

# AN6554, AN6554NS

## Quadruple Operational Amplifiers

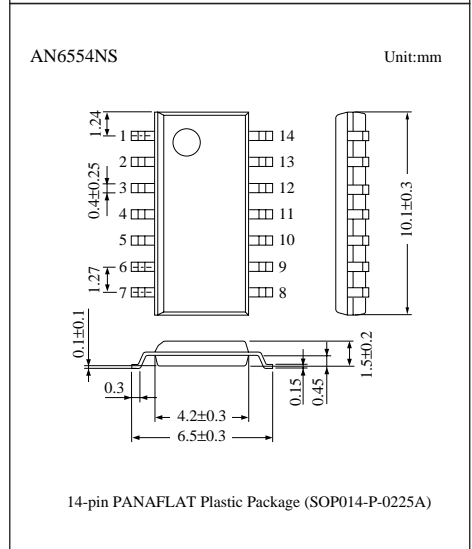
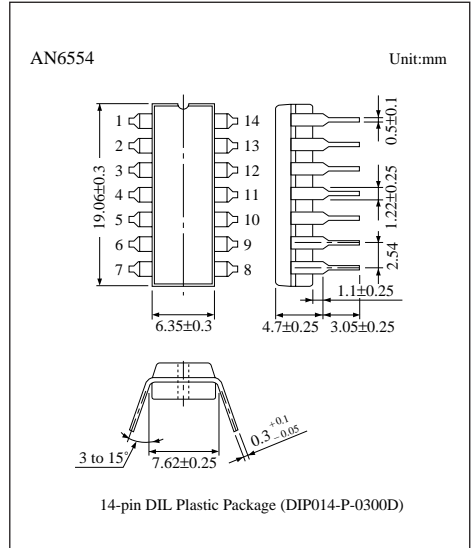
### ■ Overview

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

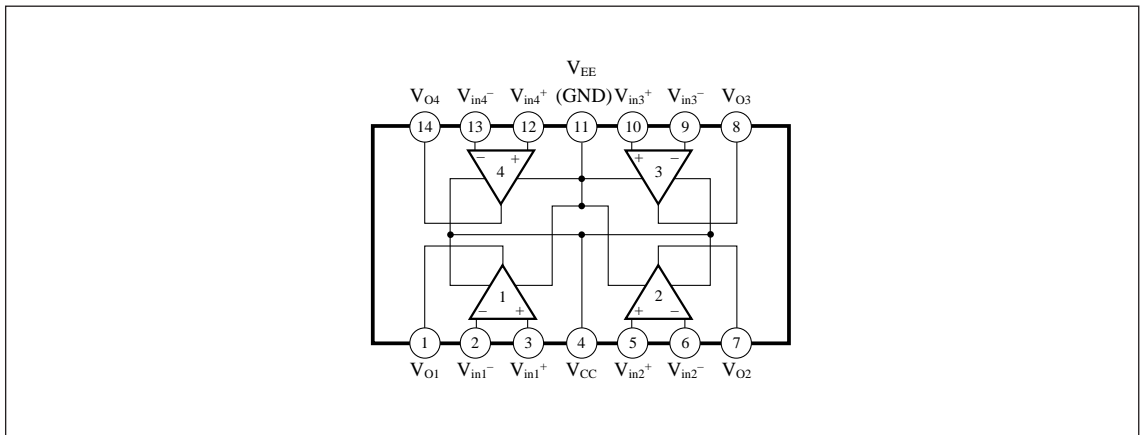
They are suitable for application to various electronic circuits such as active filters and audio pre-amplifiers.

