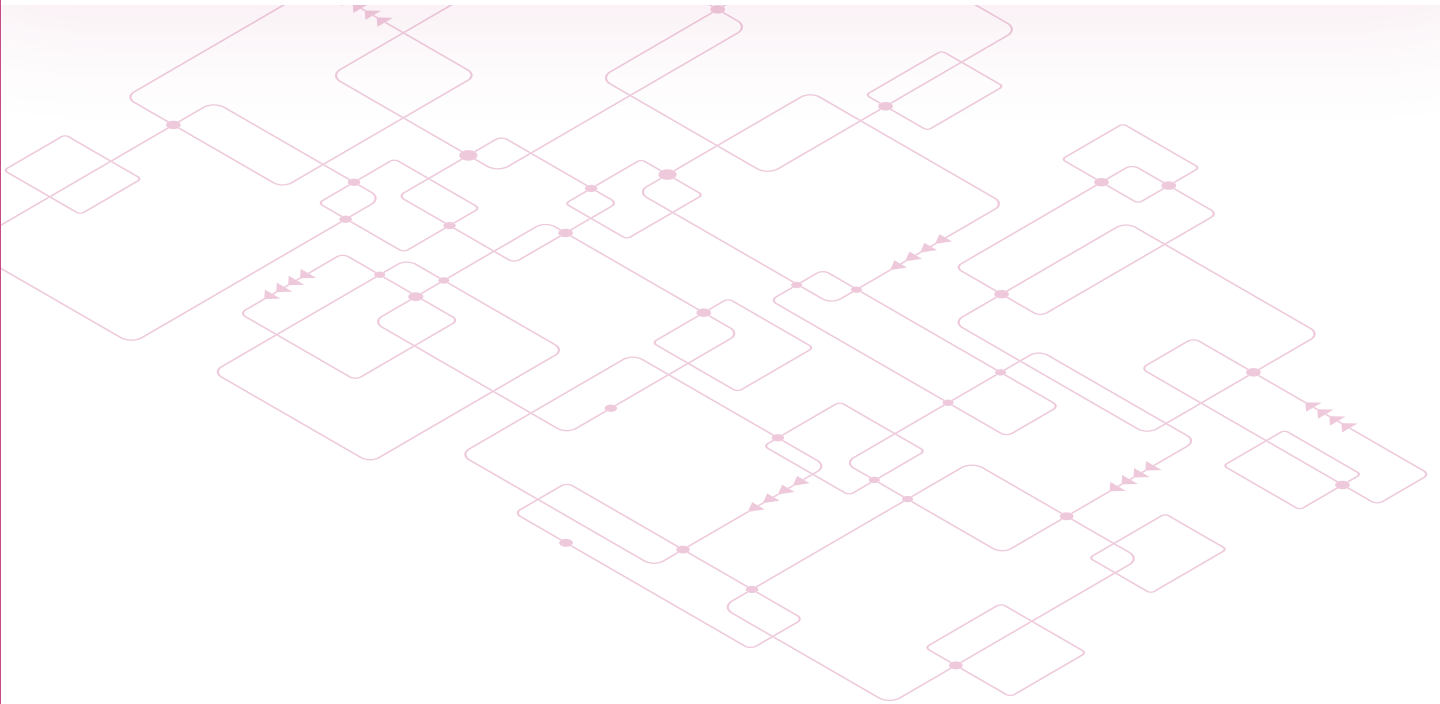
MOLDED INDUCTORS | INDUCTORS

Part Number	L (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
MPL-AT2010-R47	0.47	27	4.4	5.7	125	2010	2	1.6	1	SMD	Low profile
MPL-AT2010-R68	0.68	41	3.5	4.9	125	2010	2	1.6	1	SMD	Low profile
MPL-AT2010-1R0	1	50	3.2	4.2	125	2010	2	1.6	1	SMD	Low profile
MPL-AT2010-1R5	1.5	97	2.4	3.2	125	2010	2	1.6	1	SMD	Low profile
MPL-AT2010-2R2	2.2	137	2.2	2.7	125	2010	2	1.6	1	SMD	Low profile
MPL-AT2010-4R7	4.7	215	1.5	1.9	125	2010	2	1.6	1	SMD	Low profile
MPL-AT2512-R33	0.33	13.5	6.4	8.5	125	2512	2.5	2	1.2	SMD	Low profile
MPL-AT2512-R47	0.47	19	5.5	6.4	125	2512	2.5	2	1.2	SMD	Low profile
MPL-AT2512-R68	0.68	26	4.7	6	125	2512	2.5	2	1.2	SMD	Low profile
MPL-AT2512-1R0	1	35	4	5.2	125	2512	2.5	2	1.2	SMD	Low profile
MPL-AT2512-1R5	1.5	56	3.2	4.2	125	2512	2.5	2	1.2	SMD	Low profile
MPL-AT2514-2R2	2.2	70	2.6	3.4	125	2514	2.5	2	1.4	SMD	Low profile
MPL-AT2512-3R3	3.3	121	2	2.7	125	2512	2.5	2	1.2	SMD	Low profile
MPL-AT2514-4R7	4.7	180	1.7	2.4	125	2514	2.5	2	1.4	SMD	Low profile
MPL-AT2512-6R8	6.8	280	1.4	2.2	125	2512	2.5	2	1.2	SMD	Low profile
