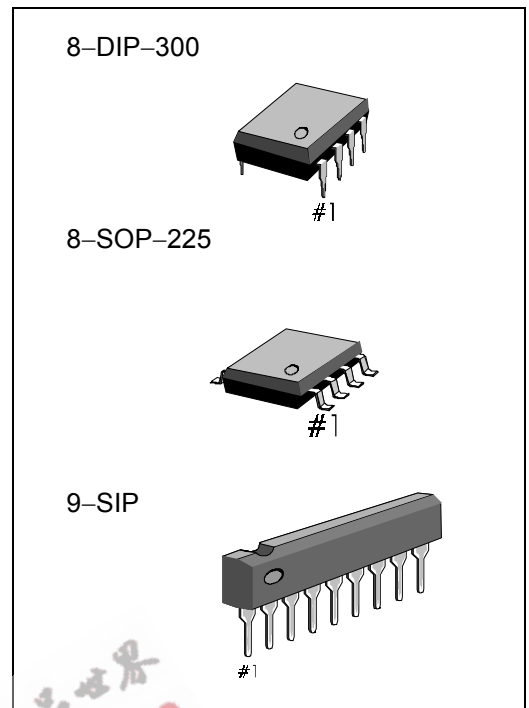


INTRODUCTION

The KA386B/BD/BS is a power amplifier designed for use in low voltage consumer applications. The gain is internally set to 20 to keep the external part count low, but the addition of an external resistor and Capacitor between Pin 1 and 8 will increase the gain to any value up to 200.

FEATURES

- Battery operation
- Minimum external parts
- Wide supply voltage range:
4V ~ 12V (KA386B)
4V ~ 9V (KA386BS/D)
- Low quiescent current drain (4mA)
- Voltage gains: 20 ~ 200dB
- Ground referenced Input
- Self-centering output quiescent voltage
- Low distortion
- 3 different of package types
KA386B (8 DIP), KA386BS (9 SIP), KA386BD (8 SOP)



ORDERING INFORMATION

Device	Package	Operating Temperature
KA386B	8-DIP-300	-20°C~ + 70°C
KA386BS	9-SIP	
KA386BD	8-SOP-225	

BLOCK DIAGRAM

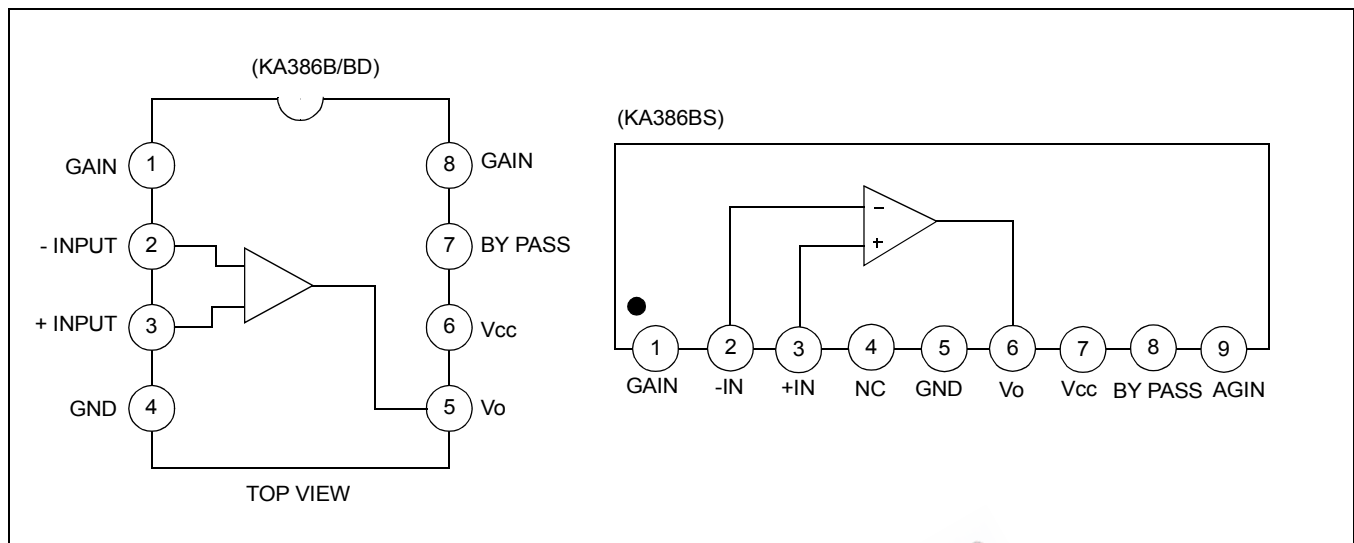


Figure 1.

