

Automotive Analog Products Guide from ON Semiconductor

ON Semiconductor®



SINGLE LINEAR VOLTAGE REGULATORS

| Device | Output Voltage | Tolerance | Output Current | Dropout (Max) | Sleepmode Current (Max) | Quiescent Current [Max] @ Low Load (load) | Enable | Reset (◆ = Adjustable) | Delay | Early Warning Flag/Monitor | WATCHDOG | Wakeup | Current Limit | Over Voltage | Over Temperature | Peak Transient | Package(s) ¹ |
|---------|----------------|-----------|----------------|---------------|-------------------------|---|--------|------------------------|-------|----------------------------|----------|--------|---------------|--------------|------------------|----------------|-------------------------|
| NCV553 | 5 V | ±3% | 80 mA | 0.8 V | 1 μA | 6 μA (1 mA) | | | | | | | • | | • | 12 V | 13 |
| CS8101 | 5 V | ±2% | 100 mA | 0.6 V | 50 μA | 140 μA (100 μA) | ◆ | ◆ | | | | | • | • | • | 60 V | B,C,D, R,Z |
| CS8151 | 5 V | ±2% | 100 mA | 0.6 V | – | 750 μA (200 μA) | | ◆ | ◆ | | ◆ | ◆ | • | • | • | 74 V | F,G,H, M,Q,W |
| CS8221 | 5 V | ±2% | 100 mA | 0.6 V | – | 120 μA (100 μA) | | | | | | | • | • | • | 60 V | K,S |
| CS9201 | 5 V | ±2% | 100 mA | 0.6 V | – | 750 μA (100 μA) | | | | | | | • | • | • | 60 V | R |
| CS9202 | 3.3 V | ±2% | 100 mA | – | – | 750 μA (100 μA) | | | | | | | • | • | • | 60 V | R |
| NCV2931 | 5 V, Adj | ±2% | 100 mA | 0.6 V | 1 mA | 1 mA (10 mA) | ◆ | | | | | | | • | | 60 V | R,K,I |
| NCV2951 | Adj, 3.3, 5 V | ±2.4% | 100 mA | 0.45 V | ** | 120 μA (100 μA) | ◆ | ◆ | | | | | • | | | 30 V | R |
| NCV4949 | 5 V | ±2% | 100 mA | 0.5 V | – | 260 μA (300 μA) | | ◆ | | ◆ | | | • | | • | 40 V | Y |

1. See Package Codes on page 16. **BOLD** denotes NEW devices. * Preliminary. ** Not specified.

SINGLE LINEAR VOLTAGE REGULATORS (continued)

| Device | Output Voltage | Tolerance | Output Current | Dropout (Max) | Sleepmode Current (Max) | Quiescent Current [Max] @ Low Load (load) | Enable | Reset (◆◆ = Adjustable) | Delay | Early Warning Flag/Monitor | WATCHDOG | Wakeup | Current Limit | Over Voltage | Over Temperature | Peak Transient | Package(s) ¹ |
|--------------------|---|-----------|----------------|---------------|-------------------------|---|--------|-------------------------|-------|----------------------------|----------|--------|---------------|--------------|------------------|----------------|-------------------------|
| NEW! NCV612 | 1.5, 1.8, 2.5, 2.7, 2.8, 3.0, 3.1, 3.3, 5.0 | ±3% | 100 mA | 0.3 V | 1 μA | 90 μA (1 mA) | ◆ | | | | | | • | | • | 6 V | 14 |
| NEW! NCV662 | 1.5, 1.8, 2.5, 2.7, 2.8, 3.0, 3.3, 5.0 | ±4% | 100 mA | 0.3 V | 1 μA | 6 μA (1 mA) | ◆ | | | | | | • | | • | 6 V | 13 |
| NEW! NCV663 | 1.5, 1.8, 2.5, 2.7, 2.8, 3.0, 3.3, 5.0 | ±4% | 100 mA | 0.3 V | – | 6 μA (1 mA) | | | | | | | • | | • | 6 V | 13 |
| NCV78L00A | 5, 12 V | ±4% | 100 mA | 1.7 V (Typ) | – | – | | | | | | | • | | • | 30 V | 5 |
| CS8321 | 5 V | ±2% | 150 mA | 0.6 V | – | 200 μA (1 mA) | | | | | | | • | | | 45 V | A,K |

