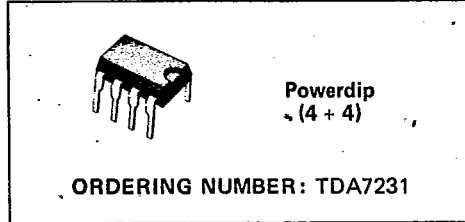


SGS-THOMSON

**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.



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)

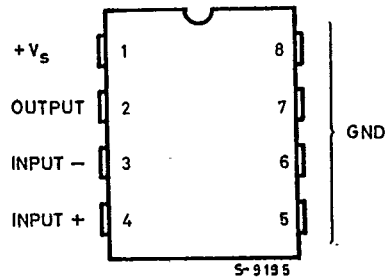
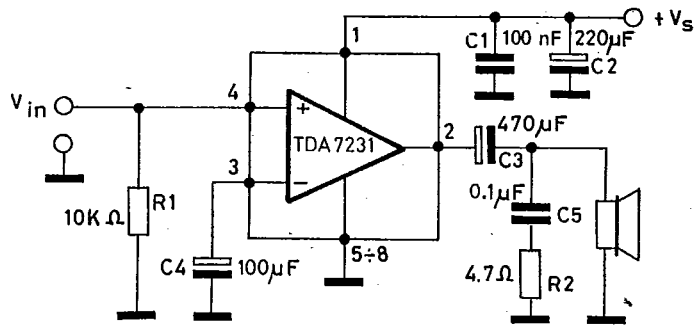
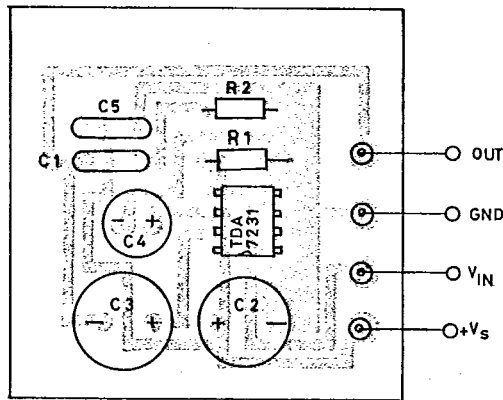


Fig. 1 - Test and application circuit



S-9196

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



CS-0235

## THERMAL DATA

S G S-THOMSON

T-74-05-01

$R_{th\ j-amb}$	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	$d = 10\%$ $V_s = 12V$ $V_s = 9V$ $V_s = 6V$ $V_s = 6V$ $V_s = 3V$ $V_s = 3V$	$f = 1KHz$ $R_L = 8\Omega$ $R_L = 4\Omega$ $R_L = 8\Omega$ $R_L = 4\Omega$ $R_L = 4\Omega$ $R_L = 8\Omega$	1.8	W	
				1.6	W	
				0.4	W	
				0.7	W	
				110	mW	
				70	mW	
$d$	Distortion	$P_o = 0.2W$ $f = 1KHz$	$R_L = 8\Omega$	0.3	%	
$G_v$	Closed loop voltage gain		38		dB	
$R_{in}$	Input resistance	$f = 1KHz$	100		$K\Omega$	
$e_N$	Total input noise	$R_s = 10K\Omega$	$B = \text{Curve A}$	2	$\mu V$	
			$B = 22Hz \text{ to } 22KHz$	3		
SVR	Supply voltage rejection	$f = 100Hz$	$R_g = 10K\Omega$	24	33	dB

Fig. 3 - Output power versus supply voltage

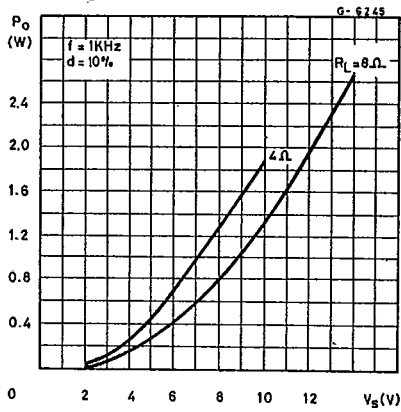


Fig. 4 - Quiescent current versus supply voltage

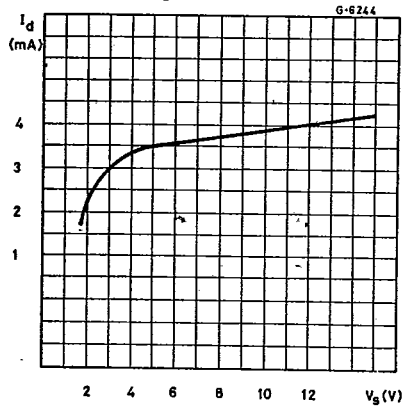


Fig. 5 - Quiescent output voltage versus supply voltage

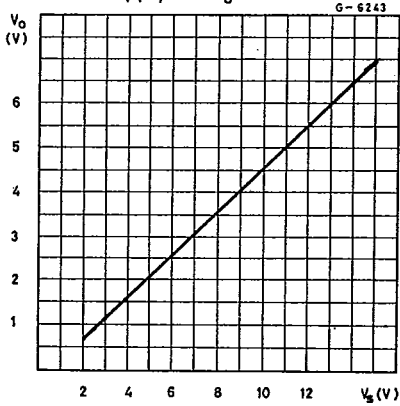


Fig. 6 - Supply voltage rejection versus frequency