MPL-AT2512-100	10	355	1.2	1.7	125	2512	2.5	2	1.2	SMD	Low profile
MPL-AY3020-R47	0.47	19.5	6.3	9	125	3020	3.5	3.2	1.8	SMD	-
MPL-AY3020-R68	0.68	26	5.15	8.6	125	3020	3.5	3.2	1.8	SMD	-
MPL-AY3020-R82	0.82	28	4.7	8	125	3020	3.5	3.2	1.8	SMD	-
MPL-AY3020-1R0	1	30	4.3	6.2	125	3020	3.5	3.2	1.8	SMD	-
MPL-AY3020-1R5	1.5	35	3.4	5.9	125	3020	3.5	3.2	1.8	SMD	-
MPL-AY3020-2R2	2.2	64	3	5.3	125	3020	3.5	3.2	1.8	SMD	-
MPL-AY3020-3R3	3.3	121	2.5	3.7	125	3020	3.5	3.2	1.8	SMD	-
MPL-AY3020-4R7	4.7	173	2	3.1	125	3020	3.5	3.2	1.8	SMD	-
MPL-AY3020-5R6	5.6	209	1.8	2.8	125	3020	3.5	3.2	1.8	SMD	-
MPL-AY3020-6R8	6.8	250	1.65	2.6	125	3020	3.5	3.2	1.8	SMD	-
MPL-AY3020-8R2	8.2	345	1.4	1.95	125	3020	3.5	3.2	1.8	SMD	-
MPL-AY3020-100	10	370	1.3	1.75	125	3020	3.5	3.2	1.8	SMD	-
MPL-AY4020-5R6	5.6	97	2.45	2.6	155	4020	4.45	4.1	1.8	SMD	High-temperature capabilities
MPL-AY4020-6R8	6.8	129	2.2	2.4	155	4020	4.45	4.1	1.8	SMD	High-temperature capabilities
MPL-AY4020-8R2	8.2	136	2.1	2.1	155	4020	4.45	4.1	1.8	SMD	High-temperature capabilities
MPL-AY4020-100	10	163	1.9	2	155	4020	4.45	4.1	1.8	SMD	High-temperature capabilities

