

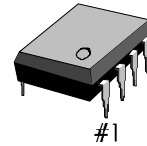
## INTRODUCTION

The S1A2201X01 is a monolithic integrated audio amplifier. It is designed for the audio frequency class B amplifier.

## FEATURES

- Wide range of operating supply voltage:  
 $V_{CC} = 3V - 14V$
- Medium output power
- $P_O = 1.2W$  at  $V_{CC} = 9V$ ,  $R_L = 8\Omega$ , THD = 10%
- Low quiescent circuit current ( $I_{CCQ} = 4mA$ : Typ)
- Good ripple rejection
- Minimum number of external parts required

8-DIP-300



## ORDERING INFORMATION

Device	Package	Operating Temperature
S1A2201X01-D0B0	8-DIP-300	-20°C - +70°C

## BLOCK DIAGRAM

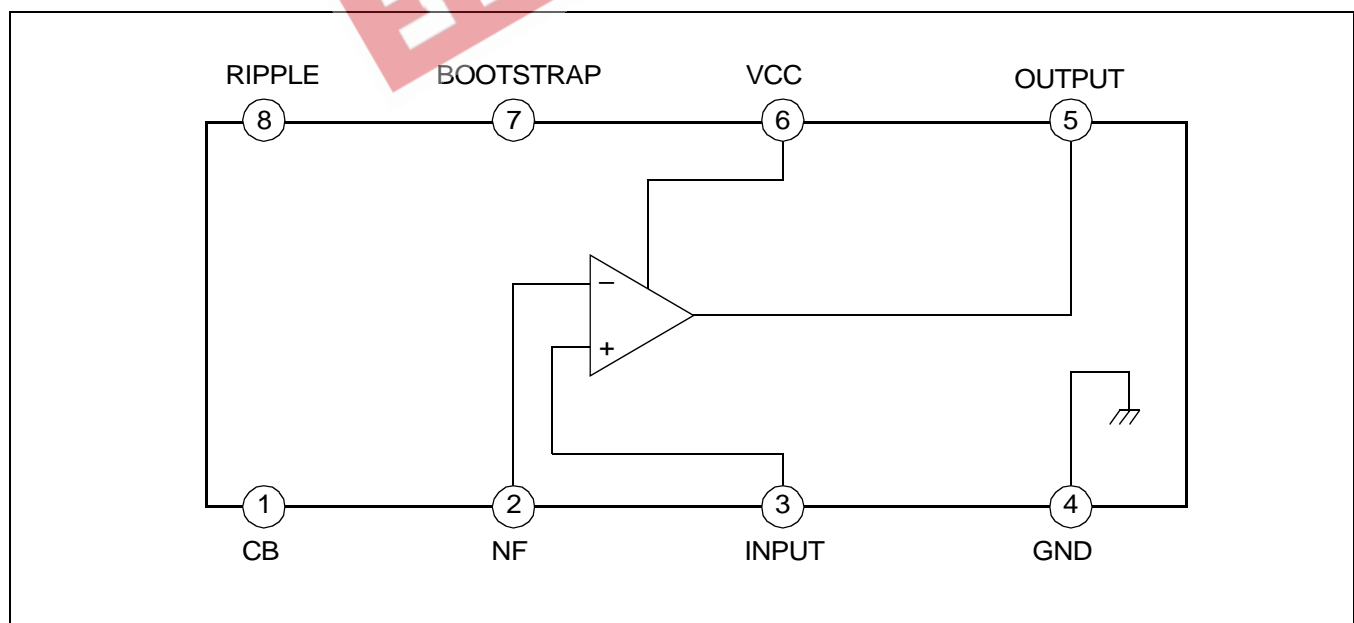


Figure 1.

**ABSOLUTE MAXIMUM RATINGS (Ta = 25°C)**

Characteristic	Symbol	Value	Unit
Supply Voltage	$V_{CC}$	16	V
Output Peak Current	$I_{PK}$	1.5	A
Power Dissipation	$P_D$	1.25	W
Operating Temperature	$T_{OPR}$	- 20 — + 70	°C
Storage Temperature	$T_{STG}$	- 40 — + 150	°C

**ELECTRICAL CHARACTERISTICS**

( Ta = 25°C,  $V_{CC}$  = 9V, f = 1kHz,  $R_G$  = 600Ω,  $R_F$  = 120Ω,  $R_L$  = 8Ω, unless otherwise specified )

