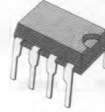


1.6W AUDIO AMPLIFIER

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

of supply voltage in portable radios, cassette recorders and players, etc.



**Powerdip
(4 + 4)**

ORDERING NUMBER: TDA7231

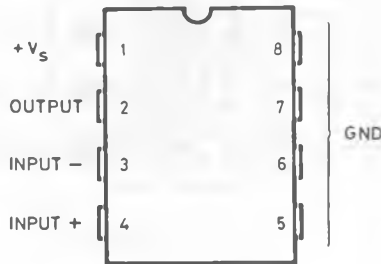
The TDA7231 is a monolithic integrated circuit in 4+4 lead minidip package. It is intended for use as class AB power amplifier with wide range

ABSOLUTE MAXIMUM RATINGS

V_s	Supply voltage	16	V
P_{tot}	Total power dissipation at $T_{amb} = 50^\circ\text{C}$ at $T_{case} = 70^\circ\text{C}$	1.25 4	W W
I_o	Output peak current	1	A
T_{stg}, T_j	Storage and junction temperature	-40 to 150	$^\circ\text{C}$

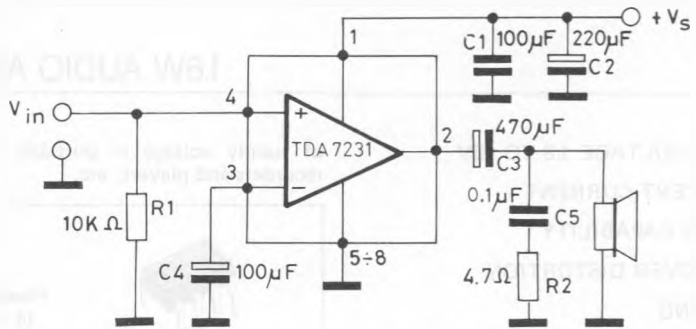
CONNECTION DIAGRAM

(Top view)



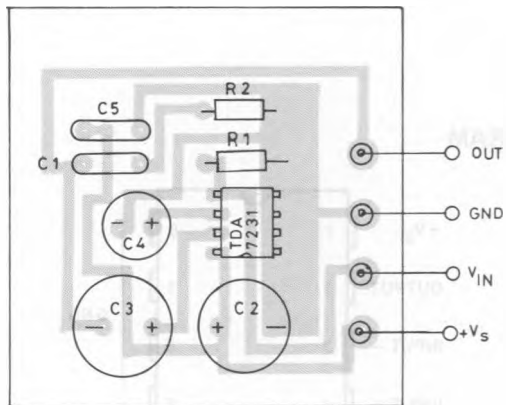
S-9195

Fig. 1 - Test and application circuit



S-9196

Fig. 2 - P.C. board and components layout



CS-0235

THERMAL DATA

$R_{th\ j-amb}$	Thermal resistance junction ambient	max	80	$^{\circ}C/W$
$R_{th\ j-pins}$	Thermal resistance junction-pins	max	15	$^{\circ}C/W$

ELECTRICAL CHARACTERISTICS ($V_S = 6V$, $T_{amb} = 25^{\circ}C$, unless otherwise specified)

Parameter	Test Conditions	Min.	Typ.	Max.	Unit
V_S	Supply voltage	1.8		15	V
V_O	Quiescent out voltage	$V_S = 6V$	2.7		V
		$V_S = 3V$	1.2		
I_d	Quiescent drain current		3.6	9	mA
I_b	Input bias current		100		nA
P_O	Output power	$d = 10\%$ $f = 1\text{KHz}$			
		$V_S = 12V$ $R_L = 8\Omega$	1.8		W
		$V_S = 9V$ $R_L = 4\Omega$	1.6		W
		$V_S = 6V$ $R_L = 8\Omega$	0.4		W
		$V_S = 6V$ $R_L = 4\Omega$	0.7		W
		$V_S = 3V$ $R_L = 4\Omega$	110		mW
$V_S = 3V$ $R_L = 8\Omega$	70		mW		
d	Distortion	$P_O = 0.2W$ $R_L = 8\Omega$ $f = 1\text{KHz}$	0.3		%
G_V	Closed loop voltage gain		38		dB
R_{in}	Input resistance	$f = 1\text{KHz}$	100		$K\Omega$
e_N	Total input noise	$R_S = 10K\Omega$	B = Curve A	2	μV
			B = 22Hz to 22KHz	3	
SVR	Supply voltage rejection	$f = 100\text{Hz}$ $R_g = 10K\Omega$	24	33	dB

Fig. 3 - Output power versus supply voltage

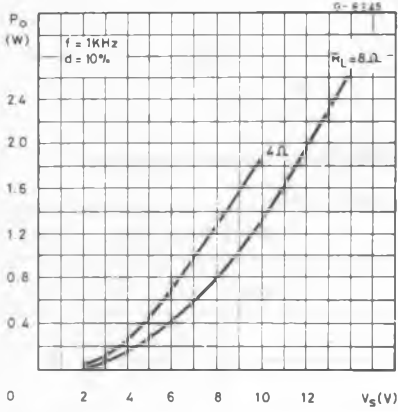


Fig. 4 - Quiescent current versus supply voltage

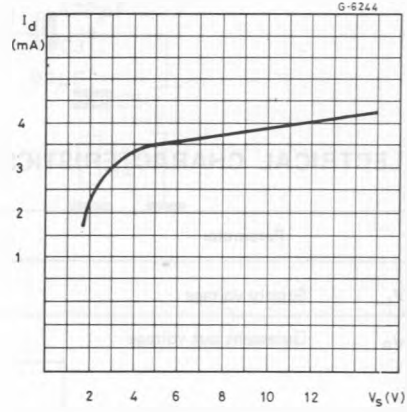


Fig. 5 - Quiescent output voltage versus supply voltage

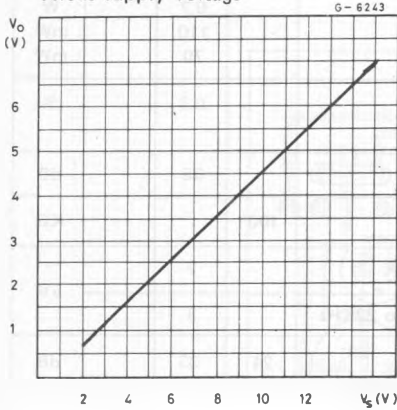


Fig. 6 - Supply voltage rejection versus frequency