Part Number	L (µH)	R _{DC} (Typ) (mΩ)	I _R (40K Rise) (A)	I _{SR1} (30% Drop) (A)	Operating Temp (Max) (°C)	Size	A Dimension (L) (mm)	B Dimension (W) (mm)	C Dimension (H) (mm)	Construction	Notes
MPL-AY1050-R47	0.47	1.25	25	41	155	1050	11	10	4.8	SMD	High-temperature capabilities
MPL-AY1050-R68	0.68	1.75	23	36	155	1050	11	10	4.8	SMD	High-temperature capabilities
MPL-AY1050-1R0	1	2.6	19	33	155	1050	11	10	4.8	SMD	High-temperature capabilities
MPL-AY1050-1R5	1.5	3.4	17	26.5	155	1050	11	10	4.8	SMD	High-temperature capabilities
MPL-AY1050-2R2	2.2	4.9	15	19.5	155	1050	11	10	4.8	SMD	High-temperature capabilities
MPL-AY1050-3R3	3.3	8	12.5	17	155	1050	11	10	4.8	SMD	High-temperature capabilities
MPL-AY1050-4R7	4.7	9.5	11.5	15	155	1050	11	10	4.8	SMD	High-temperature capabilities
MPL-AY1050-5R6	5.6	13	9.8	14	155	1050	11	10	4.8	SMD	High-temperature capabilities
MPL-AY1050-6R8	6.8	15	9	13	155	1050	11	10	4.8	SMD	High-temperature capabilities
MPL-AY1050-100	10	19	7.8	12	155	1050	11	10	4.8	SMD	High-temperature capabilities
MPL-AY1265-R47	0.47	0.89	33	64	155	1265	13.5	12.6	6.2	SMD	High-temperature capabilities
MPL-AY1265-R56	0.56	1.1	31	58	155	1265	13.5	12.6	6.2	SMD	High-temperature capabilities
MPL-AY1265-R68	0.68	1.25	29	51	155	1265	13.5	12.6	6.2	SMD	High-temperature capabilities
MPL-AY1265-R82	0.82	1.3	27	46	155	1265	13.5	12.6	6.2	SMD	High-temperature capabilities
MPL-AY1265-1R0	1	1.5	25.5	43	155	1265	13.5	12.6	6.2	SMD	High-temperature capabilities
MPL-AY1265-1R2	1.2	1.8	24	37	155	1265	13.5	12.6	6.2	SMD	High-temperature capabilities
MPL-AY1265-1R5	1.5	2.3	22	34	155	1265	13.5	12.6	6.2	SMD	High-temperature capabilities
MPL-AY1265-1R8	1.8	3.3	20	29	155	1265	13.5	12.6	6.2	SMD	High-temperature capabilities
MPL-AY1265-2R2	2.2	3.7	17	26.5	155	1265	13.5	12.6	6.2	SMD	High-temperature capabilities
MPL-AY1265-3R3	3.3	5.5	16	25	155	1265	13.5	12.6	6.2	SMD	High-temperature capabilities
MPL-AY1265-4R7	4.7	7	14	23	155	1265	13.5	12.6	6.2	SMD	High-temperature capabilities
MPL-AY1265-5R6	5.6	8.6	13	20	155	1265	13.5	12.6	6.2	SMD	High-temperature capabilities
MPL-AY1265-6R8	6.8	9.9	12	19.5	155	1265	13.5	12.6	6.2	SMD	High-temperature capabilities
MPL-AY1265-8R2	8.2	12.5	11.5	18	155	1265	13.5	12.6	6.2	SMD	High-temperature capabilities
MPL-AY1265-100	10	13.3	10.7	16	155	1265	13.5	12.6	6.2	SMD	High-temperature capabilities
MPL-AY1265-150	15	21.8	8.5	12	155	1265	13.5	12.6	6.2	SMD	High-temperature capabilities
MPL-AY1265-220	22	31.4	7	9	155	1265	13.5	12.6	6.2	SMD	High-temperature capabilities
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
MPL-AL4020-R68	0.68	7.5	8.7	11	155	4020	4.1	4.1	1.9	SMD	High-temperature capabilities, low resistance
MPL-AL4020-R82	0.82	9	8.4	9.5	155	4020	4.1	4.1	1.9	SMD	High-temperature capabilities, low resistance
MPL-AL4020-1R0	1	10.1	7.9	8.6	155	4020	4.1	4.1	1.9	SMD	High-temperature capabilities, low resistance
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
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
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
