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Linear and Switching Voltage Regulators



Selection guide



Content

| | |
|----------------------------------|----|
| Linear voltage regulators | 3 |
| DC-DC switching regulators | 9 |
| Battery management ICs | 20 |
| LED drivers | 21 |
| LCD OLED display PSUs | 26 |
| LNB supplies | 27 |
| Hot-swap power management | 28 |
| Voltage references | 28 |



Linear voltage regulators

STANDARD POSITIVE VOLTAGE REGULATORS

| Part number | Package | General description | DC input voltage max (V) | Output voltage (V_{OUT}) nom (V) | Output current (I_{OUT}) nom (A) | Adjustable regulated output voltage | Dropout voltage (V_o) nom (V) | Output tolerance (%) typ | Quiescent current (I_q) typ (mA) | Operating temperature | |
|-------------|---|---|--------------------------|--------------------------------------|--------------------------------------|-------------------------------------|-----------------------------------|--------------------------|--------------------------------------|-----------------------|----------|
| | | | | | | | | | | Min (°C) | Max (°C) |
| L78 | D ² PAK C-LEAD CUT; DPAK; TO-220; TO-220AB; TO-220FP | 1.5 A positive voltage regulators | 35 | 5 : 24 | 1.5 | No | 2 | 4 | 8 | -40 | 125 |
| L78L | S0-8; S0T-89; TO-92 | 0.1 A positive voltage regulators | 30 | 3.3 : 24 | 0.1 | No | 1.7 | 4 | 6 | -40 | 125 |
| L78M | DPAK; IPAk; TO-220; TO-220AB; TO-220FP | 0.5 A precision positive voltage regulators | 35 | 5 : 24 | 0.5 | No | 2 | 2 | 6 | -40 | 125 |
| L78S | TO-220; TO-220AB | 2 A positive voltage regulators | 35 | 5 : 24 | 2 | No | 2 | 4 | 8 | 0 | 150 |
| LM217 | D ² PAK C-LEAD CUT; TO-220AB | 1.2 V to 37 V adjustable voltage regulators | 40 | - | 1.5 | Yes | 2 | 4 | - | -25 | 150 |
| LM217L | S0-8; TO-92 | Low current 1.2 to 37 V adjustable voltage regulator | 40 | - | 0.1 | Yes | 2 | 4 | - | -40 | 125 |
| LM217M | DPAK | Medium current 1.2 to 37 V adjustable voltage regulator | 40 | - | 0.5 | Yes | 2 | 4 | - | -40 | 125 |
| LM317 | D ² PAK C-LEAD CUT; TO-220AB; TO-220FP | 1.2 V to 37 V adjustable voltage regulators | 40 | - | 1.5 | Yes | 2 | 4 | - | 0 | 125 |
| LM317L | S0-8; TO-92 | Low current 1.2 to 37 V adjustable voltage regulator | 40 | - | 0.1 | Yes | 2 | 4 | - | 0 | 125 |
| LM317M | DPAK | Medium current 1.2 to 37 V adjustable voltage regulator | 40 | - | 0.5 | Yes | 2 | 4 | - | 0 | 125 |
| LM323 | TO-220 | Three-terminal 3 A positive voltage regulators | 20 | 5 | 3 | No | 2 | 4 | 12 | 0 | 125 |
| LM723 | PDIP 14 | High precision voltage regulator | 40 | - | 0.15 | Yes | 3 | 3 | 2.3 | 0 | 70 |
| PB137 | TO-220 | Positive voltage regulator for battery charger | 40 | 13.7 | 1.5 | No | 2.1 | 1 | 4 | 0 | 150 |

STANDARD NEGATIVE VOLTAGE REGULATORS

| Part number | Package | General description | DC input voltage max (V) | Output voltage (V_{OUT}) nom (V) | Output current (I_{OUT}) nom (A) | Adjustable regulated output voltage | Dropout voltage (V_D) nom (V) | Output tolerance (%) typ | Quiescent current (I_Q) typ (mA) | Operating temperature | |
|-------------|---|---|--------------------------|--------------------------------------|--------------------------------------|-------------------------------------|-----------------------------------|--------------------------|--------------------------------------|-----------------------|----------|
| | | | | | | | | | | Min (°C) | Max (°C) |
| L79 | D ² PAK C-LEAD CUT; TO-220; TO-220AB; TO-220FP | 1.5 A negative voltage regulators | -35 | -15 : -5 | 1.5 | No | 1.1 | 2 | 3 | 0 | 150 |
| L79L | SO-8; SOT-89; TO-92 | 0.1 A negative voltage regulators | -30 | -15 : -5 | 0.1 | No | 1.7 | 4 | 6 | -40 | 125 |
| LM337 | TO-220 | Three-terminal adjustable negative voltage regulators | -40 | - | 1.5 | Yes | 2 | 3 | - | 0 | 125 |

LOW DROPOUT VOLTAGE REGULATORS

| Part number | Package | General description | DC input voltage max (V) | Output voltage (V_{OUT}) nom (V) | Output current (I_{OUT}) nom (A) | Adjustable regulated output voltage | Supply voltage rejection ratio (SVR) (@ 10 kHz) typ (dB) | Dropout voltage (V_D) nom (V) | Output tolerance (%) typ | Quiescent current (I_Q) typ (mA) | Operating temperature | |
|-------------|---------------------------------------|---|--------------------------|--------------------------------------|--------------------------------------|-------------------------------------|--|-----------------------------------|--------------------------|--------------------------------------|-----------------------|----------|
| | | | | | | | | | | | Min (°C) | Max (°C) |
| A6932H1.2 | PowerSO-8 | 2 A ULDO linear regulator for automotive applications | From 2 V to 14 V | Adj. 1.5 V to 5 V | Up to 2 A | Adj. 1.5 V to 5 V | - | - | 1 | 0.2 | -40 | 85 |
| KFXX | DPAK; SO-8 | Very low drop voltage regulators with inhibit | 20 | 2.5 : 8 | 0.5 | No | 60 | 0.4 | 2 | 0.5 | -40 | 125 |
| L4931* | DPAK; PPACK 5; SO-8; TO-92 | Very low drop voltage regulators with inhibit | 20 | 2.7 : 12 | 0.25 | No | 55 | 0.4 | 1 | 0.6 | -40 | 125 |
| L4940 | D ² PAK C-LEAD CUT; TO-220 | 1.5 A very low drop voltage regulator IC | 17 | 5 : 12 | 1.5 | No | 46 | 0.45 | 2 | 5 | -40 | 150 |
| L4941 | DPAK; TO-220 | Very low drop 1 A regulator | 16 | 5 | 1 | No | 44 | 0.45 | 4 | 4 | -40 | 150 |
| L6932 | SO-8 | High performance 2 A ULDO linear regulator | From 2 V to 14 V | 1.5 V, 1.8 V, 2.5 V | Up to 2 A | Adj. 1.5 V to 5 V | - | - | 1 | 0.2 | -25 | 125 |
| L6932H1.2 | PowerSO-8 | High performance 2 A ULDO linear regulator | From 2 V to 14 V | Adj. 1.5 V to 5 V | Up to 2 A | Adj. 1.5 V to 5 V | - | - | 1 | 0.2 | -25 | 125 |

Note: * automotive grade version available

LOW DROPOUT VOLTAGE REGULATORS (CONT'D)

| Part number | Package | General description | DC input voltage max (V) | Output voltage (V_{OUT}) nom (V) | Output current (I_{OUT}) nom (A) | Adjustable regulated output voltage | Supply voltage rejection ratio (SVR) (@ 10 kHz) typ (dB) | Dropout voltage (V_D) nom (V) | Output tolerance (%) typ | Quiescent current (I_Q) typ (mA) | Operating temperature | |
|-------------|---|--|--------------------------|--------------------------------------|--------------------------------------|-------------------------------------|--|-----------------------------------|--------------------------|--------------------------------------|-----------------------|----------|
| | | | | | | | | | | | Min (°C) | Max (°C) |
| LD1084 | TO-220 | 5 A low-drop positive voltage regulator adjustable | 30 | - | 5 | Yes | 58 | 1.3 | 1 | 5 | -40 | 125 |
| LD1085 | D ² PAK C-LEAD CUT; D ² PAK SMD; TO-220; TO-220FP | 3 A low drop positive voltage regulator: adjustable and fixed | 30 | 1.8 : 5 | 3 | Yes | 55 | 1.3 | 1 | 5 | -40 | 125 |
| LD1085C | DPAK | 3 A low-drop, adjustable positive voltage regulator | 30 | - | 3 | Yes | 65 | 1.3 | 2 | 5 | -40 | 125 |
| LD1086* | D ² PAK C-LEAD CUT; D ² PAK SMD; DPAK; TO-220; TO-220AB; VFDFPN 8 4x4x1.0 | 1.5 A adjustable and fixed low drop positive voltage regulator | 30 | 1.8 : 12 | 1.5 | Yes | 45 | 1.3 | 1 | 5 | -40 | 125 |
| LD1117 | DPAK; SO-8; SOT-223; TO-220; TO-220AB | Adjustable and fixed low drop positive voltage regulator | 15 | 1.2 : 5 | 0.8 | Yes | 65 | 1.1 | 1 | 5 | 0 | 125 |
| LD1117A | DPAK; SOT-223; TO-220AB | Low drop fixed and adjustable positive voltage regulators | 15 | 1.2 : 3.3 | 1 | Yes | 65 | 1.15 | 2 | 5 | 0 | 125 |
| LD1580 | P ² PAK | 7 A very low drop adjustable positive voltage regulator | 6 | - | 7 | Yes | 72 | 0.4 | 1 | 6 | -40 | 125 |
| LD29080 | DPAK; PPACK 5; SOT-223 | 800 mA fixed and adjustable output very low drop voltage regulator | 13 | 1.5 : 9 | 0.8 | Yes | 65 | 0.4 | 1 | 2 | -40 | 125 |
| LD29150 | DPAK; P ² PAK; PPACK 5 | 1.5 A, very low drop voltage regulator | 13 | 1.8 : 5 | 1.5 | Yes | 65 | 0.4 | 1 | 15 | -40 | 125 |
| LD29300 | P ² PAK | 3 A, very low drop voltage regulator | 13 | 3.3 | 3 | Yes | 60 | 0.4 | 1 | 20 | -40 | 125 |
| LD2979 | SOT23-5L | Very low drop voltage regulators with inhibit | 16 | 3 : 3.3 | 0.05 | No | 50 | 0.2 | 2 | 0.08 | -25 | 125 |
| LD2980 | SOT23-5L | Very low drop voltage regulators with inhibit | 16 | 1.8 : 5 | 0.05 | No | 60 | 0.12 | 0.5 | 0.08 | -40 | 125 |
| LD2981 | SOT-89; SOT23-5L | Very low drop voltage regulators with inhibit | 16 | 3 : 5 | 0.1 | No | 60 | 0.17 | 0.75 | 0.08 | -40 | 125 |

