

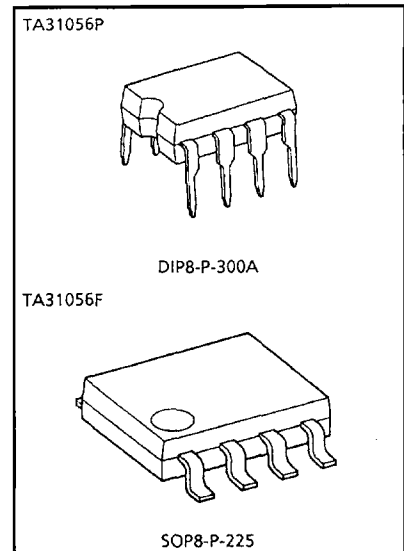
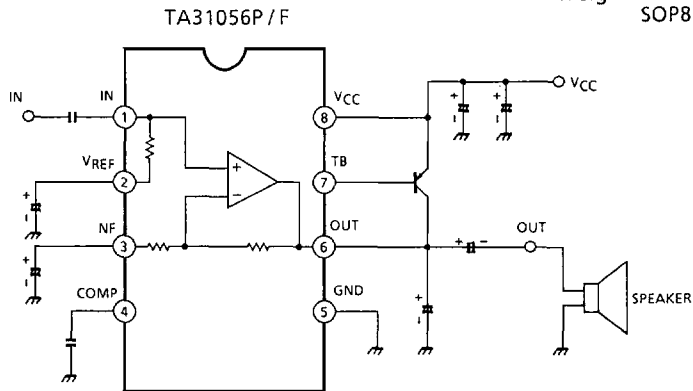
OTHER BIPOLAR ICs FOR TELEPHONE SET

SPEAKER AMP FOR TELEPHONE

FEATURES

- Low operating voltage : $V_{CC} = 1.1V$ (Typ.)
- Driving the speaker of 8Ω is possible.
- Low quiescent current
 - : $I_{CCQ} = 3.9mA$ (Typ.) at $V_{CC} = 3V$
- Voltage gain : $G_V = 28.2dB$ (Typ.) at $V_{CC} = 3V$
- Output voltage : $V_{OUT} = 800mV$ (Typ.) at $V_{CC} = 3V$
- Operating power supply voltage
 - : $V_{CC} = 1.5 \sim 5.0V$ (P Type)
 - : $V_{CC} = 1.5 \sim 4.0V$ (F Type)
- Recommendable power supply voltage : $V_{CC} = 3.0V$
- Package is compact. : (DIP 8 pin, SOP 8 pin)

BLOCK DIAGRAM



Weight DIP8-P-300A : 0.5g (Typ.)
SOP8-P-225 : 0.1g (Typ.)

TA31056P/F-1

240

OTHER BIPOLAR ICs FOR TELEPHONE SET

MAXIMUM RATINGS (Ta = 25°C)

CHARACTERISTIC	SYMBOL	RATING	UNIT
Power Supply Voltage	V _{CC}	10	V
Power Dissipation	P Type	500	mW
	F Type	290	
Operating Temperature	T _{opr}	-25~75	°C
Storage Temperature	T _{stg}	-55~150	°C