### ■ Features

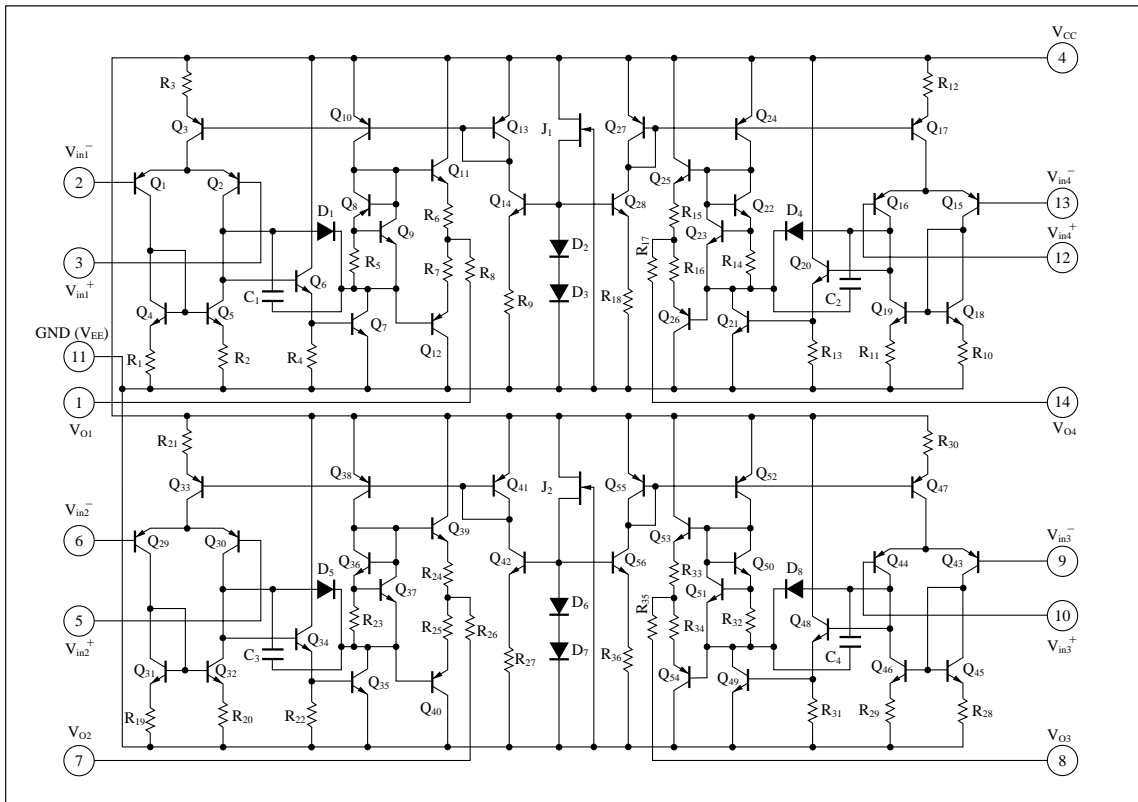
- Phase compensation circuit built-in
- High voltage gain, low noise
- Output short-circuit protection built-in