Note: * automotive grade version available

LOW DROPOUT VOLTAGE REGULATORS (CONT'D)

| Part number | Package | General description | DC input voltage max (V) | Output voltage (V_{OUT}) nom (V) | Output current (I_{OUT}) nom (A) | Adjustable regulated output voltage | Supply voltage rejection ratio (SVR) (@ 10 kHz) typ (dB) | Dropout voltage (V_D) nom (V) | Output tolerance (%) typ | Quiescent current (I_Q) typ (mA) | Operating temperature | |
|-------------|--|---|--------------------------|--------------------------------------|--------------------------------------|-------------------------------------|--|-----------------------------------|--------------------------|--------------------------------------|-----------------------|----------|
| | | | | | | | | | | | Min (°C) | Max (°C) |
| LD2985 | SOT23-5L | Very low drop and low noise voltage regulator with inhibit function | 16 | 1.8 : 5 | 0.15 | No | 65 | 0.28 | 2.5 | 0.08 | -40 | 125 |
| LD39015 | SOT 666; SOT23-5L | 150 mA low quiescent current low noise voltage regulator | 5.5 | 0.8 : 3.3 | 0.15 | No | 62 | 0.08 | 2 | 0.18 | -40 | 125 |
| LD39015J | Flip-Chip 500 u | 150 mA low quiescent current low noise voltage regulator | 5.5 | 1.2 : 2.8 | 0.15 | No | 67 | 0.09 | 2 | 0.2 | -40 | 125 |
| LD39020 | VDFPN 1.0x1.0x0.38 4L | 200 mA very low quiescent current Linear regulator IC | 5.5 | 0.8 : 5 | 0.2 | No | 67 | 0.2 | 0.5 | 0.02 | -40 | 125 |
| LD39030SJ | Flip-Chip 400 u | 300 mA low quiescent current soft-start, low noise voltage regulator | 5.5 | 1 : 3.3 | 0.3 | No | 62 | 0.2 | 2 | 0.02 | -40 | 125 |
| LD39050 | VDFPN 6 2x2x1.0; VDFPN 6 3x3 | 500 mA low quiescent current and low noise voltage regulator | 5.5 | 2.5 : 5 | 0.5 | Yes | 62 | 0.2 | 2 | 0.02 | -40 | 125 |
| LD39080 | DPAK; PPACK 5 | Ultra low drop BiCMOS voltage regulator | 6 | 1.2 : 3.3 | 0.8 | Yes | 40 | 0.15 | 1.5 | 1 | -40 | 125 |
| LD39100 | VDFPN 6 3x3 | 1 A low quiescent current low noise voltage regulator | 5.5 | 1.2 : 3 | 1 | Yes | 62 | 0.2 | 2 | 0.02 | -40 | 125 |
| LD39115J | Flip-Chip 400 u | 150 mA low quiescent current low noise voltage regulator | 5.5 | 1 : 3.3 | 0.15 | No | 67 | 0.08 | 2 | 0.02 | -40 | 125 |
| LD39130S | Flip-chip 400 μ m; VDFPN 6 1.2x1.3 | 300 mA very low quiescent current Linear regulator IC with automatic Green mode | 5.5 | 1 : 4.1 | 0.3 | Yes | 65 | 0.3 | 1 | 0.001 | -40 | 125 |
| LD39150 | DPAK; PPACK 5; VDFPN 6 3x3 | Ultra low drop BiCMOS voltage regulator | 6 | 1.8 : 3.3 | 1.5 | Yes | 40 | 0.2 | 1.5 | 1 | -40 | 125 |
| LD39200 | VDFPN 6 3x3; VDFPN 8 4x4x1.0 | 2 A high PSRR ultra low drop linear regulator with reverse current protection | 6 | 3.3 | 2 | Yes | 65 | 0.130 | 1 | 0.1 | -40 | 125 |

LOW DROPOUT VOLTAGE REGULATORS (CONT'D)

| Part number | Package | General description | DC input voltage max (V) | Output voltage (V _{OUT}) nom (V) | Output current (I _{OUT}) nom (A) | Adjustable regulated output voltage | Supply voltage rejection ratio (SVR) (@ 10 kHz) typ (dB) | Dropout voltage (V _D) nom (V) | Output tolerance (%) typ | Quiescent current (I _Q) typ (mA) | Operating temperature | |
|-------------|--|---|--------------------------|--|--|-------------------------------------|--|---|--------------------------|--|-----------------------|----------|
| | | | | | | | | | | | Min (°C) | Max (°C) |
| LD39300 | DPAK; PPACK 5 | Ultra low drop BiCMOS voltage regulator | 6 | 1.2 : 3.3 | 3 | Yes | 40 | 0.2 | 1.5 | 1.2 | -40 | 125 |
| LD3985 | Flip-Chip 500 u; SOT23-5L; TSOT23-5L | Ultra low drop-low noise BiCMOS voltage regulators | 6 | 1.22 : 4.7 | 0.15 | No | 50 | 0.06 | 2 | 0.085 | -40 | 125 |
| LD49150 | PPACK 5 | 1.5 A ultra low dropout voltage regulator | 5.5 | 0.8 : 1.2 | 1.5 | Yes | 68 | 0.12 | 1.5 | 4 | -25 | 125 |
| LD49300 | PPACK 5 | 3 A very low drop for low output voltage regulator | 5.5 | 0.8 : 1.2 | 3 | Yes | 68 | 0.22 | 1.5 | 4 | -25 | 125 |
| LD59015 | SOT323-5L | 150 mA low noise high PSRR linear voltage regulator | 5.5 | 0.8 : 3.3 | 0.15 | No | 76 | 0.15 | 1.8 | 0.031 | -40 | 125 |
| LDCL015 | SOT23-5L | 150 mA capless ultra low drop linear regulator ICs | 5.5 | 3.3 | 0.15 | Yes | 51 | 0.05 | 2 | 0.12 | -40 | 125 |
| LDF | DPAK; PPACK 5; VFDFPN 6 3x3; VFDFPN 6L 2x2x0.9 | 1 A very low drop voltage regulator IC | 16 | 1.8 : 3.3 | 1 | Yes | 55 | 0.2 | 1 | 0.2 | -40 | 125 |
| LDFM | DPAK; PPACK 5; VFDFPN 6 3x3; VFDFPN 6L 2x2x0.9 | 500 mA very low drop voltage regulator | 16 | 5 | 0.5 | Yes | 55 | 0.125 | 1 | 0.2 | -40 | 125 |
| LDK120 | SOT23-5L; SOT323-5L; VFDFPN 6 1.2x1.3x0.45 | 200 mA low quiescent current very low noise LDO | 5.5 | 0.8 : 3.5 | 0.2 | Yes | 55 | 0.1 | 2 | 0.03 | -40 | 125 |
| LDK130 | SOT23-5L; SOT323-5L; VFDFPN 6 1.2x1.3x0.45 | 300 mA low quiescent current very low noise LDO | 5.5 | 0.8 : 3.3 | 0.3 | Yes | 55 | 0.2 | 2 | 0.03 | -40 | 125 |
| LDK220 | SOT-89; SOT23-5L; SOT323-5L; VFDFPN 6 1.2x1.3x0.45 | 200 mA low quiescent current and low noise LDO | 13.2 | 1.2 : 9 | 0.2 | Yes | 36 | 0.1 | 2 | 0.055 | -40 | 125 |
| LDK715 | SOT23-5L; VFDFPN 8 3x3x1.0 | High input voltage 85 mA LDO linear regulator | 24 | 3 : 5 | 0.85 | - | 53 | 0.5 | 1 | 0.005 | -40 | 125 |

LOW DROPOUT VOLTAGE REGULATORS (CONT'D)

| Part number | Package | General description | DC input voltage max (V) | Output voltage (V_{OUT}) nom (V) | Output current (I_{OUT}) nom (A) | Adjustable regulated output voltage | Supply voltage rejection ratio (SVR) (@ 10 kHz) typ (dB) | Dropout voltage (V_D) nom (V) | Output tolerance (%) typ | Quiescent current (I_Q) typ (mA) | Operating temperature | |
|-------------|--|--|--------------------------|--------------------------------------|--------------------------------------|-------------------------------------|--|-----------------------------------|--------------------------|--------------------------------------|-----------------------|----------|
| | | | | | | | | | | | Min (°C) | Max (°C) |
| LDL112 | PPACK 5; SO-8; VFDFPN 6 2x2x0.75; VFDFPN 6 3x3 | 1.2 A low quiescent current LDO with reverse current protection | 5.5 | 0.8 : 5 | 1.2 | Yes | 46 | 0.3 | 2 | 0.035 | -40 | 125 |
| LDLN015 | VFDFPN 6 2x2x1.0 | 150 mA - ultra low noise - high PSRR linear voltage regulator IC | 5.5 | 1 : 3.3 | 0.15 | No | 89 | 0.086 | 1 | 0.035 | -40 | 125 |
| LDS3985* | SOT23-5L; VFDFPN 6 3x3 | Very low drop and low noise BiCMOS 300 mA voltage regulator | 6 | 1.5 : 5 | 0.3 | No | 50 | 0.15 | 2 | 0.085 | -40 | 125 |
| LEXX | SO-8; TO-92 | Very low-dropout voltage regulator with inhibit function | 20 | 3 : 8 | 0.1 | No | 60 | 0.2 | 1 | 0.5 | -40 | 125 |
| LFXX* | DPAK; PPACK 5; TO-220; TO-220AB; TO-220FP | Very low drop voltage regulators with inhibit | 16 | 1.5 : 12 | 0.5 | No | 65 | 0.45 | 1 | 0.5 | -40 | 125 |
| LK112 | SOT23-5L | Low noise and low drop voltage regulator with shutdown function | 14 | 1.5 : 8 | 0.15 | No | 55 | 0.29 | 2 | 0.175 | -40 | 125 |
| LK112S | SOT23-5L | Low noise and low drop voltage regulator with shutdown function | 14 | 1.8 : 5 | 0.2 | No | 55 | 0.35 | 2 | 0.175 | -40 | 125 |
| LK115 | SO-8 | Very low drop voltage regulators with inhibit | 20 | 3.3 : 5 | 0.1 | No | 57 | 0.2 | 3 | 0.28 | -40 | 125 |
| LM2931 | DPAK; SO-8; TO-92 | Very low drop voltage regulator with inhibit function | 40 | 3.3 : 5 | 0.1 | Yes | 62 | 0.25 | 5 | 2.5 | -40 | 125 |
| ST1L04 | PPACK 5 | Low quiescent current voltage regulator | 10 | - | 1 | Yes | 55 | 1 | 2 | 3 | 0 | 125 |
| ST1L05 | VFDFPN 6 3x3; VFDFPN 8 4x4x1.0 | Very low quiescent BiCMOS voltage regulator | 5.5 | 2.5 : 3.3 | 1.3 | Yes | 62 | 0.3 | 2 | 0.35 | 0 | 125 |
| ST1L08 | VFQFPN 8 2x3x0.9 | 800 mA Ultra low drop, high PSRR voltage regulator | 5.5 | 0.5 - 3.3 | 0.8 | Yes | 62 | 70 | 2 | 0.035 | -40 | 125 |

