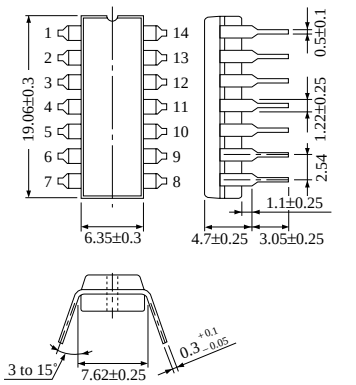
AN6554, AN6554NS

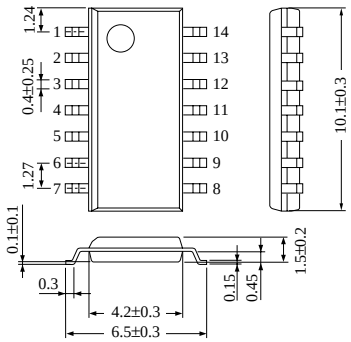
Quadruple Operational Amplifiers

AN6554 Unit:mm



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

AN6554NS Unit:mm



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

■ Overview

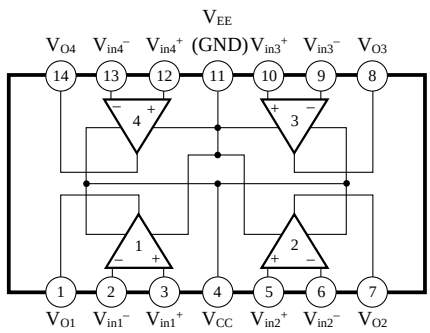
The AN6554 and the AN6554NS are quadruple operational amplifiers with phase compensation circuits built-in.

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

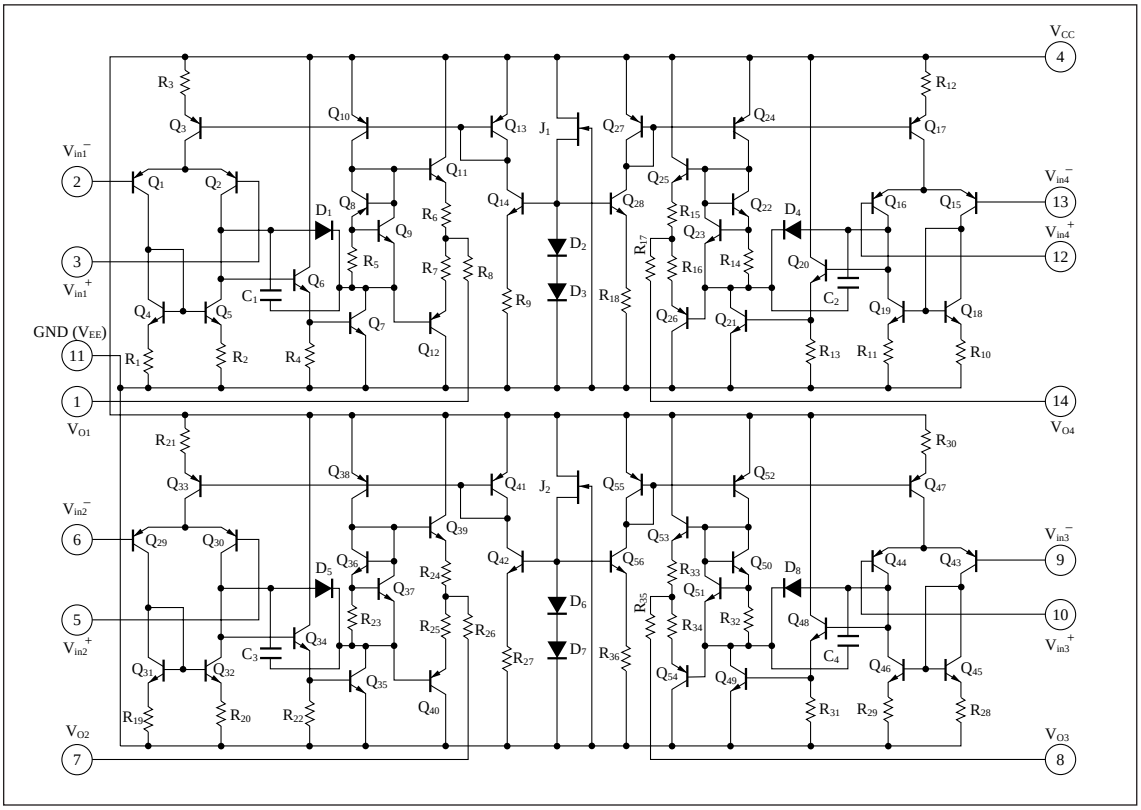
■ Features

- 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_{CC}	11	V_{EE} (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)

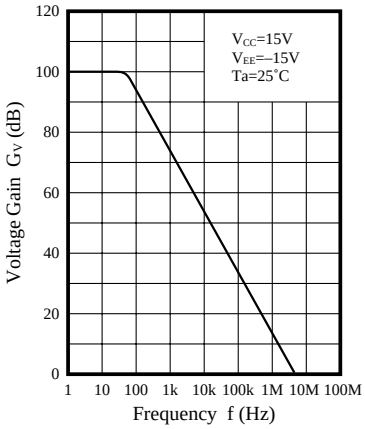
Parameter			Symbol	Rating	Unit
Voltage	Supply voltage		V_{CC}	36	V
	Differential input voltage		V_{ID}	±30	V
	Common-mode input voltage		V_{ICM}	±15	V
Power dissipation		AN6554	P_D	570	mW
		AN6554NS		380	
Temperature	Operating ambient temperature		T_{opr}	–20 to +75	˚C
	Storage temperature	AN6554	T_{stg}	–55 to +150	˚C
		AN6554NS		–55 to +125	