Characteristic	Symbol	Test Conditions	Min.	Typ.	Max.	Unit
Quiescent Circuit Current	$I_{CCQ}$	$V_I = 0$	-	4	12	mA
Output Power	$P_O$	$V_{CC} = 9V, R_L = 4\Omega, THD = 10\%$	-	1.6	-	W
		$V_{CC} = 9V, R_L = 8\Omega, THD = 10\%$	0.9	1.2	-	
		$V_{CC} = 6V, R_L = 4\Omega, THD = 10\%$	-	0.75	-	
		$V_{CC} = 6V, R_L = 8\Omega, THD = 10\%$	0.4	0.5	-	
		$V_{CC} = 12V, R_L = 8\Omega, THD = 10\%$	-	2	-	
Total Harmonic Distortion	THD	$P_O = 500mW$	-	0.3	1.0	%
Open Loop Voltage Gain	$G_{VO}$	$R_F = 0\Omega$	-	75	-	dB
Closed Loop Voltage Gain	$G_{VC}$	$R_F = 120\Omega$	33	36	39	dB
Input Resistance	$R_I$	-	-	5	-	MΩ
Output Noise Voltage	$V_{NO}$	$R_G = 10k\Omega$ BW (-3dB) = 50Hz – 20kHz	-	0.3	1.0	mV

TEST CIRCUIT

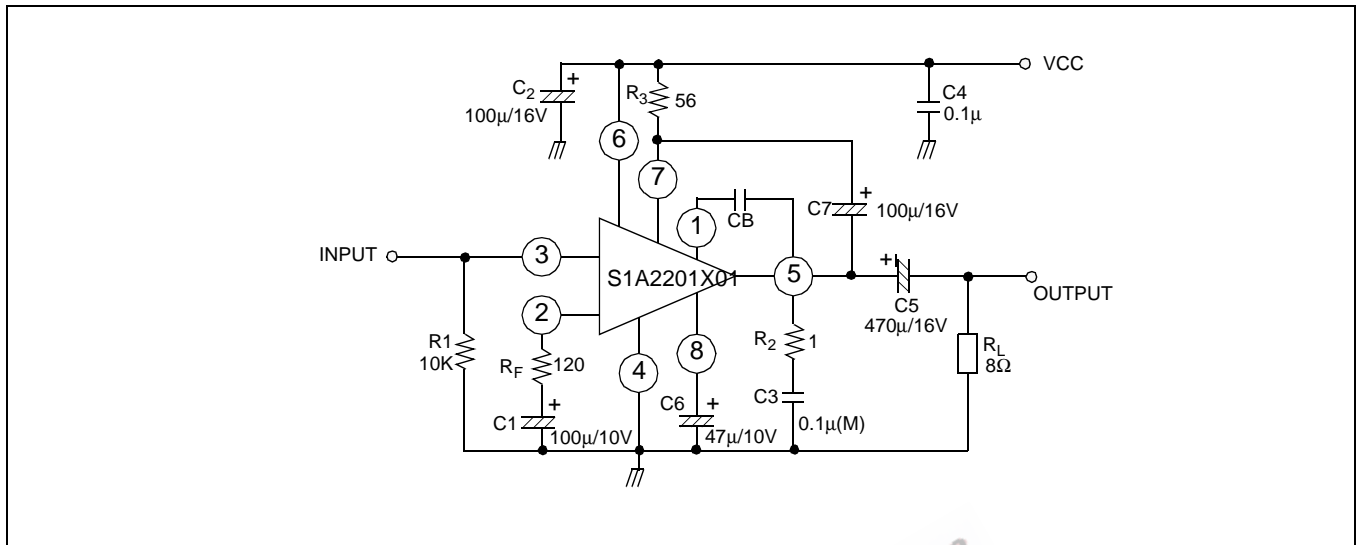
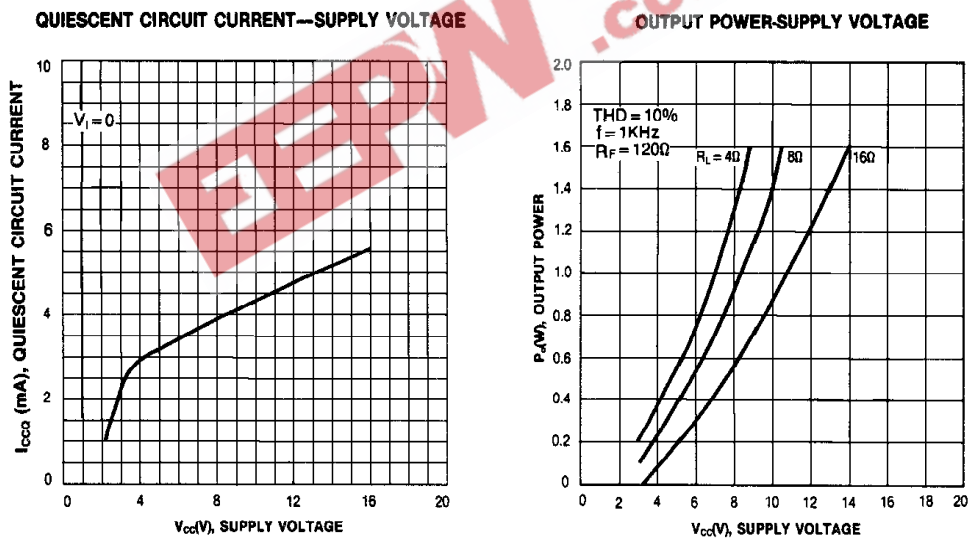
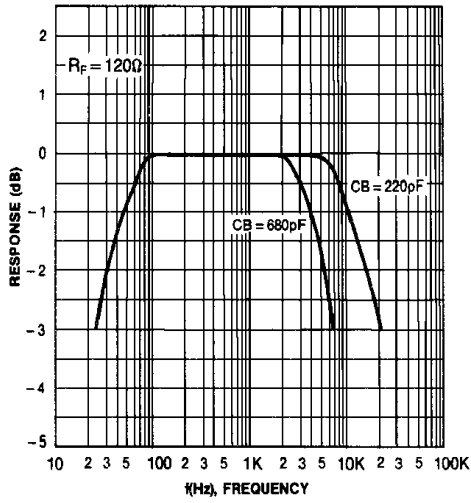