Note: * automotive grade version available

LOW DROPOUT VOLTAGE REGULATORS (CONT'D)

| Part number | Package | General description | DC input voltage max (V) | Output voltage (V_{OUT}) nom (V) | Output current (I_{OUT}) nom (A) | Adjustable regulated output voltage | Supply voltage rejection ratio (SVR) (@ 10 kHz) typ (dB) | Dropout voltage (V_D) nom (V) | Output tolerance (%) typ | Quiescent current (I_Q) typ (mA) | Operating temperature | |
|-------------|----------------------------------|---|--------------------------|--------------------------------------|--------------------------------------|-------------------------------------|--|-----------------------------------|--------------------------|--------------------------------------|-----------------------|----------|
| | | | | | | | | | | | Min (°C) | Max (°C) |
| ST715 | SOT323-5L; SOT23-5L; VDFPN 8 3x3 | High input voltage - 85 mA LDO linear regulator | 24 | 2.5 : 3.3 | 0.85 | Yes | 53 | 0.5 | 4 | 0.0038 | -40 | 125 |
| STLQ015 | SOT 666 | 150 mA - ultra low quiescent current linear voltage regulator | 5.5 | 1.2 : 3.3 | 0.15 | No | 30 | 0.112 | 2 | 0.001 | -40 | 125 |
| STLQ50 | SOT323-5L | 50 mA, 3 μ A Supply current low drop linear regulator | 12 | 1.8 : 5 | 0.05 | Yes | 10 | 0.2 | 2 | 0.003 | -40 | 125 |

DC-DC switching regulators

BOOST REGULATORS

| Part number | General description | Package | Input voltage (V_{IN}) max (V) | Regulated output voltage | | Output current-Max (I_{OUT_MAX}) (A) | Quiescent current (I_Q) typ (mA) | Synchronous rectification | Switching frequency typ (kHz) |
|-------------|--|-----------------|------------------------------------|--------------------------|---------|---|--------------------------------------|---------------------------|-------------------------------|
| | | | | Min (V) | Max (V) | | | | |
| L6920 | 1 V high efficiency synchronous step up converter | TSSOP8 | 5.5 | 2 | 5.2 | 1.2 | 0.01 | Yes | 300 |
| L6920DB | Synchronous rectifier step up converter | MSOP/TSSOP 8 | 5.5 | 1.8 | 5.2 | 0.9 | 0.01 | Yes | 300 |
| L6920DC | Synchronous rectifier step up converter | MSOP/TSSOP 8 | 5.5 | 1.8 | 5.5 | 0.9 | 0.01 | Yes | 300 |
| ST662AB* | DC-DC converter from 5 V to 12 V, 0.03 A for flash memory programming supply | S0-8 | 5.5 | 11.4 | 12.6 | 0.03 | 0.1 | No | 400 |
| ST662AC | DC-DC converter from 5 V to 12 V, 0.03 A for flash memory programming supply | S0-8 | 5.5 | 11.4 | 12.6 | 0.03 | 0.1 | No | 400 |
| ST8R00 | Micropower step up DC-DC converter | VDFPN 8 4x4x1.0 | 6 | 6 | 12 | 1 | 0.8 | Yes | 1200 |

Note: * automotive grade version available

BUCK REGULATORS

| Part Number | General description | Package | Input voltage (V_{in}) | | Regulated output voltage | | Output current-Max (I_{OUT_MAX}) (A) | Synchronous rectification | Quiescent current (I_Q) typ (mA) | Regulator switching frequency typ (kHz) | Inhibit pin | Soft-start | Junction temperature (T_J) | |
|----------------|--|-----------|----------------------------|---------|--------------------------|---------|---|---------------------------|--------------------------------------|---|-------------|------------|--------------------------------|----------|
| | | | Min (V) | Max (V) | Min (V) | Max (V) | | | | | | | Min (°C) | Max (°C) |
| A5970AD | Up to 1 A step down switching regulator for automotive applications | S0-8 | 4 | 36 | 1.235 | 36 | 1 | No | 2.5 | 500 | Yes | No | -40 | 125 |
| A5970D | Up to 1 A step down switching regulator for automotive applications | S0-8 | 4 | 36 | 1.235 | 36 | 1 | No | 2.5 | 250 | Yes | No | -40 | 125 |
| A5972D | Up to 1.5 A step down switching regulator for automotive applications | S0-8 | 4 | 36 | 1.235 | 36 | 1.5 | No | 2.5 | 250 | No | No | -40 | 125 |
| A5973AD | Up to 1.5 A step down switching regulator for automotive applications | PowerS0-8 | 4 | 36 | 1.235 | 36 | 1.5 | No | 2.5 | 500 | Yes | No | -40 | 125 |
| A5973D | Up to 2 A step down switching regulator for automotive applications | PowerS0-8 | 4 | 36 | 1.235 | 36 | 2 | No | 2.5 | 250 | Yes | No | -40 | 125 |
| A5974AD | Up to 2 A step down switching regulator for automotive applications | PowerS0-8 | 4 | 36 | 1.235 | 36 | 2 | No | 2.5 | 500 | Yes | No | -40 | 125 |
| A5974D | Up to 2.5 A step down switching regulator for automotive applications | PowerS0-8 | 4 | 36 | 1.235 | 36 | 2.5 | No | 2.5 | 250 | Yes | No | -40 | 125 |
| A5975AD | Up to 2.5 A step down switching regulator for automotive applications | PowerS0-8 | 4 | 36 | 1.235 | 36 | 2.5 | No | 2.5 | 500 | Yes | No | -40 | 125 |
| A5975D | Up to 3 A step down switching regulator for automotive applications | PowerS0-8 | 4 | 36 | 1.235 | 36 | 3 | No | 2.5 | 250 | Yes | No | -40 | 125 |
| A6902D | Up to 1 A switching step down regulator with adjustable current limit for automotive applications | S0-8 | 8 | 36 | 1.235 | 36 | 1 | No | 2.5 | 250 | No | No | -40 | 125 |
| A6985F | 38 V 0.5 A synchronous step-down switching regulator with 30 uA quiescent current for automotive application | HTSSOP16 | 4 | 38 | 0.85 | 38 | 0.5 | Yes | 0.03 | 250 | Yes | Yes | -40 | 150 |
| A6986 | 38 V 2 A synchronous step-down switching regulator with 30 uA quiescent current for automotive applications | HTSSOP16 | 4 | 38 | 0.85 | 38 | 2 | Yes | 0.03 | 250 | Yes | Yes | -40 | 150 |

BUCK REGULATORS (CONT'D)

| Part Number | General description | Package | Input voltage (V_{IN}) | | Regulated output voltage | | Output current-Max (I_{OUT_MAX}) (A) | Synchronous rectification | Quiescent current (I_Q) typ (mA) | Regulator switching frequency typ (kHz) | Inhibit pin | Soft-start | Junction temperature (T_J) | |
|------------------|--|--------------------------|----------------------------|---------|--------------------------|---------|---|---------------------------|--------------------------------------|---|-------------|------------|--------------------------------|----------|
| | | | Min (V) | Max (V) | Min (V) | Max (V) | | | | | | | Min (°C) | Max (°C) |
| A6986F | 38 V 0.5 A synchronous step-down switching regulator with 30 uA quiescent current for automotive application | HTSSOP16 | 4 | 38 | 0.85 | 38 | 1.5 | Yes | 0.03 | 250 | Yes | Yes | -40 | 150 |
| A7985A | 2 A step-down switching regulator for automotive applications | PowerSO-8 | 4.5 | 38 | 0.6 | 38 | 2 | No | 2.4 | 250 | Yes | Yes | -40 | 125 |
| A7986A | 3 A step-down switching regulator for automotive applications | PowerSO-8 | 4.5 | 38 | 0.6 | 38 | 3 | No | 2.4 | 250 | Yes | Yes | -40 | 125 |
| AST1S31 | 3 A DC step-down switching regulator for automotive applications | VDFPN 8 3x3x1.0 | 2.8 | 4 | 0.8 | 4 | 3 | Yes | 0.63 | 1500 | Yes | Yes | -40 | 150 |
| AST1S31HF | Up to 4 V, 3 A step-down 2.3 MHz switching regulator for automotive applications | VDFPN 8 3x3x1.0 | 2.8 | 4 | 0.8 | 4 | 3 | Yes | 0.63 | 2300 | Yes | Yes | -40 | 150 |
| B5973D | Up to 2 A step down switching regulator for automotive applications | PowerSO-8 | 4 | 36 | 1.235 | 36 | 2 | No | 2.5 | 250 | Yes | No | -40 | 125 |
| L296 | High current switching regulators | MW 15L | 9 | 46 | 5.1 | 40 | 4 | No | 30 | 100 | Yes | Yes | -40 | 125 |
| L4962 | 1.5 A switching regulator | HW 7LDS SPLIT V; PDIP 16 | 9 | 46 | 5.1 | 40 | 1.5 | No | 15 | 100 | Yes | Yes | -40 | 125 |
| L4963 | 1.5 A switching regulator | PDIP 18; SO-20 | 9 | 46 | 5.1 | 36 | 1.5 | No | 9 | 60 | Yes | Yes | -40 | 125 |
| L4964 | High current switching regulator | MW 15L | 9 | 46 | 5.1 | 38 | 4 | No | 30 | 120 | Yes | Yes | -40 | 125 |
| L4970A | 10 A switching regulator | MW 15L | 15 | 50 | 5.1 | 40 | 10 | No | 13 | 200 | No | No | -40 | 125 |
| L4971 | 1.5 A switching regulator | DIP-8; SO-16W | 8 | 55 | 3.3 | 50 | 1.5 | No | 2.7 | 100 | Yes | Yes | -40 | 125 |
| L4972 | 2 A switching regulator | PDIP 20; SO-20 | 15 | 50 | 5.1 | 40 | 2 | No | 13 | 100 | No | No | -40 | 125 |

