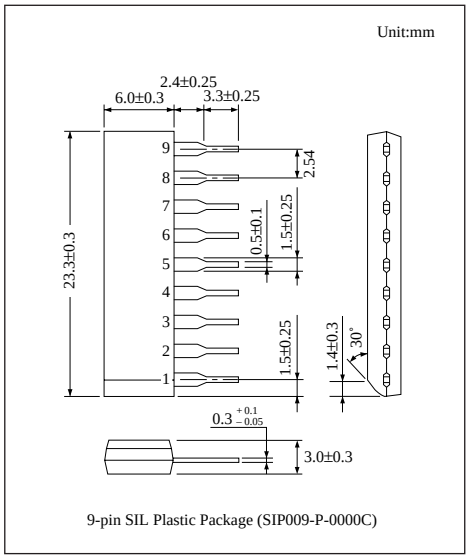
AN6551

Dual Operational Amplifier

■ Overview

The AN6551 is a dual operational Amplifier with a phase compensation circuit built-in.

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



9-pin SIL Plastic Package (SIP009-P-0000C)

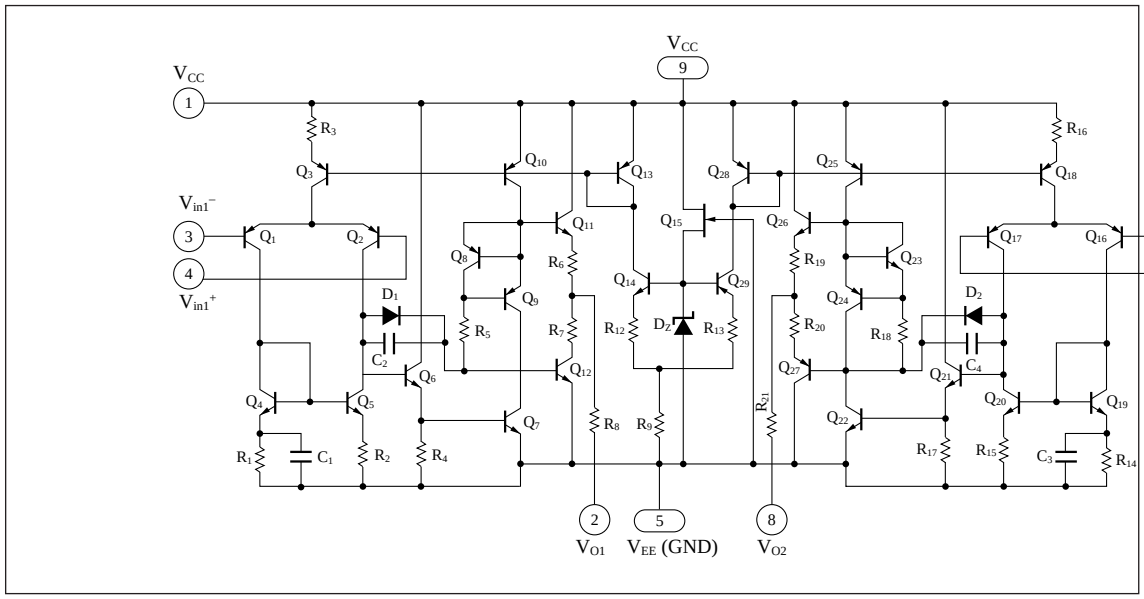
■ Features

- Phase compensation circuit
- High gain, low noise
- Output short-circuit protection
- Two circuits symmetrically arranged in 9-pin SIL plastic package

■ Pin Descriptions

Pin No.	Pin name
2	Ch.1 output
3	Ch.1 inverting input
4	Ch.1 non inverting input
5	V_{EE} (GND)
6	Ch.2 non inverting input
7	Ch.2 inverting input
8	Ch.2 output
1, 9	V_{CC}

■ Block Diagram



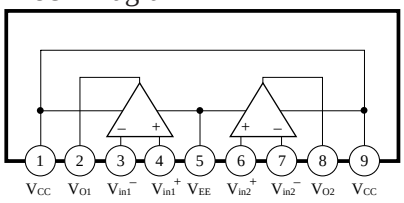
■ Absolute Maximum Ratings (Ta=25˚C)

Parameter		Symbol	Rating	Unit
Voltage	Supply voltage	V_{CC}, V_{EE}	±18	V
	Differential input voltage	V_{ID}	±30	V
	Common-mode input voltage	V_{ICM}	±15	V
Power dissipation		P_D	500	mW
Temperature	Operating ambient temperature	T_{opr}	–20 to +75	˚C
	Storage temperature	T_{stg}	–55 to +150	˚C

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

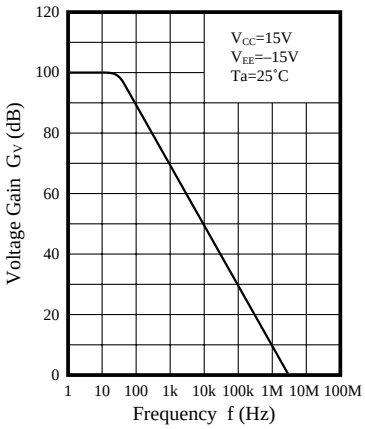
Parameter	Symbol	Condition	min	typ	max	Unit
Input offset voltage	$V_{I\,(offset)}$	R_S ≦10kΩ	—	0.5	6	mV
Input offset current	I_{IO}		—	5	200	nA
Input bias current	I_{bias}		—	—	500	nA
Voltage gain	G_V	R_L ≧2kΩ, V_O=±10V	86	100	—	dB
Maximum output voltage	$V_{O\,(max.)}$	R_L ≧10kΩ	±12	±14	—	V
		R_L ≧2kΩ	±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	150	μV/V
Power consumption	P_C	R_L=∞	—	90	170	mW
Slew rate	SR	R_L ≧2kΩ	—	1.0	—	V/μs
Equivalent input noise voltage	V_{ni}	R_S=1kΩ, B=10Hz to 30kHz	—	2.5	—	μVrms