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
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
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
MPL-AL5030-R56	0.56	3.92	13.2	22	155	5030	5.5	5.3	2.9	SMD	High-temperature capabilities, low resistance
MPL-AL5030-R82	0.82	5	12.8	18	155	5030	5.5	5.3	2.9	SMD	High-temperature capabilities, low resistance
MPL-AL5030-1R0	1	6.5	11.2	16	155	5030	5.5	5.3	2.9	SMD	High-temperature capabilities, low resistance
MPL-AL5030-1R2	1.2	8	10	14	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 _{SKT} (30% Drop) (A)	Operating Temp (Max) (°C)	Size	A Dimension (L) (mm)	B Dimension (W) (mm)	C Dimension (H) (mm)	Construction	Notes
MPL-AL5030-1R5	1.5	9.7	9	12.5	155	5030	5.5	5.3	2.9	SMD	High-temperature capabilities, low resistance
MPL-AL5030-1R8	1.8	10.5	8.8	12	155	5030	5.5	5.3	2.9	SMD	High-temperature capabilities, low resistance
MPL-AL5030-2R2	2.2	12.3	8.2	11	155	5030	5.5	5.3	2.9	SMD	High-temperature capabilities, low resistance
MPL-AL5030-3R3	3.3	21	6	10	155	5030	5.5	5.3	2.9	SMD	High-temperature capabilities, low resistance
MPL-AL5030-4R7	4.7	33	5.3	8	155	5030	5.5	5.3	2.9	SMD	High-temperature capabilities, low resistance
MPL-AL5050-5R6	5.6	20	6.8	8	155	5050	5.5	5.3	4.8	SMD	High-temperature capabilities, low resistance
MPL-AL5050-6R8	6.8	25	6.1	7.6	155	5050	5.5	5.3	4.8	SMD	High-temperature capabilities, low resistance
MPL-AL5050-8R2	8.2	28	5.8	7.2	155	5050	5.5	5.3	4.8	SMD	High-temperature capabilities, low resistance
MPL-AL5050-100	10	37	4.8	5.5	155	5050	5.5	5.3	4.8	SMD	High-temperature capabilities, low resistance
MPL-AL6050-R82	0.82	3.9	16.9	24	155	6050	6.6	6.4	4.8	SMD	High-temperature capabilities, low resistance
MPL-AL6050-1R0	1	4.3	16.2	21	155	6050	6.6	6.4	4.8	SMD	High-temperature capabilities, low resistance
MPL-AL6050-1R2	1.2	5.3	14.6	20	155	6050	6.6	6.4	4.8	SMD	High-temperature capabilities, low resistance
MPL-AL6050-1R5	1.5	6	13.3	18	155	6050	6.6	6.4	4.8	SMD	High-temperature capabilities, low resistance
MPL-AL6050-2R2	2.2	8.3	12	15	155	6050	6.6	6.4	4.8	SMD	High-temperature capabilities, low resistance
MPL-AL6050-3R3	3.3	11.5	10.1	12	155	6050	6.6	6.4	4.8	SMD	High-temperature capabilities, low resistance
MPL-AL6050-4R7	4.7	16.5	7.5	11	155	6050	6.6	6.4	4.8	SMD	High-temperature capabilities, low resistance
MPL-AL6050-5R6	5.6	19	7	10	155	6050	6.6	6.4	4.8	SMD	High-temperature capabilities, low resistance
MPL-AL6060-4R7	4.7	12	10	9	155	6060	6.6	6.4	5.8	SMD	High-temperature capabilities, low resistance
MPL-AL6060-5R6	5.6	13	9.4	8.6	155	6060	6.6	6.4	5.8	SMD	High-temperature capabilities, low resistance
MPL-AL6060-6R8	6.8	16	8.5	8	155	6060	6.6	6.4	5.8	SMD	High-temperature capabilities, low resistance
MPL-AL6060-8R2	8.2	19	8	7	155	6060	6.6	6.4	5.8	SMD	High-temperature capabilities, low resistance
MPL-AL6060-100	10	24	6.9	6.6	155	6060	6.6	6.4	5.8	SMD	High-temperature capabilities, low resistance
MPL-AL6060-150	15	35	5.8	5.5	155	6060	6.6	6.4	5.8	SMD	High-temperature capabilities, low resistance