BUCK REGULATORS (CONT'D)

| Part Number | General description | Package | Input voltage (V_{in}) | | Regulated output voltage | | Output current-Max (I_{OUT_MAX}) (A) | Synchronous rectification | Quiescent current (I_Q) typ (mA) | Regulator switching frequency typ (kHz) | Inhibit pin | Soft-start | Junction temperature (T_J) | |
|-------------|---|----------------------------|----------------------------|---------|--------------------------|---------|---|---------------------------|--------------------------------------|---|-------------|------------|--------------------------------|----------|
| | | | Min (V) | Max (V) | Min (V) | Max (V) | | | | | | | Min (°C) | Max (°C) |
| L4973 | 3.5 A switching regulator | PDIP 18; SO-20 | 8 | 55 | 0.5 | 50 | 3.5 | No | 2.7 | 100 | Yes | Yes | -40 | 125 |
| L4974A | 3.5 A switching regulator | PDIP 20 | 15 | 50 | 5.1 | 40 | 4 | No | 13 | 100 | No | No | -40 | 125 |
| L4975A | 5 A switching regulator | MW 15L | 15 | 50 | 5.1 | 40 | 5 | No | 13 | 200 | No | No | -40 | 125 |
| L4976 | 1 A step down switching regulator | DIP-8; SO-16W | 8 | 55 | 0.5 | 50 | 1 | No | 2.7 | 100 | No | No | -40 | 125 |
| L4977A | 7 A switching regulator | MW 15L | 15 | 50 | 5.1 | 40 | 7 | No | 13 | 200 | No | No | -40 | 125 |
| L4978 | 2 A step down switching regulator | DIP-8; SO-16W | 8 | 55 | 3.3 | 50 | 2 | No | 2.7 | 100 | Yes | Yes | -40 | 125 |
| L5970AD | Up to 1 A step down switching regulator | SO-8 | 4.4 | 36 | 1.235 | 36 | 1 | No | 2.5 | 500 | Yes | No | -40 | 125 |
| L5970D | Up to 1 A step down switching regulator | SO-8 | 4.4 | 36 | 1.235 | 36 | 1 | No | 2.5 | 250 | Yes | No | -40 | 125 |
| L5972D | Up to 1.5 A step down switching regulator | SO-8 | 4.4 | 36 | 1.235 | 36 | 1.5 | No | 2.5 | 250 | No | No | -40 | 125 |
| L5973AD | Up to 1.5 A step down switching regulator | PowerSO-8 | 4 | 36 | 1.235 | 36 | 1.5 | No | 2.5 | 500 | Yes | No | -40 | 125 |
| L5973D | Up to 2 A step down switching regulator | PowerSO-8 | 4 | 36 | 1.235 | 36 | 2 | No | 2.5 | 250 | Yes | No | -40 | 125 |
| L5980 | Up to 0.7 A step down switching regulator | VDFPN 8 3x3x1.0 | 2.9 | 18 | 0.6 | 18 | 0.7 | Yes | 2.4 | 250 | Yes | Yes | -40 | 125 |
| L5981 | Up to 1 A step down switching regulator | VDFPN 8 3x3x1.0 | 2.9 | 18 | 0.6 | 18 | 1 | No | 2.4 | 250 | Yes | Yes | -40 | 125 |
| L5983 | Up to 1.5 A step down switching regulator | VDFPN 8 3x3x1.0 | 2.9 | 18 | 0.6 | 18 | 1.5 | No | 2.4 | 250 | Yes | Yes | -40 | 125 |
| L5985 | Up to 2 A step down switching regulator | VDFPN 8 3x3x1.0 | 2.9 | 18 | 0.6 | 18 | 2 | No | 2.4 | 250 | Yes | Yes | -40 | 125 |
| L5986 | 2.5 A step-down switching regulator | PowerSO-8; VDFPN 8 3x3x1.0 | 2.9 | 18 | 0.6 | 18 | 2.5 | No | 2.4 | 250 | Yes | Yes | -40 | 125 |

BUCK REGULATORS (CONT'D)

| Part Number | General description | Package | Input voltage (V_{IN}) | | Regulated output voltage | | Output current-Max (I_{OUT_MAX}) (A) | Synchronous rectification | Quiescent current (I_Q) typ (mA) | Regulator switching frequency typ (kHz) | Inhibit pin | Soft-start | Junction temperature (T_J) | |
|-------------|--|--------------------------------|----------------------------|---------|--------------------------|---------|---|---------------------------|--------------------------------------|---|-------------|------------|--------------------------------|----------|
| | | | Min (V) | Max (V) | Min (V) | Max (V) | | | | | | | Min (°C) | Max (°C) |
| L5987 | 3 A step-down switching regulator | PowerSO-8; VDFPN 8 3x3x1.0 | 2.9 | 18 | 0.6 | 18 | 3 | No | 2 | 250 | Yes | Yes | -40 | 125 |
| L5988D | 4 A continuous (more than 5 A pulsed) step-down switching regulator with synchronous rectification | HTSSOP16 | 2.9 | 18 | 0.6 | 28 | 4 | Yes | 3 | 400 | Yes | Yes | -40 | 125 |
| L6902 | 1 A switching regulator with adjustable current limit | SO-8 | 8 | 36 | 1.235 | 36 | 1 | No | 2.5 | 250 | No | No | -40 | 125 |
| L6926 | High efficiency synchronous step-down regulator | MSOP/ TSSOP 8; VDFPN 8 3x3x1.0 | 2 | 5.5 | 0.6 | 5.5 | 0.8 | Yes | 0.3 | 600 | Yes | yes | -40 | 125 |
| L6928 | High efficiency monolithic synchronous step down regulator | MSOP/ TSSOP 8; VDFPN 8 3x3x1.0 | 2 | 5.5 | 0.6 | 5.5 | 0.8 | Yes | 0.23 | 1400 | Yes | Yes | -40 | 125 |
| L6984 | 36 V 400 mA synchronous step-down switching regulator | VDFPN 10 3x3x1.0 | 4.5 | 36 | 0.9 | 28 | 0.4 | Yes | 0.1 | 250 | Yes | Yes | -40 | 125 |
| L6985F | 38 V 0.5 A synchronous step-down switching regulator with 30 uA quiescent current | HTSSOP16 | 4 | 38 | 0.85 | 38 | 0.5 | Yes | 0.03 | 250 | Yes | Yes | -40 | 150 |
| L6986 | 38 V 2 A synchronous step-down switching regulator with 30 uA quiescent current | HTSSOP16 | 4 | 38 | 0.85 | 38 | 2 | Yes | 0.03 | 250 | Yes | Yes | -40 | 125 |
| L6986F | 38 V 1.5 A synchronous step-down switching regulator with 30 uA quiescent current | HTSSOP16 | 4 | 38 | 0.85 | 38 | 1.5 | Yes | 0.03 | 250 | Yes | Yes | -40 | 150 |
| L7980 | 2 A step-down switching regulator | PowerSO-8; VDFPN 8 3x3x1.0 | 4.5 | 28 | 0.6 | 28 | 2 | No | 2.4 | 250 | Yes | Yes | -40 | 125 |

BUCK REGULATORS (CONT'D)

| Part Number | General description | Package | Input voltage (V_{in}) | | Regulated output voltage | | Output current-Max (I_{OUT_MAX}) (A) | Synchronous rectification | Quiescent current (I_Q) typ (mA) | Regulator switching frequency typ (kHz) | Inhibit pin | Soft-start | Junction temperature (T_J) | |
|-------------|--|-----------------------------|----------------------------|---------|--------------------------|---------|---|---------------------------|--------------------------------------|---|-------------|--------------------|--------------------------------|----------|
| | | | Min (V) | Max (V) | Min (V) | Max (V) | | | | | | | Min (°C) | Max (°C) |
| L7981 | 3 A step-down switching regulator | PowerSO-8; VDFPN 8 3x3x1.0 | 4.5 | 28 | 0.6 | 28 | 3 | No | 2.4 | 250 | Yes | Yes | -40 | 125 |
| L7985 | 2 A step-down switching regulator | PowerSO-8; VDFPN 10 3x3x1.0 | 4.5 | 38 | 0.6 | 38 | 2 | No | 2.4 | 250 | Yes | Yes | -40 | 125 |
| L7986 | 3 A step-down switching regulator | PowerSO-8; VDFPN 10 3x3x1.0 | 4.5 | 38 | 0.6 | 38 | 3 | No | 2.4 | 250 | Yes | Yes | -40 | 125 |
| L7986TA | 3 A step-down switching regulator | PowerSO-8 | 4.5 | 38 | 0.6 | 38 | 3 | No | 2.4 | 250 | Yes | Yes | -40 | 125 |
| L7987 | 61 V 3 A asynchronous step-down switching regulator with adjustable current limitation | HTSSOP16 | 4.5 | 61 | 0.8 | 61 | 3 | No | 1 | 250 | Yes | Yes | -40 | 125 |
| L7987L | 61 V 2 A asynchronous step-down switching regulator with adjustable current limitation | HTSSOP16 | 4.5 | 61 | 0.8 | 61 | 2 | No | 1 | 250 | Yes | Yes | -40 | 125 |
| PM8903A | 3 A step-down monolithic switching regulator | VFQFPN 16 3x3x1.0 | 2.8 | 6 | 0.6 | 3.6 | 3 | Yes | 5 | 1100 | Yes | Fixed, 0.79 ms typ | -25 | 125 |
| ST1S03 | 1.5 A, 1.5 MHz adjustable, step-down switching regulator | VDFPN 6 3x3 | 2.7 | 16 | 0.8 | 5 | 1.5 | No | 2.5 | 1500 | Yes | Yes | -25 | 125 |
| ST1S06 | Synchronous rectification with inhibit, 1.5 A, 1.5 MHz fixed and adjustable, step-down switching regulator | VDFPN 6 3x3 | 2.7 | 5.5 | 0.8 | 5 | 1.5 | Yes | 1.5 | 1500 | Yes | yes | -40 | 150 |
| ST1S09 | Synchronous rectification with inhibit, 2 A, 1.5 MHz adjustable, step-down switching regulator | VDFPN 6 3x3 | 4.5 | 5.5 | 0.8 | 5 | 2 | Yes | 2.5 | 1500 | Yes | Yes | -40 | 150 |
| ST1S10 | Monolithic synchronous step-down regulator | PowerSO-8; VDFPN 8 4x4x1.0 | 2.7 | 18 | 0.8 | 16 | 3 | Yes | 1.5 | 900 | Yes | Yes | -40 | 125 |

BUCK REGULATORS (CONT'D)

| Part Number | General description | Package | Input voltage (V_{in}) | | Regulated output voltage | | Output current-Max (I_{OUT_MAX}) (A) | Synchronous rectification | Quiescent current (I_Q) typ (mA) | Regulator switching frequency typ (kHz) | Inhibit pin | Soft-start | Junction temperature (T_J) | |
|-------------|---|--|----------------------------|---------|--------------------------|---------|---|---------------------------|--------------------------------------|---|-------------|------------|--------------------------------|----------|
| | | | Min (V) | Max (V) | Min (V) | Max (V) | | | | | | | Min (°C) | Max (°C) |
| ST1S12 | Synchronous rectification with inhibit, 0.7 A, 1.7 MHz fixed and adjustable | TSOT23-5L | 2.5 | 5.5 | 0.6 | 5 | 0.7 | Yes | 0.6 | 1700 | Yes | Yes | -40 | 150 |
| ST1S14 | Up to 3 A step down switching regulator | PowerSO-8 | 5.5 | 48 | 0.8 | 48 | 3 | No | 2 | 850 | Yes | Yes | -40 | 150 |
| ST1S15 | 500 mA, 6 MHz synchronous step-down converter | Flip-Chip 400 μ ; VFDFPN 6 2x2x1.0 | 2.3 | 5.5 | 1.82 | 2.8 | 0.5 | Yes | 0.045 | 6000 | Yes | Yes | -40 | 150 |
| ST1S30 | 3 A, 1.5 MHz PWM step-down switching regulator with synchronous rectification | VFDFPN 8 4x4x1.0 | 2.7 | 6 | 0.8 | 5 | 3 | Yes | 2.5 | 1500 | Yes | Yes | -40 | 150 |
| ST1S31 | 3 A DC step-down switching regulator | SO-8; VFDFPN 8 3x3x1.0 | 2.8 | 5.5 | 0.8 | 5.5 | 3 | Yes | 0.63 | 1500 | Yes | Yes | -40 | 150 |
| ST1S32 | 4 A DC step-down switching regulator | VFDFPN 8 4x4x1.0 | 2.8 | 5.5 | 0.8 | 5.5 | 4 | Yes | 0.63 | 1500 | Yes | Yes | -40 | 150 |
| ST1S40 | 3 A DC step-down switching regulator | PowerSO-8; SO-8; VFDFPN 8 4x4x1.0 | 4 | 18 | 0.8 | 18 | 3 | Yes | 2.5 | 850 | Yes | Yes | -40 | 150 |
| ST1S41 | 4 A step-down switching regulator | PowerSO-8; VFDFPN 8 4x4x1.0 | 4 | 18 | 0.8 | 18 | 4 | Yes | 1.5 | 850 | Yes | Yes | -40 | 150 |
| ST1S50 | 4 A Monolithic synchronous step-down converter with high efficiency at light load | VDFPN 10 3x3x1.0 | 4 | 18 | 0.8 | 16 | 4 | Yes | 0.38 | 500 | Yes | Yes | -40 | 150 |
| ST2S06 | Dual synchronous rectification with reset or inhibit, 0.5 A, 1.5 MHz adjustable step-down switching regulator | VFQFPN 12 4x4x1.0 | 4.5 | 5.5 | 0.8 | 5.5 | 0.5 | Yes | 1.2 | 1500 | Yes | Yes | -40 | 150 |

