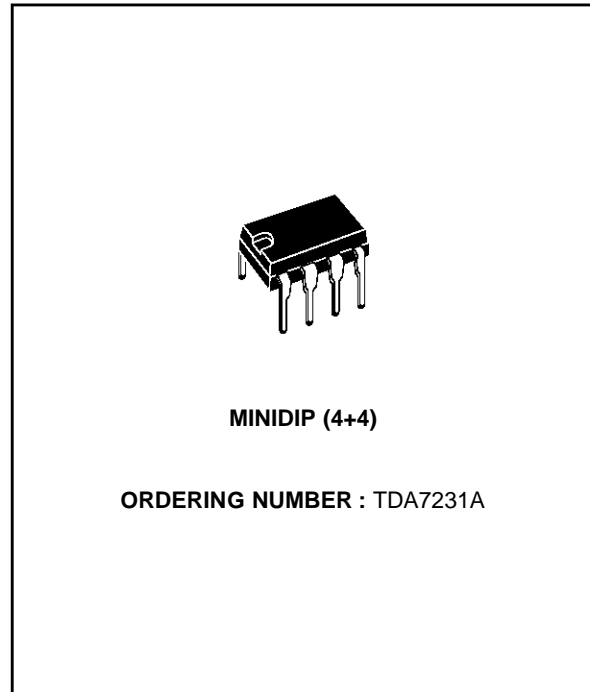


1.6W AUDIO AMPLIFIER

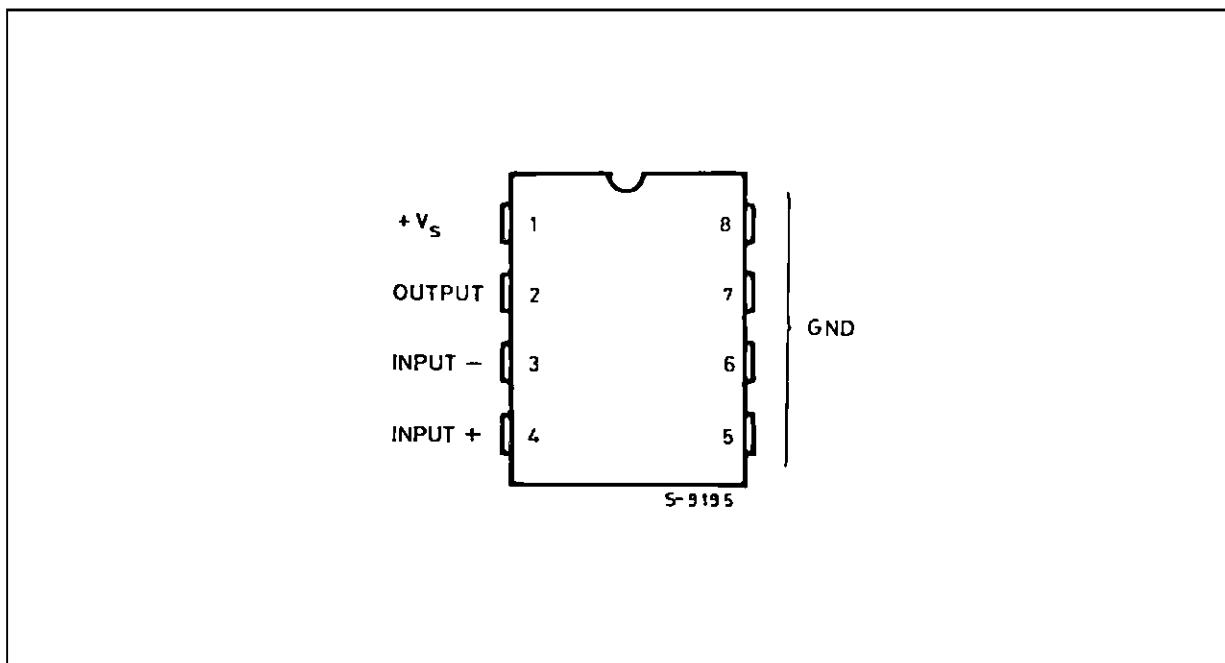
- OPERATING VOLTAGE 1.8 TO 15 V
- LOW QUIESCENT CURRENT
- HIGH POWER CAPABILITY
- LOW CROSSOVER DISTORTION
- SOFT CLIPPING



DESCRIPTION

The TDA7231A is a monolithic integrated circuit in 4 + 4 lead minidip package. It is intended for use as class AB power amplifier with wide range of supply voltage in portable radios, cassette recorders and players, etc.