GET EV READY

We offer a wide variety of EV Kits & EV Boards to meet all of your power design needs (**over 750+** options).

- ✓ **Design Flexibility**
Wide input voltage range
- ✓ **Superior Performance**
Robust special features
- ✓ **Increased Reliability**
Full protection features



This programming kit for configurable modules allows you to program, optimize, and update your design in a matter of hours.

Go to [MonolithicPower.com](https://www.monolithicpower.com) to order our 750+ products

PART NUMBERING NOMENCLATURE

EXAMPLE

MP1234GQV-Z

①

②

③

④

⑤

①	MP	Prefix	MP###	MPQ####	...see more at MonolithicPower.com
			MP####	HF####	
			MP#####	NB###	

② 1234 Part Number

③	G	Temperature Grade (T_A)	C 0°C to +70°C	G -40°C to +125°C	-----> Temperature Internal to Datasheet; (T _J) Standard
			D -40°C to +85°C	H -40°C to +125°C	
			E -20°C to +85°C	K -55°C to +125°C	

④	QV	Package (mm) and Features	C WLCSP	QH QFN (1.5x2)	W SOIC-WB w/ Exposed Pad
			D QFN (2x3)	QJ QFN (5x6)	X Sorted Wafer
			E SC70	QK QFN (6x6)	XN Unsorted Wafer
			F TSSOP w/ Exposed Pad	QM QFN (6x7)	Y TO220
			FP QFP	QN QFN (7x7)	ZF TO263
			G QFN (2x2)	QP QFN (7x8)	C C-Spec
			H MSOP w/ Exposed Pad	QQ QFN (8x8)	E Enhanced
			J TSOT23 (0.9 Height)	QV QFN (3x5)	R Reserve Lead Bend or Top Exposed Pad
			K MSOP	QW QFN (4x6)	S Customer Specific
			L QFN (3x4)	QX QFN (6x10)	T Thin Package
			M TSSOP	QY QFN (5x8)	U Ultra-Thin Package
			N SOIC w/ Exposed Pad	R QFN (4x4)	
			P PDIP (300 Mil)	S SOIC	
			Q QFN (3x3)	SD SOD123	
			QD QFN (1x1.5)	T SOT23 (1.1 Height)	...more package and feature details can be found at MonolithicPower.com
			QF QFN (1.2x1.6)	U QFN (5x5)	
			QG QFN (1.4x1.8)	V QFN (4x5)	

⑤ -Z Tape & Reel

CONTACT & ORDERING

Seattle
San Jose

Detroit

Munich
Tolochenaz
Barcelona

Shanghai
Chengdu
Shenzhen
Bangalore
Singapore
Hangzhou
Taiwan
Tokyo
South Korea

Regional Headquarters

MPS Seattle

5808 Lake Washington Blvd. NE
Kirkland, WA 98033, USA
Tel: +1 425-296-9956

MPS San Jose

79 Great Oaks Blvd.
San Jose, CA 95119, USA
Tel: +1 408-826-0600

MPS China Chengdu

#8 Kexin Road West Park of Export
Processing Zone West Hi-Tech Zone
Chengdu, Sichuan, 611731
Tel: +86-28-8730-3000

MPS China Hangzhou

Floor 6, Building A2, Xixi Center,
No. 588 West Wenyi Road, Xihu District
Hangzhou, Zhejiang, 310012
Tel: +86-571-8981-8588

MPS Switzerland

Route de Lully 5 A
1131 Tolochenaz, Switzerland
Tel: +41-21-805-0100

MPS Spain

Av. Josep Tarradellas 123, 5-A
08029 Barcelona, Spain
Tel: +34-931-815-400

MPS Investor Relations

Tel: +1 408-826-0777

Asia Sales Offices

MPS China Chengdu

#8 Kexin Road West Park of Export
Processing Zone West Hi-Tech Zone
Chengdu, Sichuan, 611731
Tel: +86-28-8730-3000

MPS China Shanghai

Floor 27, Magnolia Plaza, No. 777,
Hongqiao Road, Xuhui District
Shanghai 20030
Tel: +86-21-2225-1700

MPS Singapore

5 Tampines Central 6
#03-38, Singapore 529482
Tel: +65-65918705

MPS China Hangzhou

Floor 6, Building A2, Xixi Center,
No. 588 West Wenyi Road, Xihu District
Hangzhou, Zhejiang, 310012
Tel: +86-571-8981-8588

MPS China Shenzhen

Room 1401, Kingkey Riverfront Times
Square Branch North,
Binhe Avenue South, Futian District
Shenzhen Guangdong, 518054
Tel: +86-755-3688-5818

MPS Japan

Shinjuku Sumitomo Bldg. 31F
2-6-1 Nishishinjuku Shinjuku-ku,
Tokyo 163-0231, Japan
Tel: +81-3-5989-0885

MPS Korea

C 403, 4F Pangyo Digital Center, Sampy-
ong-dong 624 5pilgi, Bundang-gu,
SeongNam-city, Kyunggi-do, Korea
Tel: +82-2-598-2307

MPS Taiwan

29F, No. 97, Section 1, Xintai 5th Rd.
Xizhi District, New Taipei City
Tel: +886-2-86911600

MPS India

Unit G-12, Prestige Towers,
No 99 / 100, Residency Road,
Bangalore 560025
Tel: +91-80-4124-0312 / 20

US Sales Offices

MPS US

79 Great Oaks Blvd.
San Jose, CA 95119 USA
Tel: +1 408-826-0600

MPS Detroit

19499 Victor Parkway
Livonia, MI 48152, USA
Tel: +1 248-907-0222

EU Sales Offices

MPS Europe

Alte Landstrasse 25
85521 Ottobrunn, Germany
Tel: +49-89-80913512-0

MPS Spain

Av. Josep Tarradellas 123, 5-A
08029 Barcelona, Spain
Tel: +34-931-815-400

Want to order?

Visit MonolithicPower.com

Online Order Support:

1-408-826-0736

eOrder@monolithicpower.com