BUCK REGULATORS (CONT'D)

| Part Number | General description | Package | Input voltage (V_{in}) | | Regulated output voltage | | Output current-Max (I_{OUT_MAX}) (A) | Synchronous rectification | Quiescent current (I_Q) typ (mA) | Regulator switching frequency typ (kHz) | Inhibit pin | Soft-start | Junction temperature (T_j) | |
|-------------|---|-------------------|----------------------------|---------|--------------------------|---------|---|---------------------------|--------------------------------------|---|-------------|------------|--------------------------------|----------|
| | | | Min (V) | Max (V) | Min (V) | Max (V) | | | | | | | Min (°C) | Max (°C) |
| ST2S08B | Dual synchronous rectification, 1.5 A, 1.5 MHz adjustable step-down switching regulator | VFQFPN 12 4x4x1.0 | 3 | 5.5 | 0.8 | 4.675 | 1.5 | Yes | 1.5 | 1500 | Yes | Yes | -40 | 150 |
| ST763AC | 3.3 V step down current mode PWM DC-DC converters | SO-8 | 3.3 | 11 | 3.135 | 3.465 | 0.5 | No | 0.6 | 200 | Yes | No | -40 | 150 |

BUCK-BOOST REGULATORS

| Part number | General description | Package | Input voltage (V_{in}) | | Regulated output voltage | | Output current-Max (I_{OUT_MAX}) (A) | Quiescent current (I_Q) typ (mA) | Synchronous rectification | Switching frequency typ (kHz) |
|-------------|--|------------------|----------------------------|---------|--------------------------|---------|---|--------------------------------------|---------------------------|-------------------------------|
| | | | Min (V) | Max (V) | Min (V) | Max (V) | | | | |
| MC34063 | DC-DC converter control circuits | DIP-8; SO-8 | 3 | 40 | 1.25 | 38 | 1.5 | 2.5 | No | 100 |
| STBB1-AXX | 1 A, high efficiency single inductor dual mode buck-boost DC-DC converter | VDFPN 10 3x3x1.0 | 2 | 5.5 | 1.2 | 5.5 | 1 | 0.6 | Yes | 1500 |
| STBB2 | 800 mA 2.5 MHz, high efficiency dual mode buck-boost DC-DC converter | Flip-Chip 400 u | 2.3 | 5.5 | 1.2 | 4.5 | 0.8 | 0.05 | Yes | 2500 |
| STBB3J | 2 A, 2 MHz, high efficiency dual mode buck-boost DC-DC converter | Flip-Chip 400 u | 1.8 | 5.5 | 1.8 | 5.5 | 2 | 0.05 | Yes | 2000 |
| STBB3JCC | 2 A, high efficiency single inductor buck-boost DC-DC converter and High Brightness White LED Driver | Flip-Chip 400 u | 1.8 | 5.5 | 0.1 | 5.5 | 2 | 0.05 | Yes | 2000 |

MULTI-OUTPUT REGULATORS

| Part number | General description | Package | Number of output nom | Input voltage (V _{in}) | | Output current-Max (I _{OUT_MAX}) (A) | Regulated output voltage | | Regulator switching frequency | | Efficiency nom (%) |
|-------------|--|-------------------|----------------------|----------------------------------|---------|--|--------------------------|---------|-------------------------------|-----------|--------------------|
| | | | | Min (V) | Max (V) | | Min (V) | Max (V) | Min (kHz) | Max (kHz) | |
| PM6641 | Monolithic VR for Chipset and DDR2/3 Supply for Ultra-Mobile PC (UMPC) Applications | VFQFPN 48 7x7x1.0 | 4 | 2.7 | 5.5 | 2.5 | 0.8 | 2.5 | 500 | 1000 | 92 |
| PM6670AS | Complete DDR 2/3 memory power supply controller | QFN-24L | 3 | 4.5 | 36 | 10 | 0.9 | 2.6 | 200 | 600 | 92 |
| PM6670S | Complete DDR 2/3 memory power supply controller | QFN-24L | 3 | 4.5 | 28 | 10 | 0.9 | 2.6 | 200 | 600 | 92 |
| PM6675AS | High efficiency step down controller with embedded 2 A LDO regulator | QFN-24L | 3 | 4.5 | 36 | 10 | 0.6 | 3.3 | 200 | 600 | 90 |
| PM6675S | High efficiency step down controller with embedded 2 A LDO regulator | QFN-24L | 3 | 4.5 | 28 | 10 | 0.6 | 3.3 | 200 | 600 | 90 |
| PM6680 | 2 adjustable output power controller for notebook PC chipset power | VFQFPN 32 5x5x1.0 | 3 | 6 | 28 | 10 | 0.9 | 5 | 200 | 500 | 90 |
| PM6680A | Dual synchronous step down controller with adjustable output voltages plus LDO | VFQFPN 32 5x5x1.0 | 3 | 6 | 36 | 10 | 0.9 | 5 | 200 | 500 | 95 |
| PM6681A | Dual synchronous step down controller with adjustable LDO | VFQFPN 32 5x5x1.0 | 4 | 6 | 36 | 10 | 0.9 | 5 | 200 | 500 | 95 |
| PM6685 | Dual step-down controller with auxiliary voltages for notebook system power | VFQFPN 32 5x5x1.0 | 4 | 6 | 28 | 10 | 3.3 | 5 | 200 | 500 | 95 |
| PM6686 | Dual step-down controller with adjustable voltages, adjustable LDO and auxiliary charge pump controller for notebook | VFQFPN 32 5x5x1.0 | 3 | 5.5 | 28 | 10 | 0.7 | 5.5 | 200 | 500 | 95 |
| STODD01 | Monolithic power management for high definition ODD with true shut-down, reset, and programmable step-up voltage | VFQFPN 16 4x4x1.0 | 1 | 4 | 6 | 0.8 | 6.5 | 14 | 750 | 1500 | 90 |
| STODD03 | Monolithic 2 channel power management for high definition ODD with integrated power switch | VFQFPN 16 4x4x1.0 | 2 | 4 | 6 | 0.7 | 6.5 | 14 | 750 | 1500 | 90 |

SINGLE-PHASE CONTROLLERS

| Part number | General description | Package | Recommended input voltage (V_{IN}) | | Supply voltage (V_{DD}) | | Output voltage (V_{OUT}) min (V) | Peak output current (I_{Opeak}) max (A) | Recommended oscillation frequency (f_{OSC}) max (kHz) | Oscillator switching frequency (Internal) min (kHz) |
|-------------|--|-------------------|--|---------|-----------------------------|---------|--------------------------------------|---|---|---|
| | | | Min (V) | Max (V) | Min (V) | Max (V) | | | | |
| A6727 | Single-phase PWM controller for automotive applications | S0-8 | 1.5 | 19 | 4.1 | 13.2 | 0.8 | 30 | 300 | 300 |
| L6706 | VR11.1 single-phase controller with integrated driver | VFQFPN 40 6x6x0.9 | 12 | 12 | - | - | 0.03125 | 30 | 200 | 1000 |
| L6725 | Voltage mode PWM controller with bootstrap anti-discharging system | S0-16 | 1.8 | 18 | 4.5 | 18 | 0.6 | 30 | 500 | 500 |
| L6725A | Voltage mode PWM controller with bootstrap anti-discharging system | S0-16 | 1.8 | 18 | 4.5 | 18 | 0.6 | 30 | 500 | 500 |
| L6726A | Single-phase PWM controller | S0-8 | 1.5 | 19 | 4.1 | 13.2 | 0.8 | 30 | 270 | 270 |
| L6727 | Single-phase PWM controller | S0-8 | 1.5 | 19 | 4.1 | 13.2 | 0.8 | 30 | 300 | 300 |
| L6728AH | High frequency single-phase PWM controller with Power Good | VDFPN 10 3x3x1.0 | 1.5 | 13.2 | 4.1 | 13.2 | 0.8 | 30 | 600 | 600 |
| L6728D | Single-phase PWM controller with Power Good | VDFPN 10 3x3x1.0 | 1.5 | 13.2 | 4.1 | 13.2 | 0.8 | 30 | 300 | 300 |
| L6730 | Adjustable step-down controller with synchronous rectification | HTSSOP20 | 1.8 | 14 | 4.5 | 14 | 0.6 | 30 | 1000 | 1000 |
| L6730B | Adjustable step-down controller with synchronous rectification | HTSSOP20 | 1.8 | 14 | 4.5 | 14 | 0.6 | 30 | 1000 | 1000 |
| L6731D | Adjustable step-down controller with synchronous rectification dedicated to DDR memory | HTSSOP16 | 1.8 | 14 | 4.5 | 14 | 0.6 | 30 | 500 | 500 |
| L6732 | Adjustable step-down controller with synchronous rectification | HTSSOP16 | 1.8 | 14 | 4.5 | 14 | 0.6 | 30 | 500 | 500 |
| L6738 | Single-phase PWM controller with light-load efficiency optimization | VFQFPN 16 3x3x1.0 | 1.5 | 19 | 4.5 | 13.2 | 0.8 | 30 | 600 | 600 |
| L6738A | Single-phase PWM controller with light-load efficiency optimization | VFQFPN 16 3x3x1.0 | 1.5 | 19 | 4.5 | 13.2 | 0.8 | 30 | 600 | 600 |
| L6739 | Single-phase PWM controller with light-load efficiency optimization | VFQFPN 16 3x3x1.0 | 1.5 | 19 | 4.1 | 13.2 | 0.8 | 30 | 600 | 200 |
| L6910 | CPU Power Supply | HTSSOP16; S0-16 | 5 | 12 | 4.5 | 13.2 | 0.9 | 20 | 1000 | 200 |
| L6910G | Adjustable step-down controller with synchronous rectification | S0-16 | 5 | 12 | 4.5 | 13.2 | 0.9 | 20 | 1000 | 200 |
| L6997S | Step-down controller for low voltage operations | TSSOP 20 | 1 | 35 | 3 | 5.5 | 0.6 | 30 | 1000 | - |
| PM6644 | 350 mA adjustable step-down regulator | VDFPN 10 3x3x1.0 | 4.5 | 25 | 3.4 | 4.2 | 0.9 | 0.35 | 600 | 200 |
| PM7744 | Single-phase controller with digital interface | VFQFPN 16 3x3x0.9 | 3 | 12 | 3.1 | 6 | 0.6 | 30 | 1600 | 160 |
| TSM108 | Step-down controller with constant voltage/current | S0-14 | - | - | 8 | 60 | - | - | - | - |