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SINGLE LINEAR VOLTAGE REGULATORS (continued)

| Device | Output Voltage | Tolerance | Output Current | Dropout (Max) | Sleepmode Current (Max) | Quiescent Current [Max] @ Low Load (load) | Enable | Reset (◆◆ = Adjustable) | Delay | Early Warning Flag/Monitor | WATCHDOG | Wakeup | Current Limit | Over Voltage | Over Temperature | Peak Transient | Package(s) ¹ |
|---------------------|---|------------|----------------|---------------|--------------------------------|---|--------|-------------------------|-------|----------------------------|----------|--------|---------------|--------------|------------------|----------------|-------------------------|
| NCV551 | 1.5, 1.8, 2.5, 2.7, 2.8, 3, 3.2, 3.3, 5 V | ±3% | 150 mA | 0.22 V | 1 μA | 8 μA (1 mA) | ◆ | | | | | | • | | • | 12 V | N |
| NCV4269 | 5 V | ±2% | 150 mA | 0.5 V | – | 250 μA (1 mA) | | ◆◆ | ◆ | ◆ | | | • | | • | 60 V | R,Z,9 |
| NCV4279 | 5 V | ±2% | 150 mA | 0.5 V | – | 250 μA (1 mA) | | ◆◆ | ◆ | ◆ | | | • | | • | 60 V | R,Z,9 |
| NCV4299 | 3.3, 5 V | ±2% | 150 mA | 0.5 V | 1 μA | 105 μA (1 mA) | ◆ | ◆◆ | ◆ | ◆ | | | • | | • | 60 V | R,9 |
| NCV8501 | Adj, 2.5, 3.3, 5, 8, 10 V | ±2% | 150 mA | 0.6 V | 30 μA | 75 μA (100 μA) | ◆ | ◆ | ◆ | ◆ | | | • | | • | 60 V | R,X |
| NCV8502 | Adj, 2.5, 3.3, 5, 8, 10 V | ±2% | 150 mA | 0.6 V | – | 75 μA (100 μA) | | ◆◆ | ◆ | ◆ | | | • | | • | 60 V | R,X |
| NEW! NCV8508 | 5 V | ±3% | 250 mA | 0.9 V | 150 μA (Operating Mode) | 150 μA (150 mA) | | ◆ | ◆ | | ◆ | ◆ | • | | • | 60 V | M,W,T |

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SINGLE LINEAR VOLTAGE REGULATORS (continued)

| Device | Output Voltage | Tolerance | Output Current | Dropout (Max) | Sleepmode Current (Max) | Quiescent Current [Max] @ Low Load (load) | Enable | Reset (◆◆ = Adjustable) | Delay | Early Warning Flag/Monitor | WATCHDOG | Wakeup | Current Limit | Over Voltage | Over Temperature | Peak Transient | Package(s) ¹ |
|----------------------|--------------------|-----------|----------------|---------------|-------------------------|---|--------|-------------------------|-------|----------------------------|----------|--------|---------------|--------------|------------------|----------------|-------------------------|
| NEW! NCV8518 | 5 V | ±2% | 250 mA | 0.75 V | 1 μA | 150 μA (150 mA) | ◆ | ◆ | ◆ | | ◆ | ◆ | • | | • | 45 V | T,X |
| NCV33275 | 5 V | ±2% | 300 mA | 0.5 V | – | 200 μA (0 μA) | | | | | | | • | | • | 13 V | 10 |
| NCV8503 | Adj, 2.5, 3.3, 5 V | ±2% | 400 mA | 0.6 V | 1 μA | 350 μA (100 μA) | ◆ | ◆◆ | ◆ | ◆ | | | • | | • | 60 V | X |
| NCV8504 | Adj, 2.5, 3.3, 5 V | ±2% | 400 mA | 0.6 V | – | 150 μA (100 μA) | | ◆◆ | ◆ | ◆ | | | • | | • | 60 V | X |
| NCV8505 | Adj, 2.5, 3.3, 5 V | ±2% | 400 mA | 0.6 V | 1 μA | 350 μA (100 μA) | ◆ | ◆ | ◆ | | | | • | | • | 60 V | M |
| NCV8506 | Adj, 2.5, 3.3, 5 V | ±2% | 400 mA | 0.6 V | – | 150 μA (100 μA) | | ◆ | ◆ | | | | • | | • | 60 V | M |
| NEW! NCV4274 | 5 V | ±4% | 400 mA | 0.5 V | 10 μA | 220 μA (1 mA) | | | | | | | • | | • | 60 V | J,L |
| NEW! NCV4274A | 5 V | ±2% | 400 mA | 0.5 V | 10 μA | 220 μA (1 mA) | | | | | | | • | | • | 60 V | J,L |

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SINGLE LINEAR VOLTAGE REGULATORS (continued)