■ Block Diagram

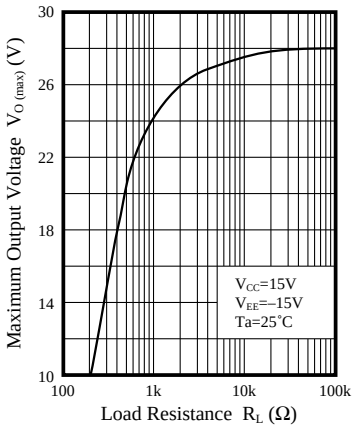


■ Characteristics Curve

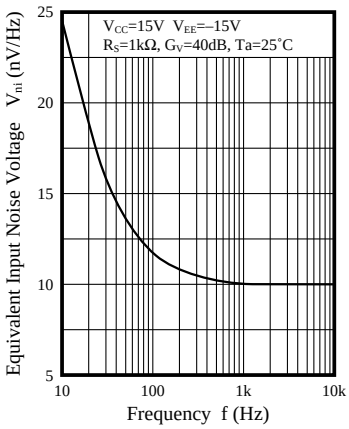
G_V–f



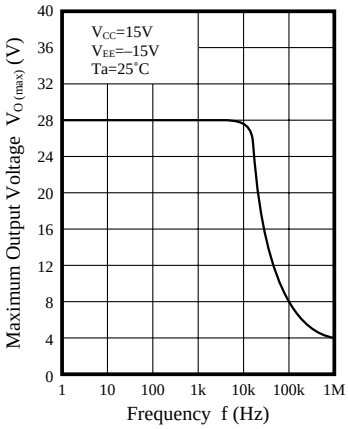
$V_{O\,(max)}$–R_L



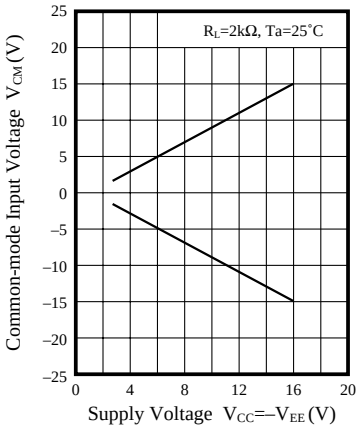
V_{ni}–f



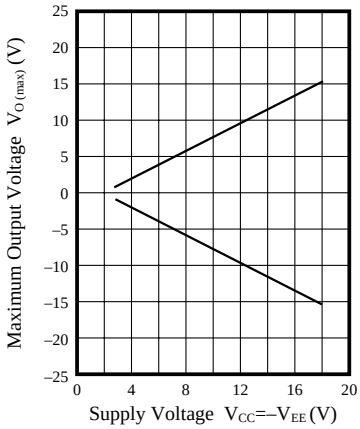
$V_{O\,(max)}$–f



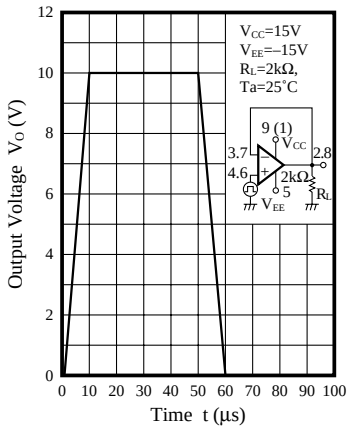
V_{CM}–V_{CC}, V_{EE}



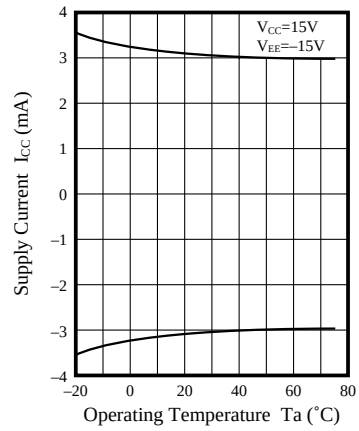
$V_{O\,(max)}$–V_{CC}, V_{EE}



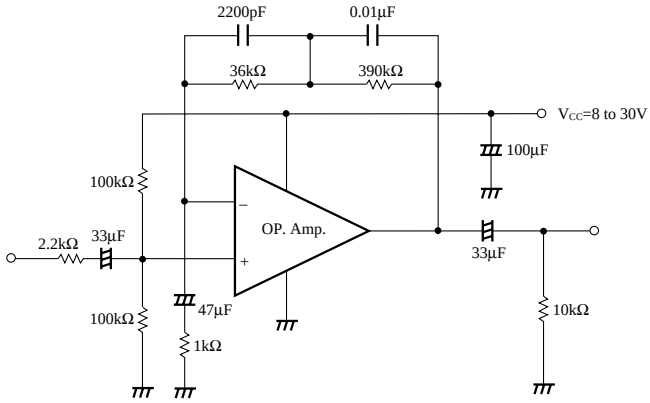
V_O – t



I_{CC} –Ta



■ Application Circuit



RIAA Pre-amp. (Single voltage operation)

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