

# AN6554, AN6554NS

## Quadruple Operational Amplifiers

### ■ Overview

The AN6554 and the AN6554NS are quadruple operational amplifiers with phase compensation circuits built-in.

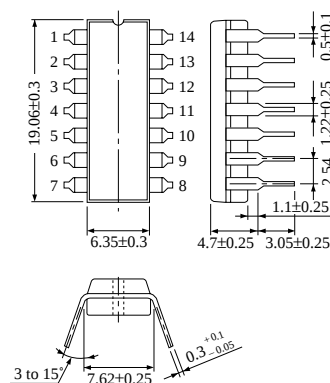
They are suitable for application to various electronic circuits such as active filters and audio pre-amplifiers.

### ■ Features

- Phase compensation circuit built-in
- High voltage gain, low noise
- Output short-circuit protection built-in

AN6554

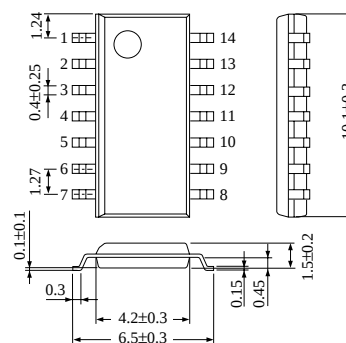
Unit:mm



14-pin DIL Plastic Package (DIP014-P-0300D)

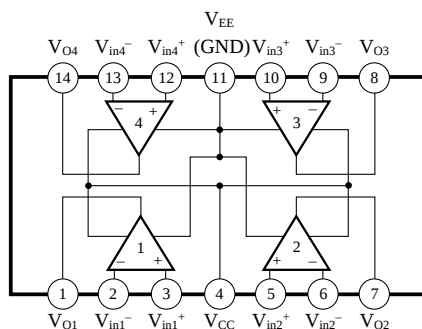
AN6554NS

Unit:mm

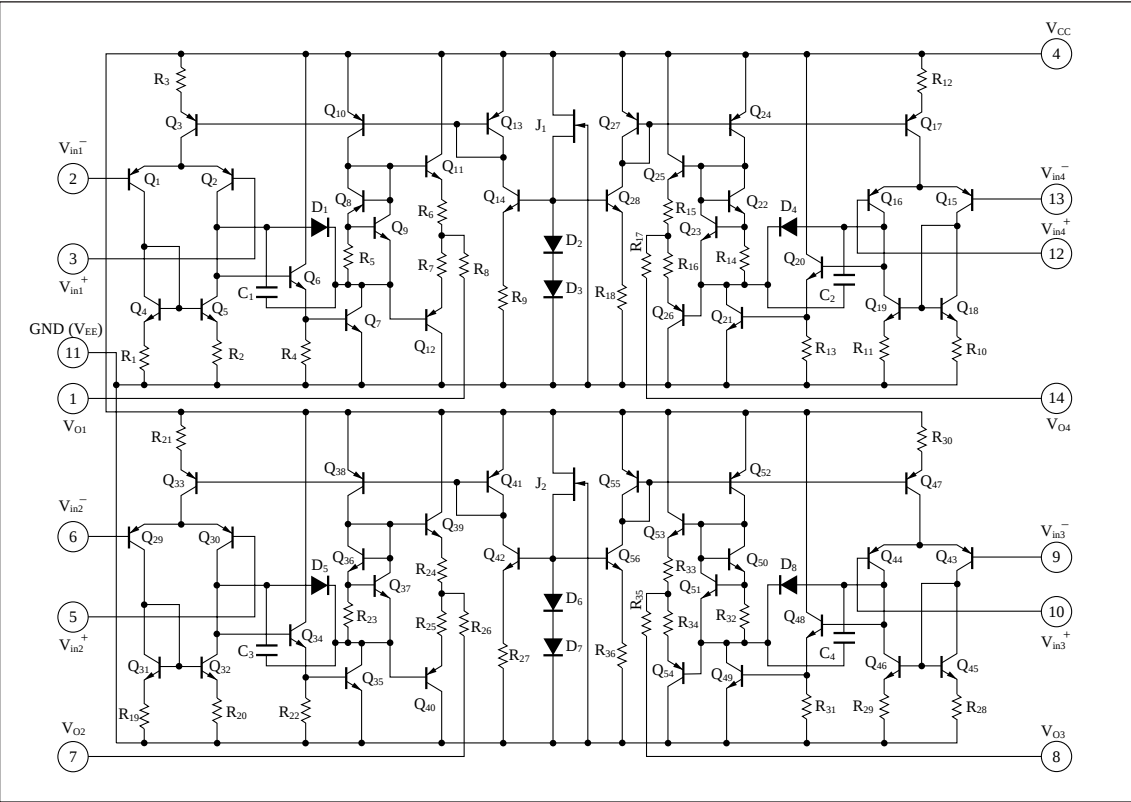


14-pin PANAFLAT Plastic Package (SOP014-P-0225A)