| Device | Output Voltage | Tolerance | Output Current | Dropout (Max) | Sleepmode Current (Max) | Quiescent Current [Max] @ Low Load (load) | Enable | Reset (◆ = Adjustable) | Delay | Early Warning Flag/Monitor | WATCHDOG | Wakeup | Current Limit | Over Voltage | Over Temperature | Peak Transient | Package(s) ¹ |
|----------------------|-------------------------|-----------|----------------|---------------|-------------------------|---|--------|------------------------|-------|----------------------------|----------|--------|---------------|--------------|------------------|----------------|-------------------------|
| NCV4276 | Adj, 1.8, 2.5, 3.3, 5 V | ±4% | 400 mA | 0.5 V | 10 µA | 220 µA (1 mA) | ◆ | | | | | | • | • | • | 60 V | J,L |
| NEW! NCV4276A | Adj, 5 V | ±2% | 400 mA | 0.5 V | 10 µA | 220 µA (1 mA) | ◆ | | | | | | • | • | • | 60 V | J,L |
| NCV4275 | 5 V | ±2% | 450 mA | 0.5 V | – | 200 µA (1 mA) | | ◆ | ◆ | | | | • | • | • | 60 V | J,L |
| NEW! NCV5500* | 1.5 V | ±2.9% | 500 mA | 1.0 V | 50 µA | 500 µA (100 µA) | ◆ | | | | | | • | • | • | 18 V | J |
| NEW! NCV5501* | 1.5 V | ±2.9% | 500 mA | 1.0 V | – | 500 µA (100 µA) | | | | | | | • | • | • | 18 V | I |
| NCV8141 | 5 V | ±4% | 500 mA | 1.5 V | 50 µA | 50 µA (0 µA) | ◆ | ◆ | ◆ | | ◆ | | • | • | • | 60 V | M |
| CS8122 | 5 V | ±2% | 750 mA | 0.6 V | – | – | | ◆ | ◆ | | | | • | • | • | 60 V | B,C,D |
| CS8126 | 5 V | ±3% | 750 mA | 0.6 V | – | – | | ◆ | ◆ | | | | • | • | • | 60 V | B,C,D, E,M |
| CS8129 | 5 V | ±3% | 750 mA | 0.6 V | – | – | | ◆ | ◆ | | | | • | • | • | 60 V | B,C,D, V |
| NCV33269 | Adj, 3.3 V | ±2% | 800 mA | 1.35 V | – | – | | | | | | | • | • | • | 20 V | I |

1. See Package Codes on page 16. **BOLD** denotes NEW devices. * Preliminary. ** Not specified.

SINGLE LINEAR VOLTAGE REGULATORS (continued)

| Device | Output Voltage | Tolerance | Output Current | Dropout (Max) | Sleepmode Current (Max) | Quiescent Current [Max] @ Low Load (load) | Enable | Reset (◆ = Adjustable) | Delay | Early Warning Flag/Monitor | WATCHDOG | Wakeup | Current Limit | Over Voltage | Over Temperature | Peak Transient | Package(s) ¹ |
|---------------------|------------------------------|-----------|----------------|---------------|-------------------------|---|--------|------------------------|-------|----------------------------|----------|--------|---------------|--------------|------------------|----------------|-------------------------|
| NEW! NCV7805 | 5, 8, 12 V | ±5% | 1 to 2 A‡ | 2.0 V (Typ) | - | - | | | | | | | • | | • | 40 V | A |
| NCV317 | Adj. | ±4% | 1.5 A | 2.25 V (Typ) | - | - | | | | | | | • | | • | 40 V | A,K |
| NCV1117 | Adj, 1.5, 1.8, 2.5, 3.3, 5 V | ±2% | 1 A | 1.2 V | - | - | | | | | | | • | | • | 20 V | I, 10 |

1. See Package Codes on page 16. **BOLD** denotes NEW devices. * Preliminary. ** Not specified. ‡ See data sheet for details.

DUAL LINEAR VOLTAGE REGULATORS

| Device | Output Voltage | Tolerance | Output Current | Dropout (Max) | Sleepmode Current (Max) | Quiescent Current [Max] @ Low Load (load) | Enable | Reset | Delay | Sequenced | Current Limit | Over Voltage | Over Temperature | Peak Transient | Package(s) ¹ |
|---------------------|------------------------------------|--------------------|--------------------------|------------------------|-------------------------|---|--------|--------|--------|-----------|---------------|--------------|------------------|----------------|-------------------------|
| CS8361 | 5 V Tracking | ±2% 25 mV | 100 mA 250 mA | 0.6 V 0.7 V | 200 µA | 200 µA (300 µA) | ◆ | ◆ | | | • | • | • | 60 V | M,W |
| CS8363 | 3.3 V Tracking | ±2% 25 mV | 100 mA 250 mA | 1.0 V 0.7 V | 200 µA | 200 µA (300 µA) | ◆ | ◆ | | | • | • | • | 60 V | M |
| NCV8509 | 5.0, 5.0, 3.3 V 2.6, 2.5, 1.8 V | ±2% ±2% | 115 mA 100 mA | 0.6 V – | – | 175 µA (200 µA) | | ◆ ◆ | ◆ ◆ | ◆ ◆ | • | | • | 50 V | X |
| NEW! NCV5504 | 3.3 V, Adj. | ±2% ±2% | 250 mA 250 mA | 0.4 V 0.4 V | – | 450 µA (0 µA) | | | | | • | | • | 18 V | J |
| CS8161 | 12 V 5 V | ±5% ±2% | 400 mA 200 mA | 0.6 V 0.6 V | 200 nA (Typ) | – | ◆ | | | | • | • | • | 74 V | B,C,D |
| CS8156 | 12 V 5 V | ±5% ±2% | 750 mA 100 mA | 1.0 V 0.6 V | 50 µA | – | ◆ | | | | • | • | • | 60 V | B,C,D |
| CS8371 | 8 V 5 V | ±5% ±5% | 1 A 250 mA | 1.5 V 2.5 V | 10 µA | – | ◆ ◆ | | | | • | • | • | 45 V | F,G,H |