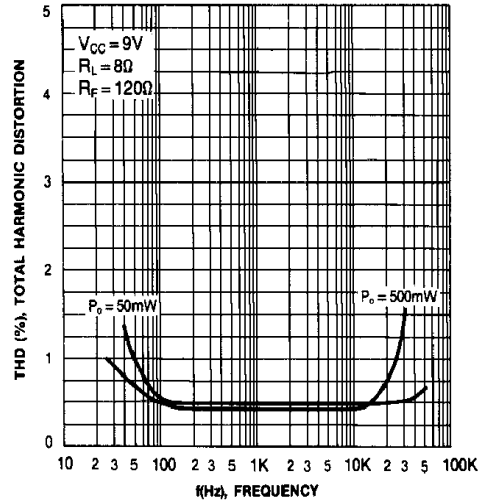
Figure 2.



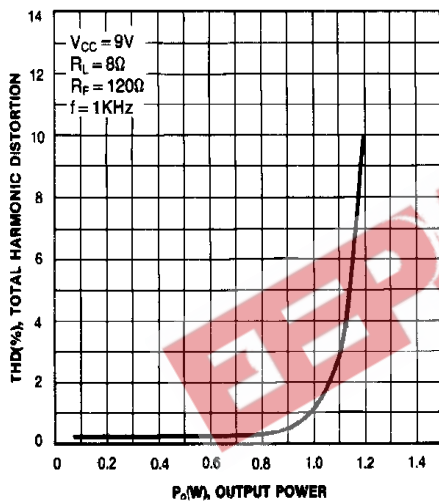
FREQUENCY RESPONSE



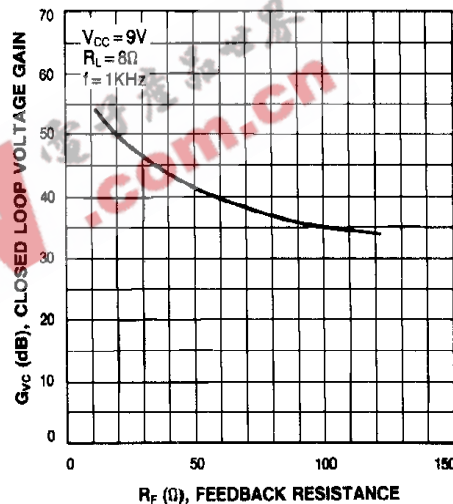
TOTAL HARMONIC DISTORTION-FREQUENCY



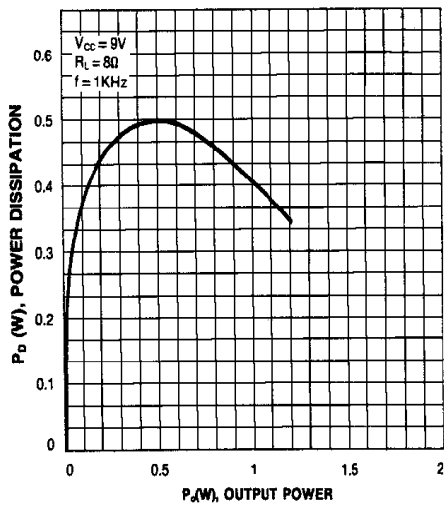
TOTAL HARMONIC DISTORTION-OUTPUT POWER



VOLTAGE GAIN-FEEDBACK RESISTANCE



POWER DISSIPATION-OUTPUT POWER



POWER DISSIPATION-SUPPLY VOLTAGE