### ■ Block Diagram



Schematic Diagram



Pin Descriptions

| Pin No. | Pin name                 | Pin No. | Pin name                 |
|---------|--------------------------|---------|--------------------------|
| 1       | Ch.1 output              | 8       | Ch.3 output              |
| 2       | Ch.1 inverting input     | 9       | Ch.3 inverting input     |
| 3       | Ch.1 non inverting input | 10      | Ch.3 non inverting input |
| 4       | V <sub>CC</sub>          | 11      | V <sub>EE</sub> (GND)    |
| 5       | Ch.2 non inverting input | 12      | Ch.4 non inverting input |
| 6       | Ch.2 inverting input     | 13      | Ch.4 inverting input     |
| 7       | Ch.2 output              | 14      | Ch.4 output              |

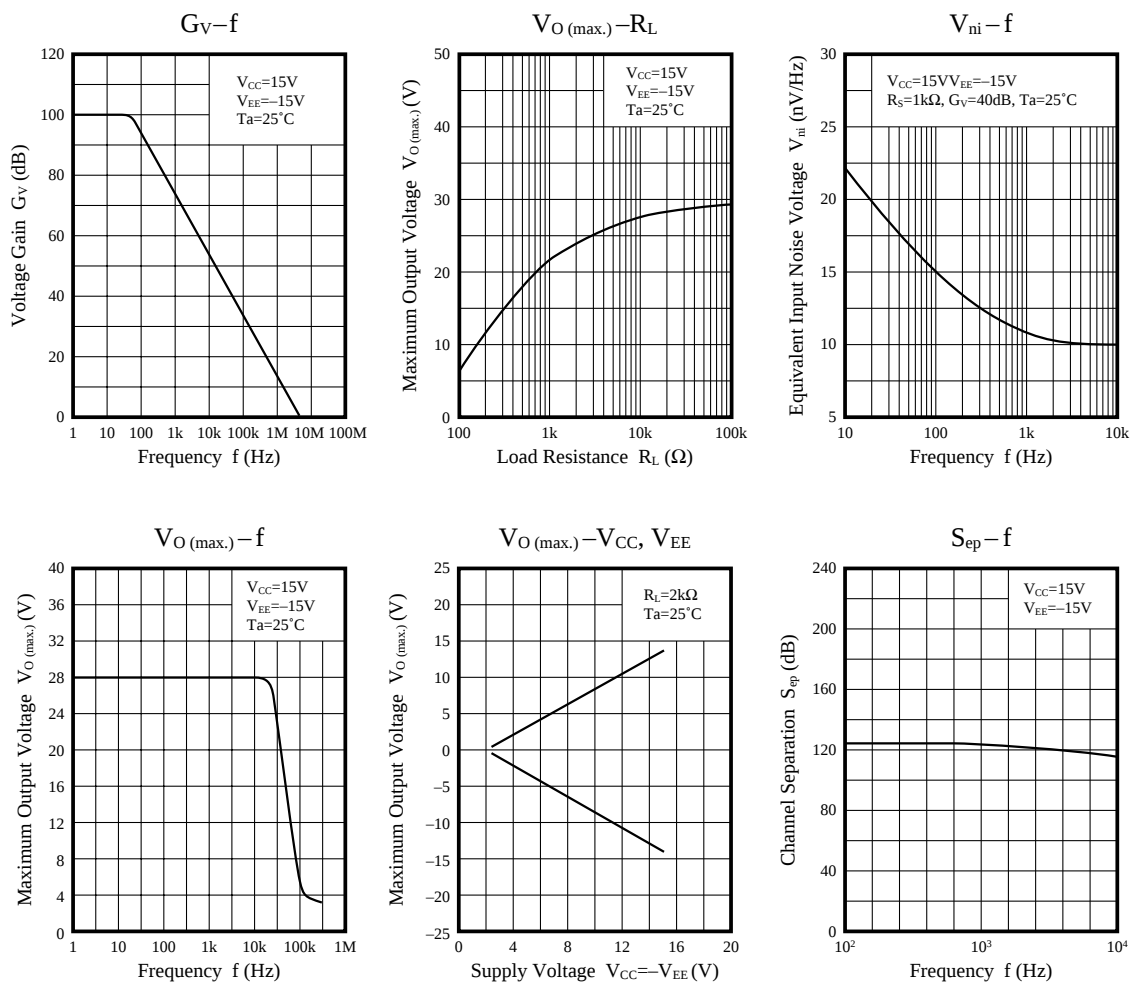
Absolute Maximum Ratings (Ta=25°C)