1. See Package Codes on page 16. **BOLD** denotes NEW devices. * Preliminary. ** Not specified.

TRACKING REGULATORS

| Device | Output Voltage | Tolerance | Output Current | Dropout (Max) | Sleepmode Current (Max) | Quiescent Current [Max] @ Low Load (load) | Enable | Reset | Current Limit | Over Voltage | Over Temperature | Peak Transient | Package(s) ¹ |
|---------|----------------------|----------------|----------------------|----------------|-------------------------|---|--------|-------|---------------|--------------|------------------|----------------|-------------------------|
| NCV8184 | Tracking | ±5 mV | 70 mA | 0.6 V | 20 µA | 70 µA (100 µA) | ◆ | | • | | • | 45 V | J,S |
| CS8182 | Tracking | ±5 mV | 200 mA | 0.6 V | 55 µA | 150 µA (100 µA) | ◆ | | • | | • | 45 V | L,S |
| CS8183 | Tracking Tracking | ±5 mV ±5 mV | 200 mA** 200 mA** | 0.6 V 0.6 V | 55 µA | 150 µA (100 µA) | ◆ | | • | | • | 45 V | Z |
| CS8361 | Tracking 5 V | ±25 mV ±2 % | 250 mA 100 mA | 0.7 V 0.6 V | 200 µA | 200 µA (300 µA) | ◆ | ◆ | • | • | • | 60 V | M,W |
| CS8363 | Tracking 3.3 V | ±25 mV ±2 % | 250 mA 100 mA | 0.7 V 1.0 V | 200 µA | 200 µA (300 µA) | ◆ | ◆ | • | • | • | 60 V | M |

1. See Package Codes on page 16. **BOLD** denotes NEW devices. * Preliminary. ** Can be combined for single 400 mA operation.

LINEAR VOLTAGE REFERENCES

| Device | Voltage | Tolerance | Forward Current (Max) | Reverse Current (Max) | Adj Range | Dynamic Impedance (Typ) | Temperature Drift (Typ) | Time Drift | Package(s) ¹ |
|---------|---------|-----------|-----------------------|-----------------------|-----------|-------------------------|-------------------------|------------|-------------------------|
| NCV1009 | 2.5 V | 2% | 10 mA | 20 mA | 5% | 0.4 Ω | 1.8 mV | 20 ppm/kHr | R |
| NCV431A | 2.5 V | ±2.2% | 100 mA | 150 mA | – | 0.22 Ω | 7.0 mV | – | 5 |

1. See Package Codes on page 16. **BOLD** denotes NEW devices. * Preliminary. ** Not specified.

SWITCHING VOLTAGE REGULATORS

| Device | Output Voltage | Volt Tolerance | Switch Current | Osc Freq | Input Range | Mode | Type | Regulator | Controller | Synchronous | Enable | Sequenced | Linear Reg. | Reset | WDI | SYNC | BIAS | Current Limit | Over Voltage | Over Temp. | Peak Trans | Package(s) ¹ |
|-----------|----------------------|----------------|----------------|----------|-------------|----------------|---------------|-----------|------------|-------------|--------|-----------|-------------|-------|-----|------|------|---------------|--------------|------------|------------|-------------------------|
| CS2841B | Adj | ±1.0% | 0.2 A | Adj | 8–40 V | Current | PWM | | ◆ | | | | ◆ | | | | | • | | | 40 V | O,U |
| CS5112 | Adj | ±3.6% | 1.4 A | Adj | 5–26 V | Current | Boost | ◆ | | | ◆ | | ◆ | ◆ | ◆ | | | • | | • | 54 V | 2 |
| NCV33063A | Adj | ±2.0% | 1.5 A | 33 kHz | 3–40 V | Invert | Boost or Buck | ◆ | | | | | | | | | | | | | 40 V | R |
| NCV33163 | Adj | ±2.0% | 2.5 A | 50 kHz | 2.5–60 V | Invert | Boost or Buck | ◆ | | | | | | ◆ | | | | • | | • | 60 V | P,V |
| NCV3843BV | Adj | ±2.0% | 0.2 A | 52 kHz | 9–30 V | Current | PWM | | ◆ | | | | | | | | | • | | | 30 V | U |
| NCV8800 | 2.6, 3.3, 5.0, 7.5 V | ±3.0% | 1.0 A | 200 kHz | 3.5–24 V | V ² | Buck | ◆ | | ◆ | ◆ | ◆ | | | | | | • | | • | 45 V | W |
| NCV494 | 5 V+ | ±5.0% | 500 mA | Adj. | 7–40 V | Voltage | PWM | | ◆ | | | | ◆ | | | | | | | | 42 V | 12 |
| NCV51411 | Adj. | ±2.0% | 1.6 A | 260 kHz | 4.4–40 V | V ² | Buck | | | | | | | | | ◆ | | • | | • | 40 V | R,X |

1. See Package Codes on page 16. **BOLD** denotes NEW devices. NOTE: Boost converters can be used in a SEPIC topology for applications requiring a higher or lower output voltage.

