SAMT0 Nonolithic Linear IC

The LA6534 is a 2-channel BTL-use driver designed for compact disc pickup actuation.
Functions and Features

- High output current ( $\mathrm{I}_{0} \max =0.5 \mathrm{~A}$ )
- Wide operating voltage range (4 to 15 V )
- Low input bias current
- High slew rate ( $0.8 \mathrm{~V} / \mathrm{\mu s}$ typ.)
- Output of amps 1 to 4 and buffer amp at muting-ON mode : OFF

| Maximum Ratings at $\mathrm{Ta}=25^{\circ} \mathrm{C}$ |  |  |  |
| :---: | :---: | :---: | :---: |
| Maximum Supply Voltage | $\mathrm{V}_{\text {CC }}$ max |  | 16 |
| Allowable Power Dissipation | Pd max |  | 1.9 |
| Differential Input Voltage | $\mathrm{V}_{\mathrm{ID}}$ | Amp 2, amp 3 | 15 |
| Common-Mode Input Voltage | $V_{\text {ICM }}$ | Amp 2, amp 3 | 15 |
| Maximum Input Voltage | $\mathrm{V}_{\text {INB }} \max$ | Buffer amp | 15 |
| Maximum Flow-in Current at Muting Pin | $\mathrm{I}_{\mathrm{M} \text { max }}$ |  | 1 |
| Maximum Output Current | $\mathrm{I}_{0}$ max |  | 0.7 |
| Operating Temperature | Topr |  | -20 to +75 |
| Storage Temperature | Tstg |  | -55 to +150 |


| Operating Conditions at $\mathrm{Ta}=25^{\circ} \mathrm{C}$ |  |  | unit |  |
| :--- | :--- | :--- | :--- | ---: |
| Maximum Supply Voltage | $\mathrm{V}_{\mathrm{CC}}$ |  | 5 | V |
| Load Resistance | $R_{\mathrm{L}}$ | Pins 3-6,11-14 | 8 | $\Omega$ |


| Operating Characteristics at $\mathrm{Ta}=25^{\circ} \mathrm{C}, \mathrm{V}_{\mathrm{CC}}=5.0 \mathrm{~V}$ |  |  | min | typ | max | unit |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| No-Loaded Current Dissipation 1 | $\mathrm{I}_{\mathrm{CC}} 1$ | Mute OFF, pins 8,9,16 GND | 5 | 10 | 20 | A |
| No-Loaded Current Dissipation 2 | $\mathrm{I}_{\mathrm{CC}}{ }^{2}$ | Mute OFF, pins $8,9,16 \mathrm{GND}$ | 3 | 7 | 15 | A |
| No-Loaded Current Dissipation 3 | $\mathrm{I}_{\mathrm{C}}{ }^{3}$ | Mute OFF, pins 8,9,16 1/2 $\mathrm{V}_{\text {CC }}$ | 10 | 20 | 30 | mA |
| No-Loaded Current Dissipation 4 | $\mathrm{I}_{\mathrm{CC}} 4$ | Mute OFF, pins 8,9,16 1/2 V CC | 4 | 8 | 16 | A |

Package Dimensions 3054A-D16FNIC
(unit:mm)


Continued from preceding page.

| Output Offset Voltage 1 | $\mathrm{V}_{\text {OFl }}$ | Out 1-Out 2 | -50 | 50 |
| :---: | :---: | :---: | :---: | :---: |
| Output Offset Voltage 2 | $\mathrm{V}_{\text {OF }}{ }^{2}$ | Out 4 - Out 3 | -50 | 50 |
| Buffer Input-Output | $\mathrm{V}_{\text {Blo }}$ | Buffer amp | -30 | 30 |
| Voltage Difference |  |  |  |  |
| Buffer Input Voltage Range | $\mathrm{V}_{\text {BICM }}$ | Buffer amp | 1.5 | $\mathrm{V}_{\mathrm{CC}}-1.5$ |
| Common-Mode Input Voltage Range | $V_{\text {ICM }}$ | Amp 2, amp 3 | 1.0 | $\mathrm{V}_{\mathrm{CC}}-1.5$ |
| Input Bias Current | $\mathrm{I}_{\mathrm{B}}$ |  |  | 50300 |
| Output Voltage | $\mathrm{V}_{0}$ | Pins 3-6,11-14 $8 \Omega$ load | 2.8 | 3.3 |
| Bridge Output Voltage Difference | $\mathrm{V}_{\text {OD }}$ | Pins 3-6,11-148S load | 1.8 | 2.2 |
| Closed-Circuit Voltage Gain | $\mathrm{V}_{\mathrm{G}}$ | Specified circuit, $\mathrm{f}=1 \mathrm{kHz}$ | 30 | 38 |
| Slew Rate | SR | Pins 3-6,11-14 |  | 0.8 |
| Muting Pin ON-State Voltage | $\mathrm{V}_{\mathrm{M}}$ |  |  | 0.7 |
| Muting Pin Flow-in Current | $\mathrm{I}_{\mathrm{M}}$ |  |  | 3 |

Note) The LA6534 is so designed that the outputs at OUT1 to OUT4 are turned OFF and the output at VBOUT is not turned OFF at the muting-ON mode.
Note) Be carefull in handling the LA6543, because dielectric breakdown is liable to occur.

## Equivalent Circuit Block Diagram




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