MULTI-PHASE CONTROLLERS

| Part number | General description | Package | Recommended input voltage (V_{IN}) | | Supply voltage (V_{DD}) | | Output voltage (V_{OUT}) | | Peak output current ($I_{Opeak}/$ max (A)) | Recommended oscillation frequency (f_{OSC}) max (kHz) | Disable pin | Input voltage (V_{IN}) | | Power good output | Key features | Oscillator switching frequency (Internal) | |
|---------------|--|-------------------|--|---------|-----------------------------|---------|------------------------------|---------|---|---|-------------|----------------------------|---------|-------------------|--------------|---|-----------|
| | | | Min (V) | Max (V) | Min (V) | Max (V) | Min (V) | Max (V) | | | | Min (V) | Max (V) | | | Min (kHz) | Max (kHz) |
| L6716 | 2/3/4 phase controller with embedded drivers for Intel VR11.1 | VFQFPN 48 7x7x1.0 | 10.8 | 13.2 | 4.1 | 6 | 1.6 | 0.03 | 120 | 400 | Yes | 6 | 16 | Yes | - | 200 | 1000 |
| L6717 | High-efficiency hybrid AM2r2 Controller with I ² C interface and embedded drivers | VFQFPN 48 7x7x1.0 | 10.8 | 13.2 | 4.1 | 6 | 1.55 | 0.0125 | 120 | 400 | Yes | 6 | 16 | Yes | - | 200 | 1000 |
| L6717A | High-efficiency hybrid controller with I ² C interface and embedded drivers | VFQFPN 48 7x7x1.0 | 10.8 | 13.2 | 4.1 | 6 | 1.55 | 0.0125 | 120 | 400 | Yes | 6 | 16 | Yes | - | 200 | 1000 |
| L6718 | Digitally controlled dual PWM with embedded drivers for VR12 | VFQFPN 20 7x7x1.0 | 4.75 | 7.5 | 4.1 | 7 | 0.25 | 2.145 | 180 | 500 | Yes | 4.75 | 7.5 | Yes | - | 180 | 550 |
| L6751B | Digitally controlled dual PWM for Intel VR12 and AMD SVI | QFN 68 8x8x1.0 | 10.8 | 13.2 | 4.1 | 6 | 0.25 | 1.52 | 200 | 400 | Yes | 6 | 16 | Yes | - | 200 | 1000 |
| L6751C | Digitally controlled dual PWM for Intel VR12 and AMD SVI | WPLGA 72 6x6x0.7 | 10.8 | 13.2 | 4.1 | 6 | 0.25 | 1.52 | 200 | - | Yes | 6 | 16 | Yes | - | - | - |
| L6758A | High-performance (4+1) dual controller for VR12 | VFQFPN 48 6x6x0.9 | 10.8 | 13.2 | 4.1 | 6 | 0.25 | 1.52 | 150 | 400 | Yes | 6 | 16 | Yes | - | 200 | 1000 |
| L6759D | 3+1 dual controller for VR12 with PMBus | VFQFPN 48 6x6x0.9 | 10.8 | 13.2 | 4.1 | 6 | 0.25 | 1.52 | 100 | 400 | Yes | 6 | 16 | Yes | - | 200 | 1000 |
| PM6764 | VR12.5 digital multiphase controller with PMBus | VFQFPN 28 4x4x1.0 | 10.8 | 13.2 | 4.75 | 5.25 | 0.52 | 2.3 | 120 | 500 | - | - | - | - | - | 200 | 1000 |
| PM6766 | VR12.5 digital multiphase controller with PMBus | VFQFPN 40 5x5x1.0 | 10.8 | 13.2 | 4.75 | 5.25 | 0.52 | 2.3 | 220 | 500 | - | - | - | - | - | 200 | 1000 |

MULTI-PHASE CONTROLLERS (CONT'D)

| Part number | General description | Package | Recommended input voltage (V_{IN}) | | Supply voltage (V_{DD}) | | Output voltage (V_{OUT}) | | Peak output current ($I_{OPEAK}/$ max (A)) | Recommended oscillation frequency (f_{OSC}) max (kHz) | Disable pin | Input voltage (V_{IN}) | | Power good output | Key features | Oscillator switching frequency (Internal) | |
|-------------|---|-------------------|--|---------|-----------------------------|---------|------------------------------|---------|---|---|-------------|----------------------------|---------|-------------------|--------------|---|-----------|
| | | | Min (V) | Max (V) | Min (V) | Max (V) | Min (V) | Max (V) | | | | Min (V) | Max (V) | | | Min (kHz) | Max (kHz) |
| PM6776* | Next generation Intel server CPU digital multiphase controller with PMBus | VFQFPN 48 6x6x0.9 | 10.8 | 13.2 | 4.75 | 5.25 | 0.52 | 2.3 | 250 | 500 | - | - | - | - | - | 200 | 1000 |

Note: * in development

Battery management ICs

BATTERY MANAGEMENT ICs

| Part number | General description | Package | Operating temperature | | Supply current (I_{CC}) typ (mA) | Supply voltage (V_{DD}) | |
|-------------|---|-------------------|-----------------------|----------|--------------------------------------|-----------------------------|---------|
| | | | Min (°C) | Max (°C) | | Min (V) | Max (V) |
| L6924D | Single Cell Li Ion battery Charger | VFQFPN 16 3x3x1.0 | -40 | 85 | 1.8 | 2.5 | 12 |
| L6924U | Single Cell Li-Ion Battery Charger IC for USB port and AC Adapter | VFQFPN 16 3x3x1.0 | -40 | 85 | 1.8 | 2.5 | 12 |
| PM6613N | 2-4 cells Li-ion, Li-FePO4 battery charger with SMBus interface, N-channel RBFET and BATFET MOSFET selector | VFQFPN 20 3x3 | -40 | 85 | 1.25 | 4.5 | 5.5 |
| STBC08 | 800 mA standalone linear Li-Ion Battery charger with terminal regulation | VDFPN 6 3x3 | -40 | 85 | 0.15 | 4.25 | 6.5 |
| STBC21 | Li+ battery charger with thermal regulation | HTSSOP14 | -25 | 85 | 0.75 | 2.6 | 9 |
| STBCFG01 | Switch-mode Single Cell Li+ Battery Charger with OTG Boost, Voltage Mode Fuel Gauge and LDO | Flip-Chip 400u | -30 | 85 | 0.29 | 3.78 | 5.95 |
| STC4054 | 800 mA standalone linear Li-Ion Battery charger with terminal regulation | TSOT23-5L | -40 | 85 | 0.15 | 4.25 | 6.5 |
| STNS01 | Li-Ion Linear Battery Charger with LDO | VDFPN 12 3x3x0.75 | -40 | 85 | 1.4 | 4.55 | 5.4 |

BOOST CURRENT REGULATORS FOR LED

| Part number | General description | Package | Input voltage (V_{in}) | | Output current (I_{out}) max (mA) | Output current accuracy typ (%) | Output channels max | Switching frequency typ (kHz) | Number of LEDs max | LED configuration | Other features |
|----------------|--|--------------------------|----------------------------|---------|---------------------------------------|---------------------------------|---------------------|-------------------------------|--------------------|-------------------|--|
| | | | Min (V) | Max (V) | | | | | | | |
| LED7706 | LED driver with boost regulator, 6-rows 30 mA, for LCD panels backlight | QFN-24L | 4.5 | 36 | 180 | 2 | 6 | 660 | 60 | Serial | External synch |
| LED7707 | LED driver with boost regulator, 6-rows 85 mA, for LCD panels backlight | QFN-24L | 4.5 | 36 | 510 | 2 | 6 | 660 | 60 | Serial | External synch |
| LED7708 | 16 channels x 85 mA LED driver with boost controller and 4-wire serial interface | VFQFPN 48 7x7x1.0 | 3.6 | 36 | 1360 | 2 | 16 | 610 | 160 | Serial | External synch |
| STLA02 | White LED driver for display backlight | VFDFPN 6 2x2x0.75 | 2.5 | 18 | 20 | 5 | 1 | 2000 | 6 | Serial | Overvoltage protection |
| STLD40D | White LED power supply for large display backlight | VFDFPN 8 3x3x1.0 | 3 | 5.5 | 20 | 5 | 1 | 10 | 10 | Serial | Enable pin with PWM dimming control |
| STLD41 | White LED driver for mid-size LCD display backlight | VFDFPN 8 3x3x1.0 | 3 | 21 | 120 | 10 | 4 | 1400 | 40 | Serial | Max 40 LED (4 strings of 10 LED) |
| STLED25 | 5 channels step-up white LED driver | Flip-Chip 400 μ | 2.3 | 5.5 | 125 | 7.5 | 5 | 2500 | 10 | Serial | PWM dimming with automatic shutdown time window |
| STP2CMP | Low voltage 2-channel constant current LED driver with charge pump | VFQFPN 20 3.2x1.8x0.5 | 2.7 | 5.5 | 60 | 7 | 2 | - | 2 | Parallel | Integrated Charge Pump |
| STP4CMP | Low voltage 4-channel constant current LED driver with charge pump | VFQFPN 20 3.2x1.8x0.5 | 2.7 | 5.5 | 120 | 7 | 4 | - | 4 | Parallel | Integrated charge pump, individual constant current control |

BUCK CURRENT REGULATORS FOR LED

| Part number | General description | Package | Input voltage (V _{in}) | | Output current- Max (I _{OUT,MAX}) (A) | Feedback voltage accuracy (%) typ | Feedback voltage (V) nom | Synchronous rectification | Dimming control | Inhibit pin | Regulated output voltage max (V) | Oscillator Switching frequency (Internal) | | Soft-start | Other features | Operating junction temperature (T _j) | |
|----------------|--|-----------------------------|----------------------------------|---------|--|-----------------------------------|--------------------------|---------------------------|-----------------|-------------|----------------------------------|---|-----------|------------|---|--|----------|
| | | | Min (V) | Max (V) | | | | | | | | Min (kHz) | Max (kHz) | | | Min (°C) | Max (°C) |
| LED2000 | 3 A monolithic step-down current source with synchronous rectification | SO-8; VFDFPN 8 4x4x1.0 | 3 | 18 | 3 | 7 | 0.1 | Yes | PWM | No | 18 | 850 | 850 | Yes | Peak current mode architecture, Embedded compensation network, Internal current limiting, Ceramic output capacitor compliant, Thermal shutdown | -40 | 150 |
| LED2001 | 4 A monolithic step-down current source with synchronous rectification | PowerSO-8; VFDFPN 8 4x4x1.0 | 3 | 18 | 4 | 7 | 0.1 | Yes | PWM | No | 18 | 850 | 850 | Yes | Peak current mode architecture, Embedded compensation network, Internal current limiting, Ceramic output capacitor compliant, Thermal shutdown | -40 | 125 |
| ST1CC40 | 3 A, 850 KHz, monolithic synchronous step-down constant current LED driver | SO-8; VFDFPN 8 4x4x1.0 | 3 | 18 | 3 | 7 | 0.1 | Yes | None | Yes | 18 | 850 | 850 | Yes | Peak current mode architecture, Embedded compensation network, Internal current limiting, Ceramic output capacitor compliant, Thermal shutdown, Inhibit pin | -40 | 150 |