VOLTAGE SENSING RESET CIRCUITS

| Device | Threshold Voltage | | | | | | | | | | | | | | Window Detection | Reference Voltage | Sink Current (mA) | Quiescent Current (μA) (max) | Peak Transient | Package(s) ¹ |
|----------------------|-------------------|-------|-------|-------|-------|-------|-------|--------|-------|-------|--------|-------|-------|-------|------------------|-------------------|-------------------|------------------------------|----------------|-------------------------|
| | Adj | 1.0 V | 1.2 V | 1.5 V | 1.6 V | 2.3 V | 2.3 V | 2.65 V | 2.9 V | 3.0 V | 4.27 V | 4.4 V | 4.5 V | 4.6 V | | | | | | |
| NEW! NCV301 | | | ♦ | | ♦ | | | | | | | | | | | | 1.0 mA | 1.3 μA | 12 V | N |
| NEW! NCV303 | | ♦ | | ♦ | | ♦ | ♦ | | ♦ | ♦ | | ♦ | ♦ | ♦ | ♦ | | 1.5 mA | 1.4 μA | 12 V | N |
| NCV33064 | | | | | | | | | | | | | | ♦ | | | 10 mA | 500 μA | 10 V | R,4 |
| NEW! NCV33161 | ♦ | | | | | | | | | | | | | | ♦ | ♦ | 10 mA | 700 μA | 40 V | R |
| NCV33164 | | | | | | | ♦ | | | ♦ | | | | | | | 6.0 mA | 40 μA | 12 V | R |

1. See Package Codes on page 16. **BOLD** denotes NEW devices. * Preliminary. ** Not specified.

ALTERNATOR VOLTAGE REGULATORS

| Device | Darlington Driver | FET Driver | Stator Power Up | Lamp Driver | Flip-Chip | Current Limit | Peak Transient | Package(s) ¹ |
|--------|-------------------|------------|-----------------|-------------|-----------|---------------|----------------|-------------------------|
| CS3341 | • | | | ◆ | ◆ | • | 80 V | U |
| CS3351 | • | | • | ◆ | ◆ | • | 80 V | U |
| CS3361 | | • | | ◆ | | • | 80 V | U |

1. See Package Codes on page 16. **BOLD** denotes NEW devices. * Preliminary. ** Not specified.

DRIVERS

| Device | Description | Output Current | R _{DS(ON)} @ 25°C | Sleep Mode | On-Chip Flyback Diode | Active Output Clamp | Parallel Inputs | SPI | Fault Reporting | Undervoltage Lockout | Open Load Detect | Power On Reset | Programmable Blanking Time | Current Limit | Over Voltage | Over Temperature | Low Duty Cycle Overcurrent Mode | Peak Transient | Package(s) ¹ |
|----------------------|--------------------------------|----------------|----------------------------|------------|-----------------------|---------------------|-----------------|-----|-----------------|----------------------|------------------|----------------|----------------------------|---------------|--------------|------------------|---------------------------------|----------------|-------------------------|
| NCV7601 | Quad Driver | 600 mA | - | | ◆ | ◆ | ◆ | | | | | | | • | | • | | 60 V | P |
| NCV1413 | Darlington Transistor Array | 500 mA | - | | ◆ | | ◆ | | | | | | | | | | | 50 V | V |
| NCV33152 | High Speed Dual MOSFET Drivers | 1.5 A | - | ◆ | ◆ | | ◆ | | | | | | | | | | | 20 V | R |
| NEW! NCV7702B | Dual H-Bridge Driver | 1 A | - | ◆ | ◆ | | ◆ | | ◆ | | | | | • | • | • | • | 60 V | 2 |

1. See Package Codes on page 16. **BOLD** denotes NEW devices. * Preliminary. ** Not specified.

MOTOR CONTROL

| Device | Description | FET Driver | H-Bridge | Output Current | 3 and 4 Phase Capable | Sleep Mode | Buffered Speed Output | Divide-By Select | On-Chip Flyback Diode | Undervoltage Lockout | Current Limit Adjust | On-Chip Linear Regulator | Current Limit | Over Voltage | Peak Transient | Thermal Shutdown | Package(s) ¹ |
|----------------------|-------------------------------------|------------|----------|----------------|-----------------------|------------|-----------------------|------------------|-----------------------|----------------------|----------------------|--------------------------|---------------|--------------|----------------|------------------|-------------------------|
| NCV33033 | Brushless DC Motor Controller | • | • | 100 mA | • | | | | | ◆ | ◆ | ◆ | • | | 30 V | • | Y |
| NCV33035 | Brushless DC Motor Controller | • | • | 40 mA | • | | | | | ◆ | ◆ | ◆ | • | | 40 V | • | 1 |
| NCV33039* | Closed Loop Brushless Motor Adapter | | | | | | | | | | | | | | 8.25 V** | | R |
| NEW! NCV7702B | Dual H-Bridge Driver | | • | 1 A | | ◆ | | | ◆ | | | | • | • | 60 V | • | 2 |