ABSOLUTE MAXIMUM RATINGS (Ta = 25°C)

Characteristic	Symbol	Value	Unit
Supply Voltage	V_{CC}	15	V
Power Dissipation	KA386B	660	mW
	KA386BS	500	
	KA386BD	300	
Input Voltage	V_I	± 0.4	V
Operating Temperature	T_{OPR}	-20~+70	°C
Storage Temperature	T_{STG}	-40 ~ + 125	°C

ELECTRICAL CHARACTERISTICS

($T_a = 25^\circ\text{C}$, $V_{CC} = 6\text{V}$, $R_L = 8\Omega$, $f = 1\text{kHz}$, unless otherwise specified)

Characteristic	Symbol	Test Conditions	Min.	Typ.	Max.	Unit
Quiescent Circuit Current	I_{CCQ}	$V_I = 0$	–	4	8	mA
Output Power	P_O	$V_{CC} = 6\text{V}$, THD = 10%	250	325	–	mW
		$V_{CC} = 9\text{V}$, THD = 10%	500	200	–	mW
Voltage Gain	G_V	Pins 1 and 8 Open	–	26	–	dB
		10F from Pin 1 to 8	–	46	–	
Bandwidth	BW	Pins 1 and 8 Open	–	300	–	kHz
		10 μF from Pin 1 to 8	–	60	–	
Total Harmonic Distortion (D-Type)	THD	$P_O = 125\text{mW}$, Pins 1 and 8 Open	–	0.2	–	%
Input Resistance	R_I	–	–	50	–	k Ω
Input Bias Current	I_{BIAS}	Pins 1 and 8 Open	–	250	–	nA

APPLICATION CIRCUIT

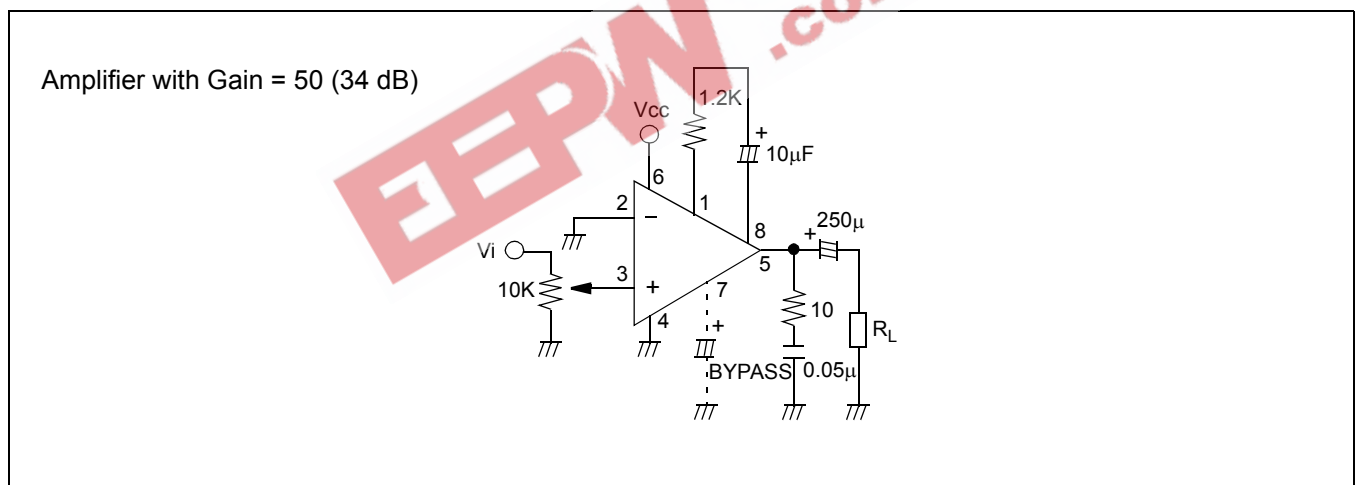


Figure 2.

NOTES

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