PIN CONNECTION



ABSOLUTE MAXIMUM RATINGS

Symbol	Parameter	Value	Unit
V _s	Supply Voltage	16	V
P _{tot}	Total Power Dissipation at T _{amb} = 50 °C at T _{case} = 70 °C	1.25 4	W W
I _o	Output Peak Current	1	A
T _{stg} , T _j	Storage and Junction Temperature	- 40 to 150	°C

THERMAL DATA

Symbol	Parameter	Value	Unit
R _{th j-amb}	Thermal Resistance Junction-ambient Max.	80	°C/W
R _{th j-pins}	Thermal Resistance Junction-pins Max.	15	°C/W

ELECTRICAL CHARACTERISTICS (V_s = 6 V, T_{amb} = 25 °C, unless otherwise specified)

Symbol	Parameter	Test Conditions	Min.	Typ.	Max.	Unit
V _s	Supply Voltage		1.8		15	V
V _o	Quiescent Out Voltage	V _s = 6 V V _s = 3 V		2.7 1.2		V V
I _d	Quiescent Drain Current			3.6	9	mA
I _b	Input Bias Current			100		nA
P _o	Output Power	d = 10% f = 1kHz V _s = 12V R _L = 8Ω V _s = 9V R _L = 4Ω V _s = 6V R _L = 8Ω V _s = 6V R _L = 4Ω V _s = 3V R _L = 4Ω V _s = 3V R _L = 8Ω		1.8 1.6 0.4 0.7 110 70		W W W W mW mW
d	Distortion	P _o = 0.2 W f = 1 kHz R _L = 8 Ω		0.3		%
G _v	Closed Loop Voltage Gain			38		dB
R _{in}	Input Resistance	f = 1kHz	100			kΩ
e _N	Total Input Noise	R _s = 10kΩ B = Curve A B = 22Hz to 22kHz		2 3		μV μV
SVR	Supply Voltage Rejection	f = 100Hz, R _g = 10kΩ	24	33		dB

Figure 1 : Test and Application Circuit

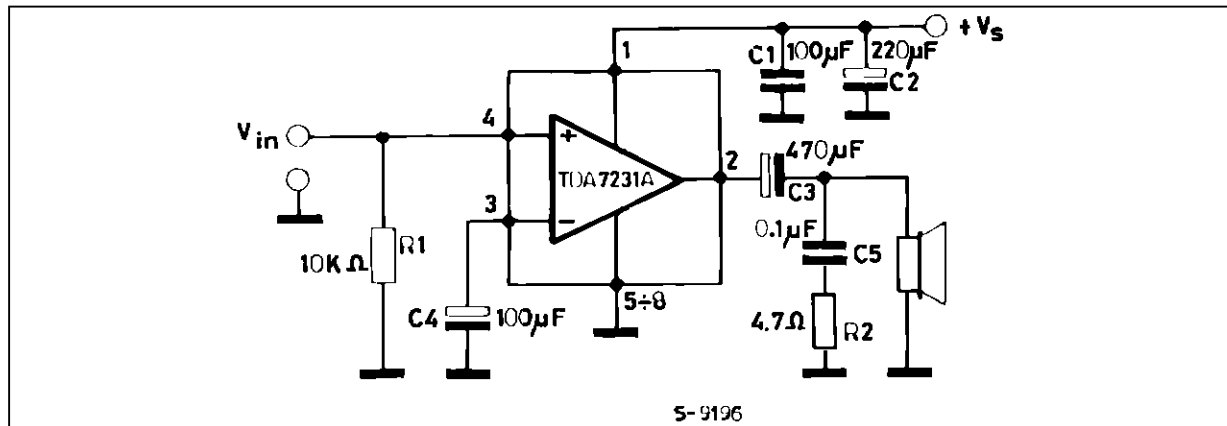


Figure 2 : P.C. Board and Components Layout of the figure 1 (1:1 scale)