1. See Package Codes on page 16. *Intended for use with the NCV33035. **Internal shunt regulator.

SENSOR ICS

| Device | Description | Dual | Quad | Diff Input | Open Sensor Detect | Dual WATCHDOG | Sensor Input Voltage Range | V _{CC} (Max) | Package(s) ¹ |
|---------|---|------|------|------------|--------------------|---------------|----------------------------|-----------------------|-------------------------|
| CS1124 | Variable Reluctance Sensor Interface IC | • | | | ◆ | | -250 to +250 V | 7 V | R |
| NCV7001 | Variable Reluctance Sensor Interface IC | | • | • | ◆ | ◆ | -220 to +220 V | 7 V | 1 |

1. See Package Codes on page 16. **BOLD** denotes NEW devices. * Preliminary. ** Not specified.

LIN TRANSCEIVERS

| Device | ISO 9141 Conformance | LIN 1.3 Conformance | LIN 2.0 Conformance | Sleep Mode Current (μ A max) | Recessive Mode Current (μ A max) | On-Chip Voltage Regulator (mA) | Regulator Delayed Reset | ENABLE | External Regulator Control | Integrated Bus Termination | Over Temperature | Peak Transient | Package(s) ¹ |
|----------------------|----------------------|---------------------|---------------------|-----------------------------------|---------------------------------------|--------------------------------|-------------------------|--------|----------------------------|----------------------------|------------------|----------------|-------------------------|
| NEW! NCV7380 | • | • | • | | 30 | | | | | ♦ | ♦ | 40 V | R |
| NEW! NCV7382 | • | • | • | 14 | | | ♦ | ♦ | ♦ | ♦ | | 40 V | R |
| NEW! NCV7361A | • | • | • | 50 | | 50 | ♦ | ♦ | | ♦ | ♦ | 40 V | R |

1. See Package Codes on page 16. **BOLD** denotes NEW devices. * Preliminary. ** Not specified.

CAN TRANSCEIVER

| Device | Description | Sleep Mode Current (Max) | Bus Speed (Max) | Bus Speed High Speed Transmission Mode | J2411 Conformance | Wave Shaping | Integrated Receiver Filter | Loss of Ground Detection | Selective Bus Wakeup | 3.3 V & 5.0 V Compatible Logic | External Voltage Regulator Control | CAN Pin Reverse Voltage Protection | Current Limit | Over Temperature | Operation During Jump Start | Peak Transient | ESD Protection (CAN Pin) | Package(s) ¹ |
|---------------------|-----------------------------|--------------------------|-----------------|--|-------------------|--------------|----------------------------|--------------------------|----------------------|--------------------------------|------------------------------------|------------------------------------|---------------|------------------|-----------------------------|----------------|--------------------------|-------------------------|
| NEW! NCV7356 | Single Wire CAN Transceiver | 60 μ A | 40 kbps | 100 kbps | • | • | • | • | • | • | • | • | • | • | • | 40 V | 4.0 kV | R,9 |

1. See Package Codes on page 16. **BOLD** denotes NEW devices. * Preliminary. ** Not specified.

OP AMPS & COMPARATORS

| Device | Description | Dual | Quad | Response Time | Large Signal Response Time | Input Bias Current | Input Offset Voltage (Max) | Gain/Bandwidth (MHz) | Quiescent Current | Slew Rate | Peak Transient | Package(s) ¹ |
|----------------------|---|------|------|---------------|----------------------------|--------------------|----------------------------|----------------------|------------------------------|--------------------------------|----------------|-------------------------|
| NCV2901 | Quad Comparator | | ◆ | 1.3 μ S | 300 nS | 25 nA | 7 mV | – | 2.5 mA* | – | 36 V | U |
| NCV2903 | Dual Low Offset Voltage Comparators | ◆ | | 1.5 μ S | 300 nS | 25 nA | 7 mV | – | 2.5 mA* | – | 36 V | R,5 |
| NCV2902 | Quad Operational Amplifier | | ◆ | – | – | 90 nA | 7 mV | 1 | 3.0 mA | 0.6 V/ μ S | 32 V | U |
| NCV2904 | Dual Operational Amplifier | ◆ | | – | – | 45 nA | 7 mV | 1 | 3.0 mA | 0.6 V/ μ S | 32 V | R |
| NCV2002 | Single Low-Voltage, Rail-to-Rail Op Amp with Enable | | | – | – | 10 pA | 9.5 mV | 0.9 | 1 mA | 1.3 V/ μ S | 7 V | N |
| NEW! NCV33172 | Dual Low Power Op Amp | ◆ | | – | – | 5 nA | 4.5 mV | 1.8 | 250 μA | 2.1 V/μS | 22 V | R |
| NCV33202 | Dual Low-Voltage, Rail-to-Rail Op Amp | ◆ | | – | – | 100 nA | 8 mV | 2.2 | 2.25 mA | 1.0 V/ μ S | 13 V | R |
| NCV33204 | Quad Low-Voltage, Rail-to-Rail Op Amp | | ◆ | – | – | 100 nA | 8 mV | 2.2 | 4.5 mA | 1.0 V/ μ S | 13 V | U,11 |
| NCV33274A | Quad Low Input Offset Voltage Op Amp | | ◆ | – | – | 300 nA | 3.5 mV | 24 | 12 mA | 10 V/ μ S | 36 V | U |