FLASH LED SUPPLY

| Part number | General description | Input voltage (V _{in}) | | Switching frequency typ (kHz) | Number of LEDs max | LED configuration | LED Flash current max (A) | Package | Other features | Operating temperature | |
|---------------|---|----------------------------------|---------|-------------------------------|--------------------|-------------------|---------------------------|--------------------------------------|--------------------------------------|-----------------------|----------|
| | | Min (V) | Max (V) | | | | | | | Min (°C) | Max (°C) |
| STCF03 | High power white LED driver | 2.7 | 5.5 | 1800 | 1 | - | 0.8 | VFQFPN 20 4x4x1.0; uTFBGA 25 3x3x1.1 | ℓ°C control - Torch mode | -40 | 85 |
| STCF04 | High power white LED SuperCap driver with ℓ°C interface | 2.5 | 5.5 | 1800 | 4 | Parallel | 10 | uTFBGA 25 3x3x1.1 | ℓ°C control - Torch mode - Super Cap | -40 | 85 |
| STCF05 | High power white LED driver with ℓ°C interface | 2.5 | 5.5 | 1800 | 2 | Serial | 0.4 | uTFBGA 25 3x3x1.1 | ℓ°C control - Torch mode | -40 | 85 |
| STCF07 | High buck-boost power white LED driver | 2.7 | 5.5 | 1800 | 1 | - | 1 | VFQFPN 16 4x4x1.0 | ℓ°C control - Torch mode | -40 | 85 |

LINEAR CURRENT REGULATOR FOR LED

| Part number | General description | Input voltage (V_{in}) | | Output current (I_{out}) max (mA) | Output current accuracy typ (%) | Number of LEDs max | LED configuration | Package | Other features |
|-------------|---------------------------------------|----------------------------|---------|---------------------------------------|---------------------------------|--------------------|-------------------|----------------------------|--------------------------------|
| | | Min (V) | Max (V) | | | | | | |
| STCS05 | 0.5 A max constant current LED driver | 4.5 | 40 | 500 | 10 | 10 | Serial | SO-8 | - |
| STCS05A | 0.5 A max constant current LED driver | 4.5 | 40 | 500 | 10 | 10 | Serial | SO-8 | Slop control with external cap |
| STCS1 | 1.5 A max constant current LED driver | 4.5 | 40 | 1500 | 10 | 10 | Serial | PowerSO-8; VDFPN 8 3x3x1.0 | - |
| STCS1A | 1.5 A max constant current LED driver | 4.5 | 40 | 1500 | 10 | 10 | Serial | PowerSO-8; VDFPN 8 3x3x1.0 | Slop control with external cap |
| STCS2 | 2 A max constant current LED driver | 4.5 | 40 | 2000 | 10 | 10 | Serial | PowerSO-10 | - |
| STCS2A | 2 A max constant current LED driver | 4.5 | 40 | 2000 | 10 | 10 | Serial | PowerSO-10 | Slop control with external cap |

LED ARRAY DRIVERS

| Part number | General description | Package | Input voltage (V_{in}) | | Output channels max | Other features | Output current accuracy typ (%) |
|--------------|--|-------------------------------------|----------------------------|---------|---------------------|---|---------------------------------|
| | | | Min (V) | Max (V) | | | |
| ALED1642GW | 16-channels LED driver with error detection, current gain control and 12/16 bit-PWM brightness control for automotive applications | HTSSOP24 | 3 | 5.5 | 16 | Error detection, gain control and PWM brightness control | 3 |
| LED1642GW | 16-channels LED driver with error detection, current gain control and 12/16 bit PWM brightness control | HTSSOP24; QFN-24L; QSOP24; TSSOP 24 | 3 | 5.5 | 16 | Error detection, gain control and PWM brightness control | 3 |
| LED2472G | 24-Channels LED driver with LED error detection and gain control | TQFP 48 7x7x1.0; VFQFPN 40 5x5x1.0 | 3 | 5.5 | 24 | Error detection and gain control | 3 |
| STAP08DP05 | Low voltage 8-bit constant current LED sink driver with output error detection for automotive applications | HTSSOP16 | 3 | 5.5 | 8 | Full error output detection, TSD, UVLO | 4 |
| STAP16DPPS05 | Low voltage 16-bit constant current LED sink driver with output error detection and auto power-saving for automotive applications | HTSSOP24 | 3 | 5.5 | 16 | Full error output detection, auto power saving, TSD, UVLO | 4 |

LED ARRAY DRIVERS (CONT'D)

| Part number | General description | Package | Input voltage (V _{in}) | | Output channels max | Other features | Output current accuracy typ (%) |
|-------------|---|-----------------------------------|----------------------------------|---------|---------------------|--|---------------------------------|
| | | | Min (V) | Max (V) | | | |
| STAP16DPS05 | Low voltage 16-bit constant current LED sink driver with output error detection and auto power-saving for automotive applications | HTSSOP24 | 3 | 5.5 | 16 | Full error output detection, auto power saving, TSD, UVLO | 4 |
| STP04CM05 | 4-bit constant current power-LED sink driver | HTSSOP16; SO-14 | 3 | 5.5 | 4 | High current power LED drive, TSD, UVLO, POR | 1 |
| STP08CP05 | Low-voltage, low current power 8-bit shift register | HTSSOP16; SO-16; TSSOP 16 | 3 | 5.5 | 8 | Constant current control, TSD, UVLO | 2.75 |
| STP08DP05 | Low-voltage 8-bit constant current LED sink with full outputs error detection | HTSSOP16; SO-16; TSSOP 16 | 3 | 5.5 | 8 | Full error output detection, TSD, UVLO | 3 |
| STP16CP05 | Low-voltage 16-bit constant current LED sink driver | HTSSOP24; QSOP24; SO-24; TSSOP 24 | 3 | 5.5 | 16 | Constant current control, TSD, UVLO | 3 |
| STP16CPC05 | Low voltage 16-bit constant current LED sink driver | HTSSOP24; QSOP24; SO-24; TSSOP 24 | 3 | 5.5 | 16 | Constant current control, TSD, UVLO | 3 |
| STP16CPC26 | Low voltage 16-bit constant current LED sink driver | HTSSOP24; QSOP24; SO-24; TSSOP 24 | 3 | 5.5 | 16 | Constant current control, TSD, UVLO, balanced TON/TOFF, suitability to very noisy applications | 3 |
| STP16CPP05 | Low-voltage 16-bit constant current LED sink driver | HTSSOP24; QSOP24; SO-24; TSSOP 24 | 3 | 5.5 | 16 | Constant current control, TSD, UVLO | 1.2 |
| STP16CPPS05 | Low-voltage 16-bit constant current LED sink driver with auto power-saving | HTSSOP24; QSOP24; SO-24; TSSOP 24 | 3 | 5.5 | 16 | Constant current control, auto power saving, TSD, UVLO | 1.2 |
| STP16CPS05 | Low-voltage 16-bit constant current LED sink driver with auto-power saving | HTSSOP24; QSOP24; SO-24; TSSOP 24 | 3 | 5.5 | 16 | Full error output detection, constant current control, TSD, power saving | 3 |
| STP16DP05 | Low-voltage 16-bit constant current LED sink driver with outputs error detection | HTSSOP24; QSOP24; SO-24; TSSOP 24 | 3 | 5.5 | 16 | Full error output detection, TSD, UVLO | 3 |
| STP16DPP05 | Low voltage 16-bit constant current LED sink driver with output error detection | HTSSOP24; QSOP24; SO-24; TSSOP 24 | 3 | 5.5 | 16 | Constant current control, full outputs error detection, TSD, UVLO | 1.2 |

LED ARRAY DRIVERS (CONT'D)

| Part number | General description | Package | Input voltage (V_{IN}) | | Output channels max | Other features | Output current accuracy typ (%) |
|-------------|--|-----------------------------------|----------------------------|---------|---------------------|--|---------------------------------|
| | | | Min (V) | Max (V) | | | |
| STP16DPPS05 | Low-voltage 16-bit constant current LED sink driver with outputs error detection and auto-power saving | HTSSOP24; QSOP24; SO-24; TSSOP 24 | 3 | 5.5 | 16 | Constant current control, full outputs error detection, auto power saving, TSD, UVLO | 1.2 |
| STP16DPS05 | Low voltage 16-bit constant current LED sink driver with outputs error detection | HTSSOP24; QSOP24; SO-24; TSSOP 24 | 3 | 5.5 | 16 | Constant current control, full outputs error detection, auto power saving, TSD, UVLO | 3 |
| STP24DP05 | 24-bit constant current LED sink driver with output error detection | TQFP 48 7x7x1.0 | 3 | 5.5 | 24 | Full error output detection, TSD, UVLO | 3 |
| STPIC6C595 | Power logic 8-bit shift register | SO-16; TSSOP 16 | 4.5 | 5.5 | 8 | Low $R_{DS(ON)}$ 8-bit shift-register with 100 mA DMOS outputs | - |
| STPIC6D595 | Power logic 8-bit shift register | SO-16; TSSOP 16 | 4.5 | 5.5 | 8 | Low $R_{DS(ON)}$ 8-bit shift-register with 100 mA DMOS outputs | - |

LED MATRIX DRIVERS

| Part number | General description | Package | Input voltage (V_{IN}) | | Output channels max | Output current-Max ($I_{OUT,MAX}$) nom (A) | Output current accuracy typ (%) | Switching frequency typ (kHz) |
|-------------|--|-------------------|----------------------------|---------|---------------------|--|---------------------------------|-------------------------------|
| | | | Min (V) | Max (V) | | | | |
| LED7706 | LED driver with boost regulator, 6-rows 30 mA, for LCD panels backlight | QFN-24L | 4.5 | 36 | 6 | 30 | 2 | 660 |
| LED7707 | LED driver with boost regulator, 6-rows 85 mA, for LCD panels backlight | QFN-24L | 4.5 | 36 | 6 | 85 | 2 | 660 |
| LED7708 | 16 channels x 85 mA LED driver with boost controller and 4-wire serial interface | VFQFPN 48 7x7x1.0 | 3.6 | 36 | 16 | 85 | 2 | 610 |
| STLED524 | Intelligent matrix LED display driver | CSPS0,4 26-100 | 2.7 | 5.5 | 24 | 25 | 7.5 | 600 |