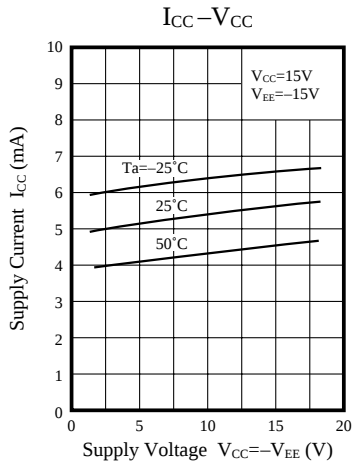
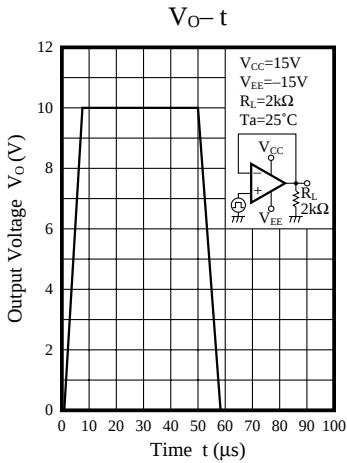
| Parameter         |                               | Symbol           | Rating      | Unit |
|-------------------|-------------------------------|------------------|-------------|------|
| Voltage           | Supply voltage                | V <sub>CC</sub>  | 36          | V    |
|                   | Differential input voltage    | V <sub>ID</sub>  | ±30         | V    |
|                   | Common-mode input voltage     | V <sub>ICM</sub> | ±15         | V    |
| Power dissipation |                               | P <sub>D</sub>   | 570         | mW   |
|                   |                               |                  | 380         |      |
| Temperature       | Operating ambient temperature | T <sub>opr</sub> | −20 to +75  | °C   |
|                   | Storage temperature           | T <sub>stg</sub> | −55 to +150 | °C   |
|                   |                               |                  | −55 to +125 |      |

## ■ Electrical Characteristics ( $V_{CC}=15V$ , $V_{EE}=-15V$ , $T_a=25^\circ C$ )

| Parameter                       | Symbol          | Condition                             | min      | typ      | max | Unit          |
|---------------------------------|-----------------|---------------------------------------|----------|----------|-----|---------------|
| Input offset voltage            | $V_{I(offset)}$ | $R_S \leq 10k\Omega$                  | —        | 0.5      | 5   | mV            |
| Input offset current            | $I_{IO}$        |                                       | —        | 5        | 50  | nA            |
| Input bias current              | $I_{bias}$      |                                       | —        | 100      | 300 | nA            |
| Voltage gain                    | $G_V$           | $R_L \geq 2k\Omega$ , $V_O = \pm 10V$ | 88       | 100      | —   | dB            |
| Maximum output voltage          | $V_{O(max.1)}$  | $R_L \geq 10k\Omega$                  | $\pm 12$ | $\pm 14$ | —   | V             |
|                                 | $V_{O(max.2)}$  | $R_L \geq 2k\Omega$                   | $\pm 10$ | $\pm 13$ | —   | V             |
| Common-mode input voltage width | $V_{CM}$        |                                       | $\pm 12$ | $\pm 14$ | —   | V             |
| Common-mode rejection ratio     | CMR             |                                       | 70       | 90       | —   | dB            |
| Supply voltage rejection ratio  | SVR             |                                       | —        | 30       | 100 | $\mu V/V$     |
| Power consumption               | $P_C$           |                                       | —        | —        | 240 | mW            |
| Slew rate                       | SR              |                                       | —        | 1.6      | —   | V/ $\mu s$    |
| Equivalent input noise voltage  | $V_{ni}$        | $R_S=1k\Omega$ , B=10Hz to 30kHz      | —        | 2.5      | —   | $\mu V_{rms}$ |
| Channel separation              | Sep             | f=10kHz                               | —        | 110      | —   | dB            |

## ■ Characteristics Curve





This datasheet has been download from:

[www.datasheetcatalog.com](http://www.datasheetcatalog.com)

Datasheets for electronics components.