1. See Package Codes on page 16. **BOLD** denotes NEW devices. * Maximum at 30 V. ** Not specified.

TIMER

| Device | Description | Astable | Monostable | Output (Source) | Output (Sink) | Stability | Peak Transient | Package(s) ¹ |
|----------|--------------------------|---------|------------|-----------------|---------------|---------------|----------------|-------------------------|
| NCV1455B | Direct NE555 Replacement | • | • | 200 mA | 200 mA | 0.005% per °C | 18 V | R |

1. See Package Codes on page 16. **BOLD** denotes NEW devices. * Preliminary. ** Not specified.

GAUGE DRIVERS

| Device | Description | Major Gauge Driver | Minor Gauge Driver | SPI | Frequency to Voltage Converter | Drive Current | Return to Zero | UVLO | Current Limit | Over Temperature | Peak Transient | Package(s) ¹ |
|--------|---|--------------------|--------------------|-----|--------------------------------|---------------|----------------|------|---------------|------------------|----------------|-------------------------|
| CS4121 | Low Voltage Precision Air-Core Tach/Speedo Driver | • | | | • | 33 mA | | | • | | 60 V | Q,Z |
| CS4122 | Triple Air-Core Gauge Driver with Serial Bus Interface | • | • | • | | 70 mA | | | • | • | 16.5 V | 2 |
| CS4192 | Single Air-Core Gauge Driver with Serial Bus Interface | • | | • | | 80 mA | | | • | • | 16.5 V | W |
| CS8190 | Precision Air-Core Tach/Speedo Driver with Return to Zero | • | | | • | 33 mA | ◆ | ◆ | | | 60 V | Q,Z |

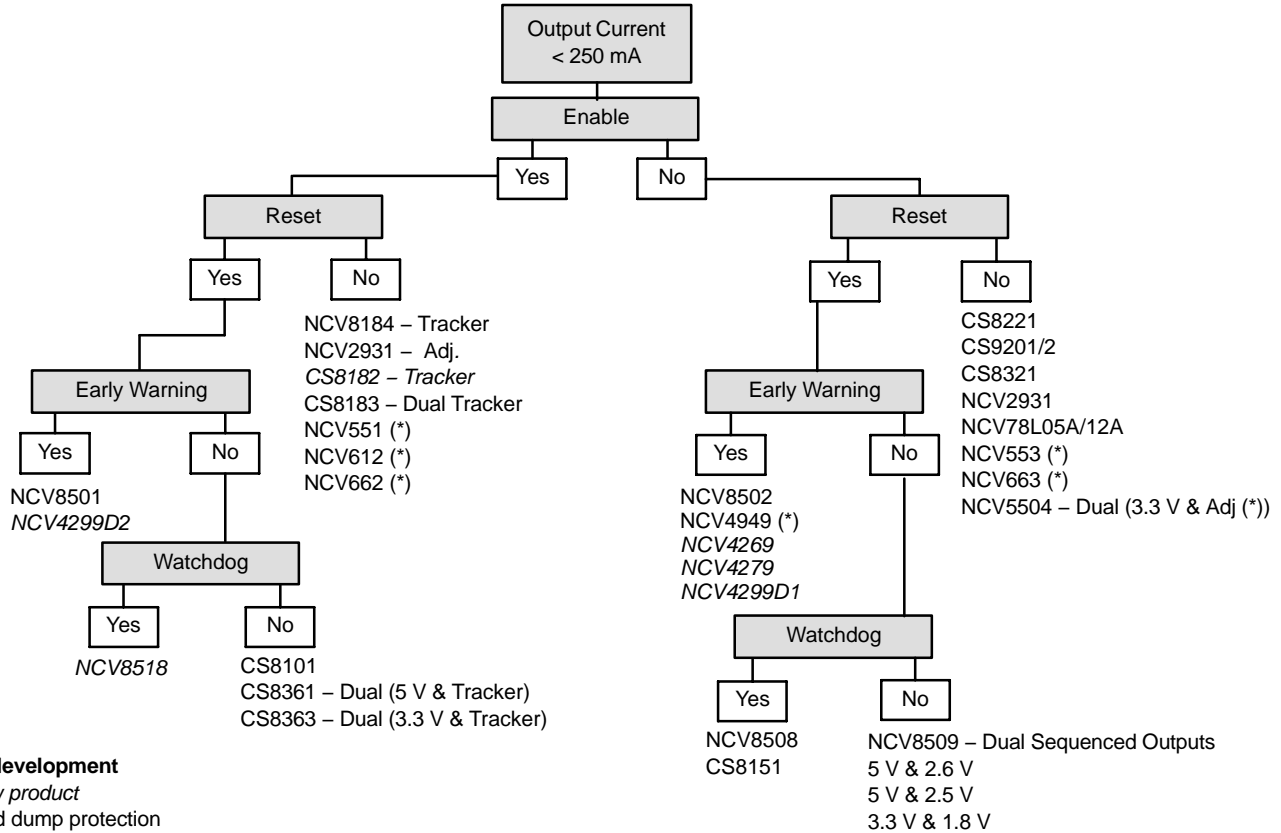
1. See Package Codes on page 16. **BOLD** denotes NEW devices. * Preliminary. ** Not specified.