### ■ 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

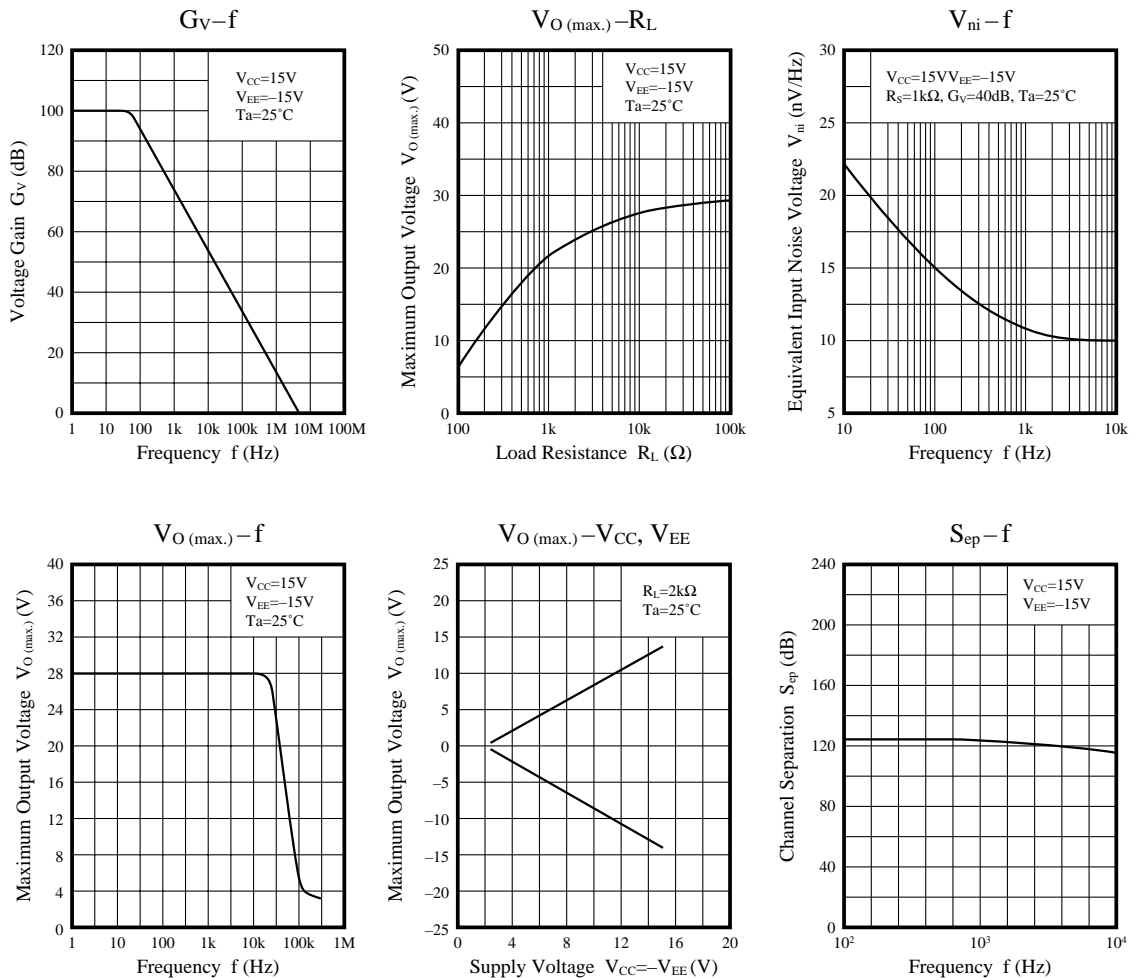
## ■ Absolute Maximum Ratings (Ta=25°C)

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	AN6554	P <sub>D</sub>	570	mW
	AN6554NS		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	

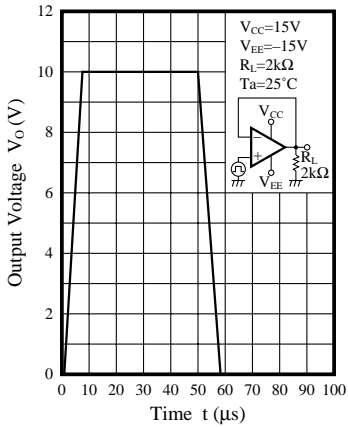
## ■ Electrical Characteristics ( $V_{CC}=15V$ , $V_{EE}=-15V$ , $T_a=25^\circ C$ )

Parameter	Symbol	Condition	min	typ	max	Unit
Input offset voltage	$V_{I(\text{offset})}$	$R_S \leq 10k\Omega$	—	0.5	5	mV
Input offset current	$I_{IO}$		—	5	50	nA
Input bias current	$I_{\text{bias}}$		—	100	300	nA
Voltage gain	$G_V$	$R_L \geq 2k\Omega$ , $V_O = \pm 10V$	88	100	—	dB
Maximum output voltage	$V_{O(\text{max.1})}$	$R_L \geq 10k\Omega$	$\pm 12$	$\pm 14$	—	V
	$V_{O(\text{max.2})}$	$R_L \geq 2k\Omega$	$\pm 10$	$\pm 13$	—	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	—	$\mu V_{\text{rms}}$
Channel separation	Sep	f=10kHz	—	110	—	dB

## ■ Characteristics Curve



$V_O-t$



$I_{CC}-V_{CC}$