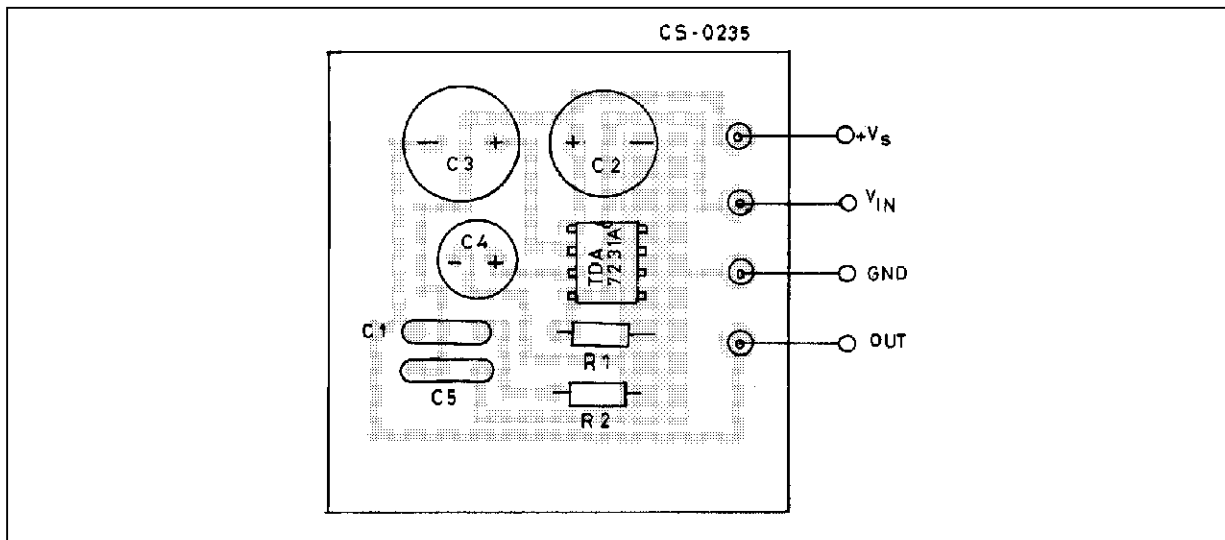


Figure 3 : Output Power versus Supply Voltage

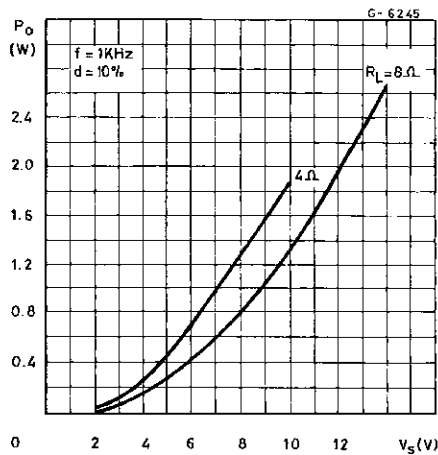


Figure 4 : Quiescent Current versus Supply Voltage

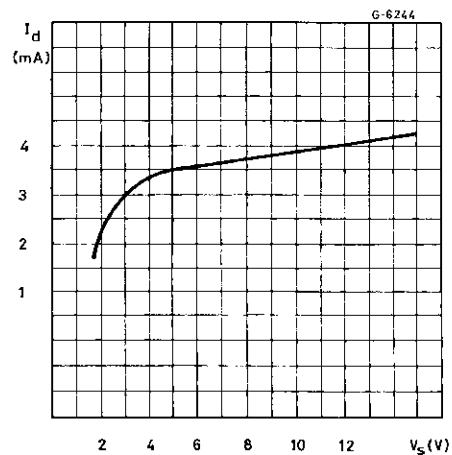


Figure 5 : Quiescent Output Voltage versus Supply Voltage

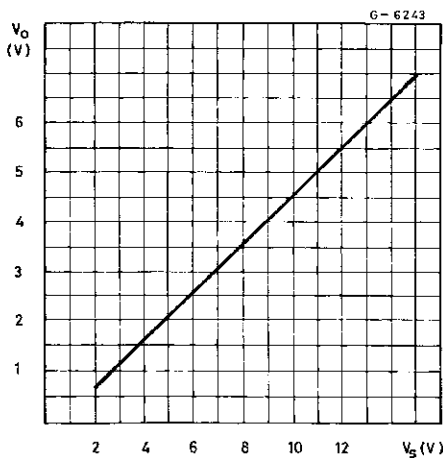
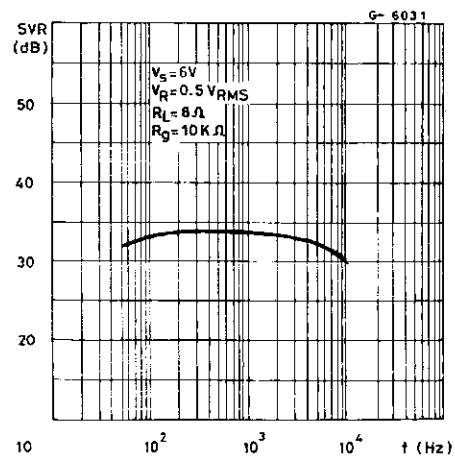