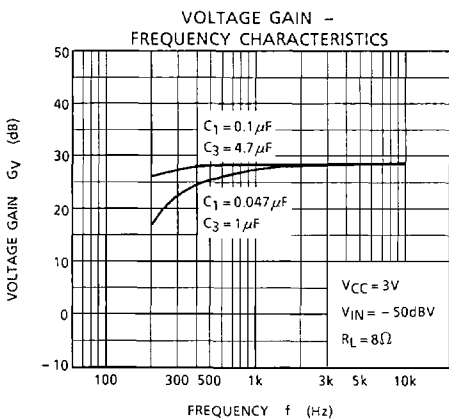
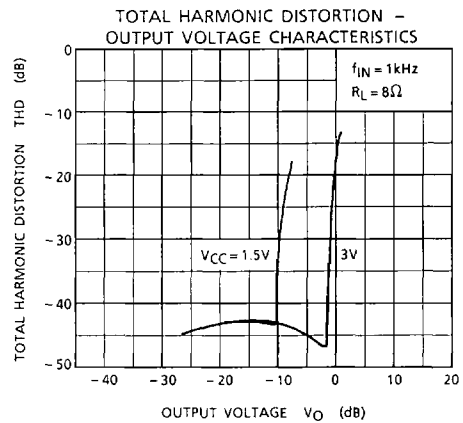
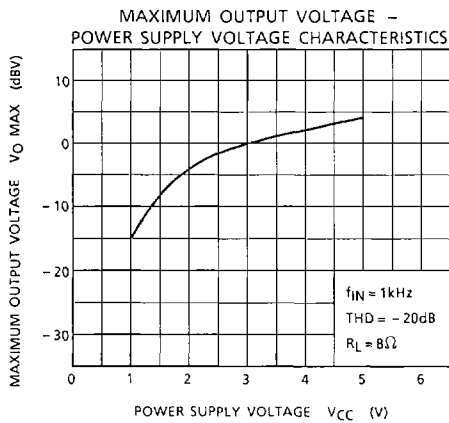
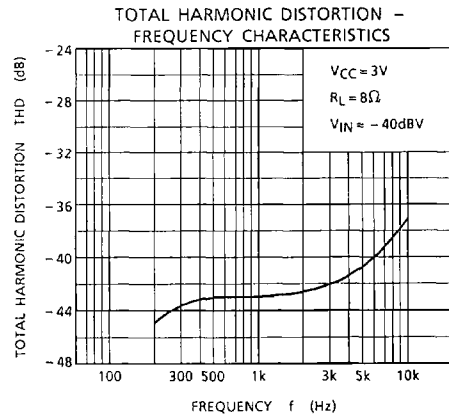
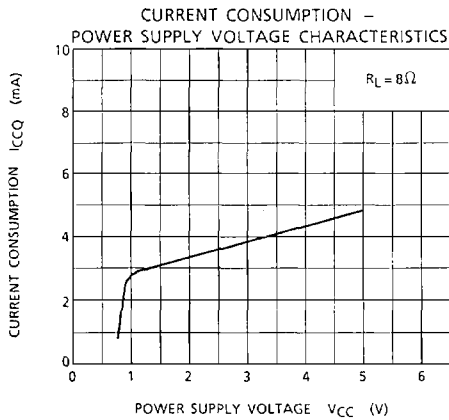
ELECTRICAL CHARACTERISTICS (Unless otherwise specified, V_{CC} = 3V, f_{IN} = 1kHz, R_L = 8Ω, Ta = 25°C)

CHARACTERISTIC	SYMBOL	TEST CIR-CUIT	TEST CONDITION	MIN.	TYP.	MAX.	UNIT
Quiescent Current	I _{CCQ1}	—	V _{CC} = 1.5V	—	3.1	5.3	mA
	I _{CCQ2}	—	V _{CC} = 3.0V	—	3.9	6.5	
	I _{CCQ3}	—	V _{CC} = 5.0V	—	4.9	8.5	
Voltage Gain	G _V	—	—	25.7	28.2	30.7	dB
Output Voltage	V _{OUT}	—	THD = 10%	—	800	—	mV
Total Harmonic Distortion	THD	—	—	—	0.8	2.5	%
Output Noise Voltage	V _{NO}	—	—	—	200	—	μV
Input Resistance	R _{IN}	—	—	—	15	—	kΩ

4

TA31056P/F-2

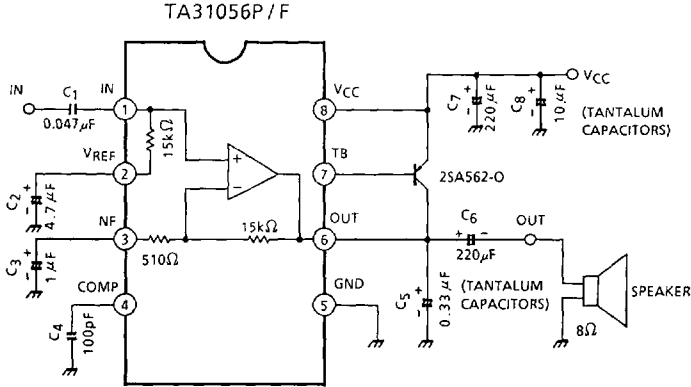
OTHER BIPOLAR ICs FOR TELEPHONE SET



TA31056P/F-3

OTHER BIPOLAR ICs FOR TELEPHONE SET

APPLICATION CIRCUIT



* Employ C4 and C5 of enough temperature characteristic for preventing oscillation.

4