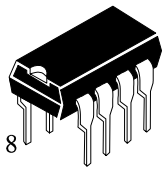
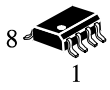
Speaker Amplifier

KK5009

The KK5009 is a monolithic integrated circuit designed for speaker amp.



N SUFFIX
PLASTIC



D SUFFIX
SOIC

ORDERING INFORMATION
KK5009N Plastic
KK5009D SOIC
T_A = -20° to 60° C for package

FEATURES

- Operating supply voltage range : Vcc = 1.5V ~ 5.0V
- Recommended operating supply voltage : Vcc = 3V
- Low quiescent : Icc = 3.9mA
- Package is compact.

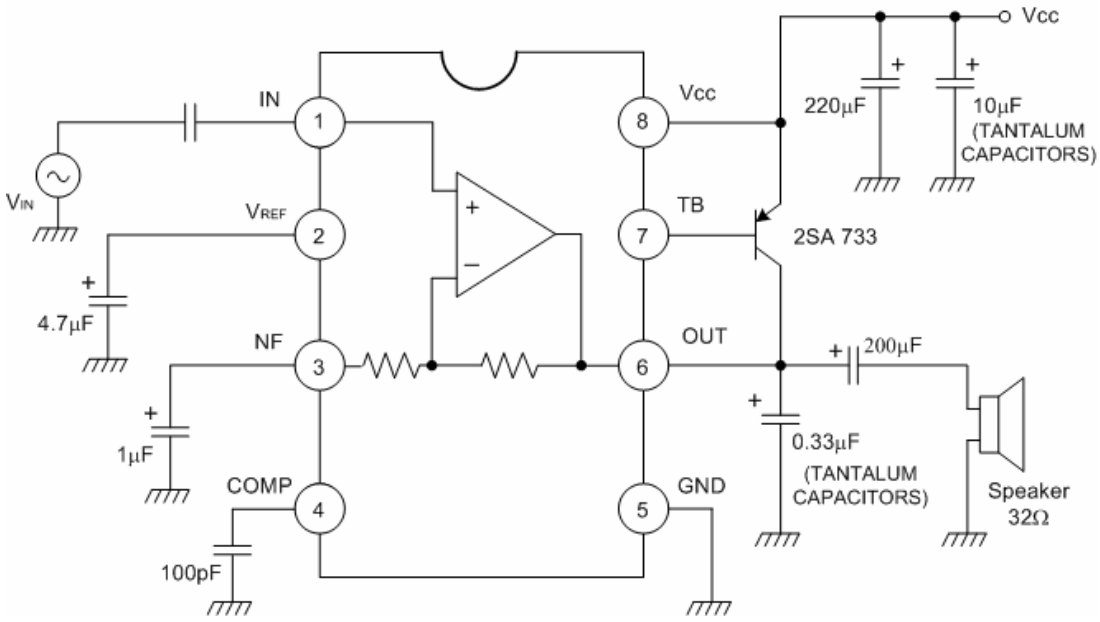
APPLICATION

- Telephone set

MAXIMUM RATINGS

Characteristics	Symbol	Rating	Unit
Supply Voltage	Vcc	10	V
Power Dissipation	P_D	800	mW
Operating Temperature	Topr	-20 ~ +60	℃
Storage Temperature	Tstr	-55 ~ +150	℃

BLOCK DIAGRAM & APPLICATION CIRCUIT



ELECTRICAL DC CHARACTERISTICS

(Pin Voltage at Vcc = 3V and no input signal)

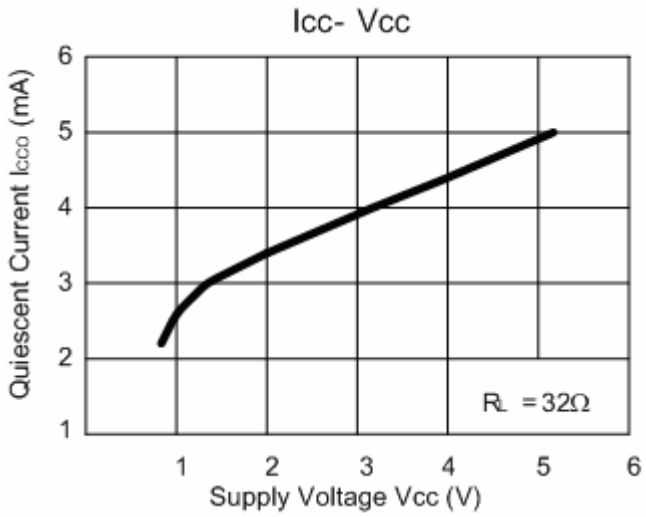
Pin No.	Symbol	Typical Value	Unit	Pin No	Symbol	Typical Value	Unit
1	V_1	1.4	V	5	V_5	0	V
2	V_2	1.4	V	6	V_6	1.5	V
3	V_3	1.4	V	7	V_7	2.3	V
4	V_4	1.3	V	8	V_8	3.0	V