PACKAGE CODES

| Code | Description | Code | Description | Code | Description | Code | Description |
|------|----------------------------|------|---------------------------|------|-------------|------|-------------|
| A = | TO-220 Straight Lead (3) | K = | D ² PAK 3-Lead | U = | SO-14 | 5 = | Micro8™ |
| B = | TO-220 Straight Lead (5) | L = | D ² PAK 5-Lead | V = | SO-16 | 6 = | Flip-Chip |
| C = | TO-220 Vertical Lead (5) | M = | D ² PAK 7-Lead | W = | SO-16 Fused | 7 = | PLCC-44 |
| D = | TO-220 Horizontal Lead (5) | N = | TSOP-5 | X = | SO-16 Epad | 8 = | N/A |
| E = | TO-220 Special (5) | O = | DIP-14 | Y = | SO-20 | 9 = | SO-14 Fused |
| F = | TO-220 Straight Lead (7) | P = | DIP-16 | Z = | SO-20 Fused | 10 = | SOT-223 |
| G = | TO-220 Vertical Lead (7) | Q = | DIP-16 Fused | 1 = | SO-24 | 11 = | TSSOP-14 |
| H = | TO-220 Horizontal Lead (7) | R = | SO-8 | 2 = | SO-24 Fused | 12 = | SON-16 |
| I = | DPAK 3-Lead | S = | SO-8 Fused | 3 = | SO-28 | 13 = | SC-82 |
| J = | DPAK 5-Lead | T = | SO-8 Epad | 4 = | TO-226AA | 14 = | SC-70 |

For additional information, please see the ON Semiconductor Packaging and Case Outlines Reference Manual (CASERM/D) and/or Tape & Reel Packaging Specifications Brochure (BRD8011/D).

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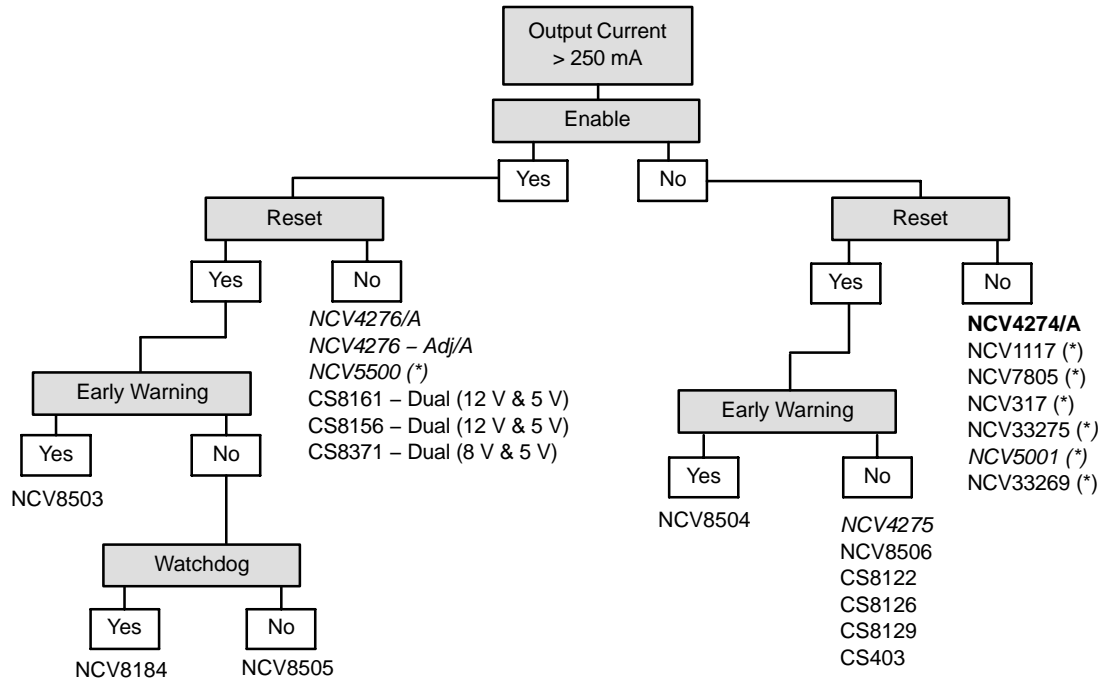


Bold: In development

Italic: New product

(*) No load dump protection

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Notes

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