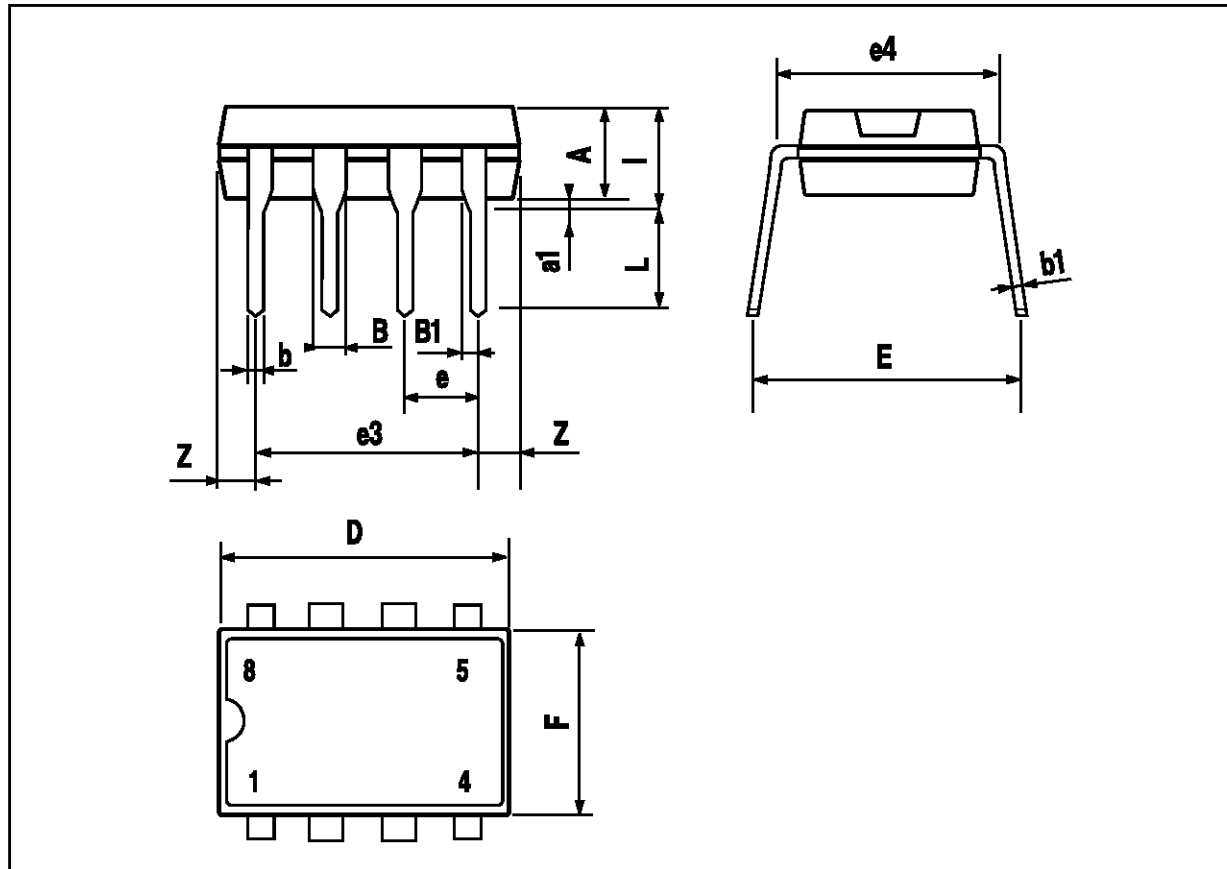
Figure 6 : Supply Voltage Rejection versus Frequency



TDA7231A

MINIDIP PACKAGE MECHANICAL DATA

DIM.	mm			inch		
	MIN.	TYP.	MAX.	MIN.	TYP.	MAX.
A		3.3			0.130	
a1	0.7			0.028		
B	1.39		1.65	0.055		0.065
B1	0.91		1.04	0.036		0.041
b		0.5			0.020	
b1	0.38		0.5	0.015		0.020
D			9.8			0.386
E		8.8			0.346	
e		2.54			0.100	
e3		7.62			0.300	
e4		7.62			0.300	
F			7.1			0.280
I			4.8			0.189
L		3.3			0.130	
Z	0.44		1.6	0.017		0.063



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