LCD OLED display PSUs

LCD OLED DISPLAY PSUS

| Part number | General description | Package | Supply voltage (V _{in}) min (V) | Output voltage (V _{out}) (positive) | | Output voltage (V _{out}) (negative) | | Output voltage variation (Positive) typ (%) | Output voltage variation (Negative) typ (%) | Quiescent current (I _q) typ (μA) | Efficiency max (%) | TDMA noise typ (mV) | Switching frequency | | | Topology |
|-------------|--|----------------------------|---|---|---------|---|---------|---|---|--|--------------------|---------------------|---------------------|-----------|-----------|-------------------|
| | | | | Min (V) | Max (V) | Min (V) | Max (V) | | | | | | Min (MHz) | Typ (MHz) | Max (MHz) | |
| STLDC08 | 200 mA dual step-up controller for LED supply | VDFPN 10 3x3x1.0 | 0.8 | 6 | 18 | - | - | - | - | 0.8 | 80 | - | - | - | - | Boost |
| STOD03AS | Dual DC-DC converter for powering AMOLED displays | VDFPN 12 3x3x0.55 | 2.5 | 4.55 | 4.65 | 5.4 | 2.4 | -1.5, +1.5 | -2.0, +2.0 | 1 | 85 | 20 | 1.2 | 1.5 | 1.7 | Boost + Inverting |
| STOD03B | 150 mA dual DC-DC converter with LDO for powering AMOLED display | VDFPN 12 3x3x0.55 | 2.3 | 4.554 | 4.646 | 5.4 | 2.4 | -1.0, +1.0 | -2.0, +2.0 | 1 | 82 | 20 | 1.35 | 1.5 | 1.65 | Boost + Inverting |
| STOD1317B | 170 mA 13 V, high efficiency boost converter + LDO | VDFPN 12 3x3x0.75 | 2.6 | 6 | 13 | - | - | -1.0, +1.0 | - | 1 | 85 | 20 | 1 | 1.2 | 1.35 | Boost + LDO |
| STOD13AS | 250 mA dual DC-DC converter for powering AMOLED display | VDFPN 12 3x3x0.55 | 2.5 | 4.56 | 4.63 | 6.4 | 2.4 | -0.6, +0.6 | -1.4, +1.4 | 1 | 85 | 15 | 1.35 | 1.5 | 1.65 | Boost + Inverting |
| STOD13CM | 250 mA dual DC-DC converter | VDFPN 12 3x3x0.55 | 2.5 | 4.56 | 4.63 | 6.4 | 2.4 | -0.6, +0.6 | -1.4, +1.4 | 1 | 85 | 13 | 1.35 | 1.5 | 1.65 | Boost + Inverting |
| STOD1812 | 120 mA power supply for PMOLED display panel | VDFPN 10 3x3x1.0 | 2.5 | 2.5 | 18 | - | - | -2.5, +2.5 | - | 0.1 | 85 | 20 | 1 | 1.2 | 1.35 | Boost |
| STOD2540 | 40 mA PMOLED display power supply | VDFPN 8 3x3x1.0 | 3 | 3.5 | 35 | - | - | -4.8, +4.8 | - | 0.4 | 70 | - | - | - | - | Boost |
| STOD32A | 300 mA triple DC-DC converter for powering AMOLED displays | VFQFPN 16L 3x3x0.55 | 2.9 | 4.577 | 4.623 | 4.8 | 0.8 | -0.5, +0.5 | -1.2, +1.2 | - | 93 | 8 | 1.4 | 1.55 | 1.7 | Boost + Inverting |
| STOD32W | 100 mA triple DC-DC converter for powering AMOLED displays | Flip-Chip 1.6x1.7 12 bumps | 2.9 | 4.577 | 4.623 | 4.6 | 0.8 | -0.5, +0.5 | -1.2, +1.2 | - | 92 | 8 | 1.4 | 1.55 | 1.7 | Boost + Inverting |

LNB SUPPLIES

| Part number | Supply voltage (V_{CC}) | | Regulated output voltage | | Output current-Max (I_{OUT_MAX}) max (A) | Tone amplitude typ (V) |
|-------------|-----------------------------|---------|--------------------------|---------|---|------------------------|
| | Min (V) | Max (V) | Min (V) | Max (V) | | |
| LNBH23 | 8 | 15 | 13 | 18 | 1 | 0.65 |
| LNBH23L | 8 | 15 | 13 | 18 | 0.8 | 0.65 |
| LNBH24L | 8 | 15 | 13 | 18 | 1 | 0.65 |
| LNBH25 | 8 | 16 | 13 | 18 | 1.1 | 0.675 |
| LNBH25L | 8 | 16 | 13 | 18 | 0.75 | 0.675 |
| LNBH25LS | 8 | 15 | 13 | 18 | 0.75 | 0.675 |
| LNBH25S | 8 | 16 | 13 | 18 | 1.1 | 0.675 |
| LNBH26 | 8 | 16 | 13 | 18 | 1.1 | 0.675 |
| LNBH26L | 8 | 16 | 13 | 18 | 0.75 | 0.675 |
| LNBH26LS | 8 | 16 | 13 | 18 | 0.75 | 0.675 |
| LNBH26S | 8 | 16 | 13 | 18 | 1.1 | 0.675 |
| LNBH29 | 8 | 17.5 | 13 | 18 | 0.55 | 0.675 |
| LNBH30 | 10 | 17.5 | 11.8 | 15 | 0.75 | - |

Hot-swap power management

E-FUSE

| Part number | General description | Package | UVLO threshold, rising typ (V) | DC Input voltage max (V) | Output Voltage (V_{OUT}) nom (V) | Clamping Voltage (V_{CL}) nom (V) | Output current (I_{OUT}) nom (A) | $R_{DS(on)}$ typ (m Ω) | $R_{DS(on)}$ max (m Ω) | Operating junction temperature (T_J) | |
|-------------|---|-------------------|--------------------------------|--------------------------|--------------------------------------|---------------------------------------|--------------------------------------|--------------------------------|--------------------------------|--|----------|
| | | | | | | | | | | Min (°C) | Max (°C) |
| STEF033 | Electronic fuse for 3.3 V line | VDFPN 10 3x3x1.0 | 2.35 | 8 | 3.3 | 4.5 | 3.6 | 40 | 70 | -40 | 125 |
| STEF05 | Electronic fuse for 5 V line | VDFPN 10 3x3x1.0 | 3.6 | 10 | 5 | 6.65 | 3.6 | 40 | 70 | -40 | 125 |
| STEF05D | Electronic fuse for 5 V line | VDFPN 10 3x3x1.0 | 3.6 | 10 | 5 | 6.65 | 3.6 | 40 | 70 | -40 | 125 |
| STEF12 | Electronic fuse for 12 V line | VDFPN 10 3x3x1.0 | 8.5 | 18 | 12 | 15 | 3.6 | 53 | 70 | -40 | 125 |
| STEF4S | Electronic fuse for 3.3 V and 5 V lines | VDFPN 10 3x3x0.75 | 2.3 - 3.6 | 15 | 3.3 - 5 | 3.8 - 5.7 | 5 | 40 | 70 | -40 | 125 |

Voltage references

SHUNT VOLTAGE REFERENCES

| Part number | General description | Package | Reference voltage (V_{REF}) nom (V) | Cathode to anode voltage (V_{KA}) | | Operating cathode current (I_K) | | Precision (%) typ | Temperature coefficient of V_{REF} (Tc) max | Static impedance (R_{KA}) max | Operating temperature | |
|-------------|--|--|---|---------------------------------------|---------|-------------------------------------|----------|-------------------|---|-----------------------------------|-----------------------|----------|
| | | | | Min (V) | Max (V) | Min (mA) | Max (mA) | | | | Min (°C) | Max (°C) |
| LM4041 | 1.225 V micropower shunt voltage reference | SOT23; SOT323-5L | 1.225 | - | - | 0.04 | 1.2 | 0.1 | 120 | 0.4 | -40 | 85 |
| TL1431* | Programmable voltage reference | SO-8; TO-92 | 2.5 | 2.5 | 36 | 1 | 100 | 0.25 : 0.4 | 100 | 0.5 | -40 | 105 |
| TL431* | Programmable voltage reference | SO-8; SOT23; SOT23-5L; SOT323-6L; TO-92 | 2.5 | 2.5 | 36 | 1 | 100 | 1 | 100 | 0.5 | -40 | 105 |
| TL432 | Programmable voltage reference | SOT23 | 2.5 | 2.5 | 36 | 1 | 100 | - | 100 | 0.5 | -40 | 125 |

Note: * automotive grade version available

SHUNT VOLTAGE REFERENCES (CONT'D)

| Part number | General description | Package | Reference voltage (V_{REF} nom (V)) | Cathode to anode voltage (V_{KA}) | | Operating cathode current (I_K) | | Precision (%) typ | Temperature coefficient of V_{REF} (Tc) max | Static impedance (R_{iO}) max | Operating temperature | |
|-------------|---|----------------------------------|---|--|---------|--|----------|----------------------|---|---|--------------------------|----------|
| | | | | Min (V) | Max (V) | Min (mA) | Max (mA) | | | | Min (°C) | Max (°C) |
| TLVH431 | Programmable shunt voltage reference | SOT23; SOT23-5L; SOT323-6L | 1.24 | 1.24 | 18 | 0.1 | 60 | 0.25 | 100 | 0.62 | -40 | 125 |
| TS2431 | Programmable shunt voltage reference | SOT23 | 2.5 | 2.5 | 24 | 1 | 100 | 0.5 | 100 | 0.75 | -40 | 105 |
| TS3431 | 1.24 V programmable shunt voltage reference | SOT23 | 1.24 | 1.24 | 24 | 0.4 | 100 | 0.25 | 100 | 0.4 | -40 | 125 |
| TS4040 | 2.5 V micropower shunt voltage reference | SOT23 | 2.5 | - | - | 0.065 | 15 | 1 | 150 | 0.6 | -40 | 85 |
| TS4041 | Precision micropower shunt voltage reference | SOT23 | 1.225 | - | - | 0.065 | 12 | 0.5 | 150 | 0.5 | -40 | 85 |
| TS4061 | Precision micropower shunt voltage reference | SOT23; SOT323-3L | 1.225 : 1.25 | - | - | 0.010 | 15 | 0.1 | 35 | 0.3 | -40 | 85 |
| TS431* | Low voltage adjustable shunt reference | SOT23-5L; TO-92 | 1.24 | 1.24 | 6 | 0.06 | 30 | 0.2 | 100 | 0.4 | -40 | 125 |
| TS432 | 1.24 V Aadjustable shunt voltage reference | SOT23 | 1.24 | 1.24 | 10 | 0.06 | 12 | 0.5 | 100 | 0.5 | -40 | 85 |
| TS4431 | 1.224 V open collector shunt voltage reference | SOT23-5L | 1.224 | 1.224 | 10 | 0.25 | 20 | 0.5 | 100 | - | -40 | 85 |
| TS4436 | Adjustable 0.6 V open collector shunt voltage reference | SOT323-5L | 0.6 | 0.6 | 10 | 0.15 | 20 | 0.5 | 150 | - | -40 | 85 |
| TS821 | 1.225 V micropower shunt voltage reference | SOT23 | 1.225 | - | - | 0.045 | 12 | 0.5 | 120 | 0.5 | -40 | 85 |
| TS822 | 2.5 V micropower shunt voltage reference | SOT23 | 2.5 | - | - | 0.05 | 15 | 1 | 100 | 0.6 | -40 | 85 |
| TS824-1.2 | High thermal stability micropower shunt voltage reference | SOT23 | 1.225 | - | - | 0.04 | 12 | 1 | 50 | 0.7 | -40 | 85 |
| TS824-2.5 | High thermal stability micropower shunt voltage reference | SOT23 | 2.5 | - | - | 0.06 | 15 | 0.5 | 50 | 0.6 | -40 | 85 |

Note: * automotive grade version available

Notes



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