■ Electrical Characteristics (V_{CC}=15V, V_{EE}=–15V, Ta=25˚C)

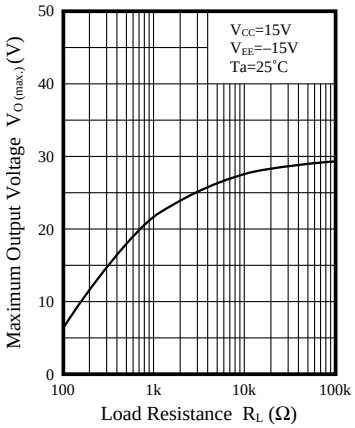
Parameter	Symbol	Condition	min	typ	max	Unit
Input offset voltage	$V_{I\,(offset)}$	$R_S \leqq 10k\Omega$	—	0.5	5	mV
Input offset current	I_{IO}		—	5	50	nA
Input bias current	I_{bias}		—	100	300	nA
Voltage gain	G_V	$R_L \geqq 2k\Omega$, V_O=±10V	88	100	—	dB
Maximum output voltage	$V_{O\,(max.1)}$	$R_L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

■ Characteristics Curve

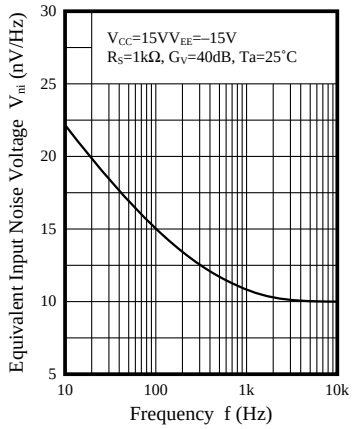
G_V–f



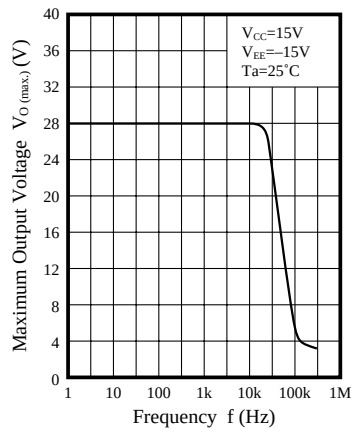
$V_{O\,(max.)}$–R_L



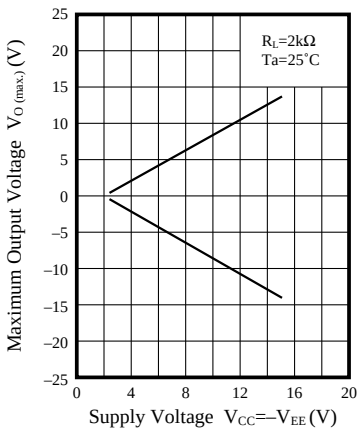
V_{ni}–f



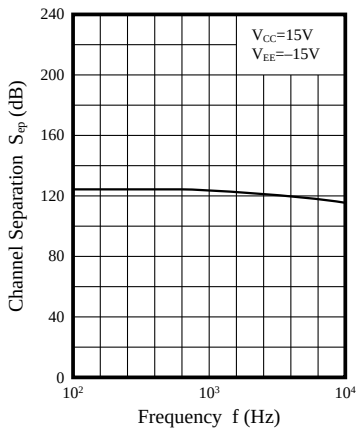
$V_{O\,(max.)}$–f



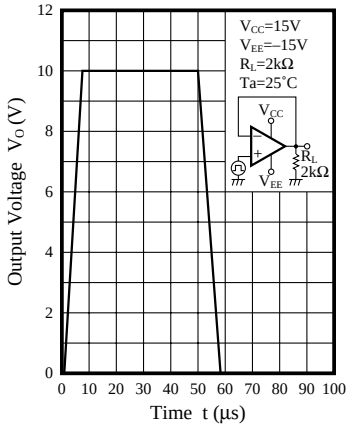
$V_{O\,(max.)}$–V_{CC}, V_{EE}



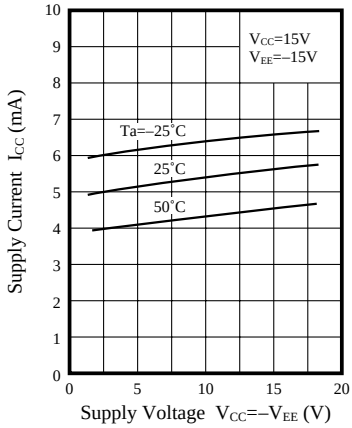
S_{ep}–f



V_O– t


Output Voltage V_O (V)
Time t (µs)
V_{CC}=15V
V_{EE}=–15V
R_L=2kΩ
Ta=25˚C
V_{CC}
R_L
2kΩ
V_{EE}

I_{CC}–V_{CC}


Supply Current I_{CC} (mA)
Supply Voltage V_{CC}=–V_{EE} (V)
V_{CC}=15V
V_{EE}=–15V
Ta=–25˚C
25˚C
50˚C

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