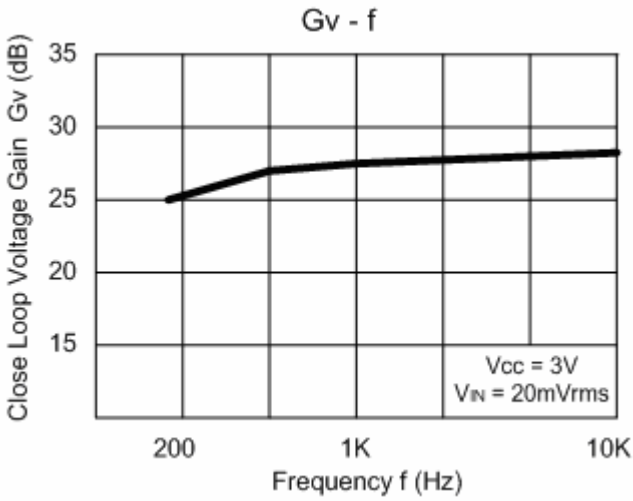
ELECTRICAL AC CHARACTERISTICS

(Unless otherwise specified, Vcc = 3V, f = 1KHz, V_{IN} = 20mVrms, R_L = 32Ω, Ta = 25 ºC)

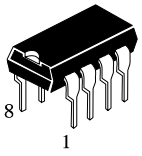
Characteristic	Symbol	Test condition	Min.	Typ.	Max.	Unit
Quiescent Current	I_{CCO1}	Vcc = 1.5V		3.1		mA
	I_{CCO2}	Vcc = 3.0V		3.9		mA
	I_{CCO3}	Vcc = 5.0V		4.9		mA
Close Loop Voltage Gain	G_V			27		dB
Maximum Output Voltage	V_{OM}	THD = 10%		1.0		Vrms
Total Harmonic Distortion	THD	V_{IN} = 40m Vrms		0.6		%
Output noise Voltage	V_{NO}	V_{IN} = 0		200		μVrms
Input Resistance	R_{IN}			15		KΩ

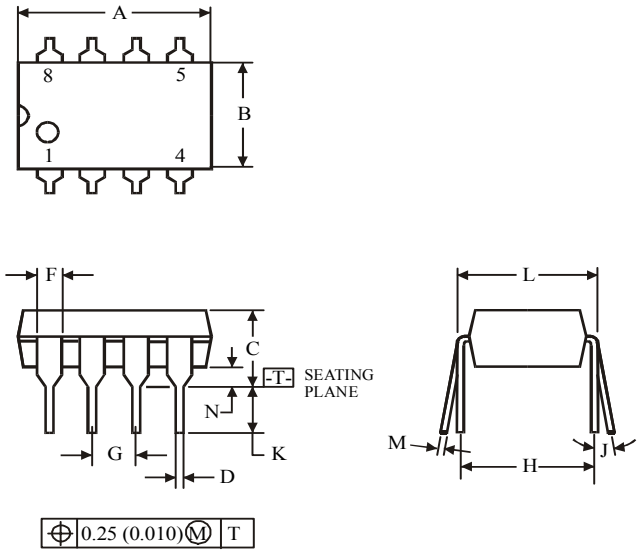
TYPICAL PERFORMANCE CHARACTERISTICS





N SUFFIX PLASTIC DIP
(MS – 001BA)



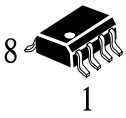


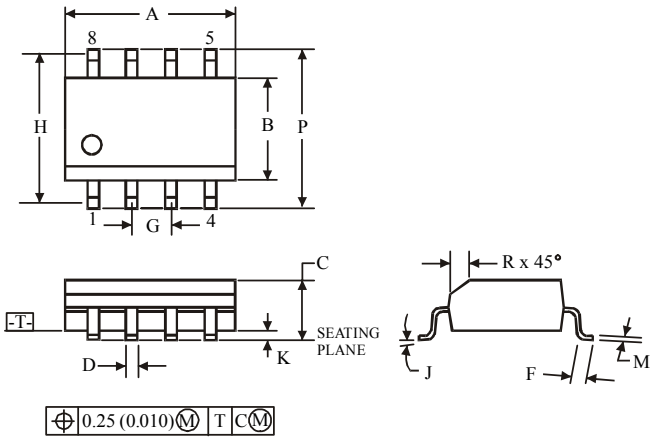
	Dimension, mm	
Symbol	**MIN**	**MAX**
A	8.51	10.16
B	6.1	7.11
C		5.33
D	0.36	0.56
F	1.14	1.78
G	2.54	
H	7.62	
J	0°	10°
K	2.92	3.81
L	7.62	8.26
M	0.2	0.36
N	0.38	

NOTES:

1. Dimensions “A”, “B” do not include mold flash or protrusions.
   Maximum mold flash or protrusions 0.25 mm (0.010) per side.

D SUFFIX SOIC
(MS - 012AA)





	Dimension, mm	
Symbol	**MIN**	**MAX**
A	4.8	5
B	3.8	4
C	1.35	1.75
D	0.33	0.51
F	0.4	1.27
G	1.27	
H	5.72	
J	0°	8°
K	0.1	0.25
M	0.19	0.25
P	5.8	6.2
R	0.25	0.5

NOTES:

1. Dimensions A and B do not include mold flash or protrusion.
2. Maximum mold flash or protrusion 0.15 mm (0.006) per side
   for A; for B – 0.25 mm (0.010) per side.