

# Audio amplifier

- LOW QUIESCENT CURRENT
- LOW CROSS-OVER DISTORTION
- SPECIAL PACKAGE WITH EXTERNAL HEAT-SINK
- SELF CENTERING BIAS

The TAA 621 is a silicon planar integrated circuit specially designed as audio amplifier for TV sets.

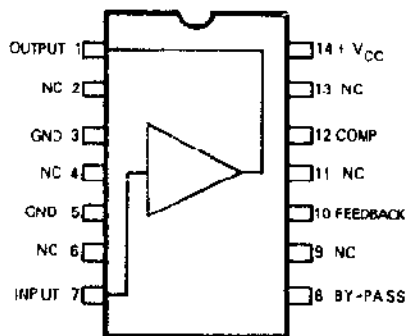
It delivers an output power in excess of 3.5 W to a load of 15Ω with THD ≤ 10%.

Special feature of the circuit include a low quiescent current and self centering DC output voltage for any supply from 12 to 24 V.

### ABSOLUTE MAXIMUM RATINGS (1)

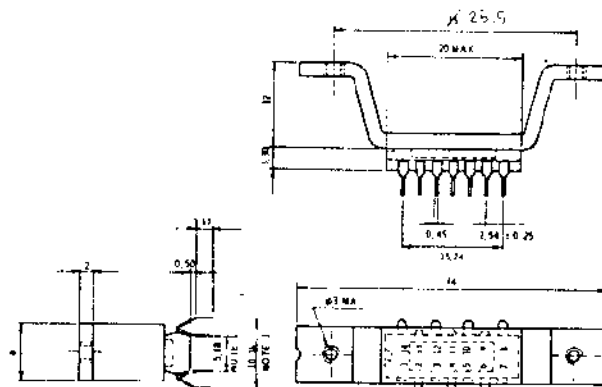
Supply Voltage	+ 27 V
Junction Temperature	+ 125°C
Power Dissipation ( $T_A = 80^\circ\text{C}$ )	1 W
( $T_A = 60^\circ\text{C}$ )	3.8 W
Peak Output Current	1 A

### CONNECTION DIAGRAM



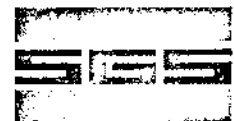
### PHYSICAL DIMENSIONS

High Power Plastic Split-Dip  
External Slug

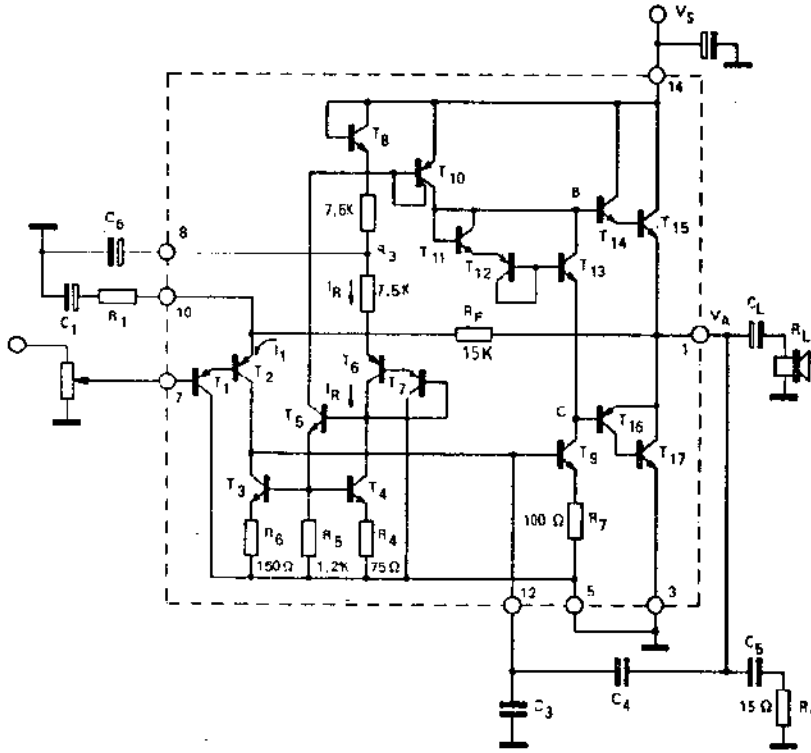


Notes: 1) Leads are intended for insertion in hole rows, 5.08 and 10.16 center.  
2) All dimensions in mm.

1) These ratings are limiting values above which the serviceability of any individual semiconductor device may be impaired.  $T_A = 25^\circ\text{C}$  unless otherwise noted.

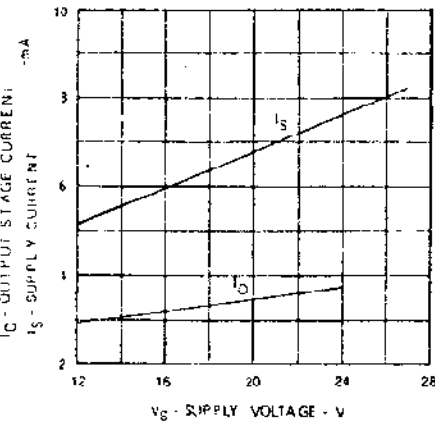


ELECTRICAL DIAGRAM

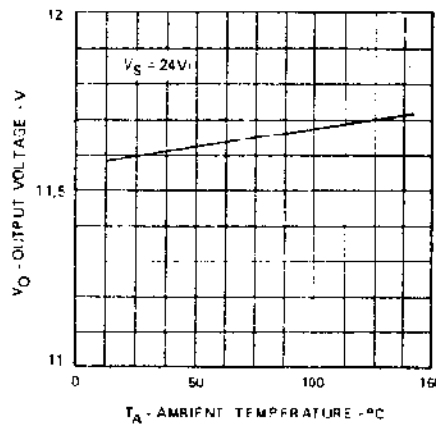


TYPICAL ELECTRICAL CHARACTERISTICS (25°C free air temperature unless otherwise noted)

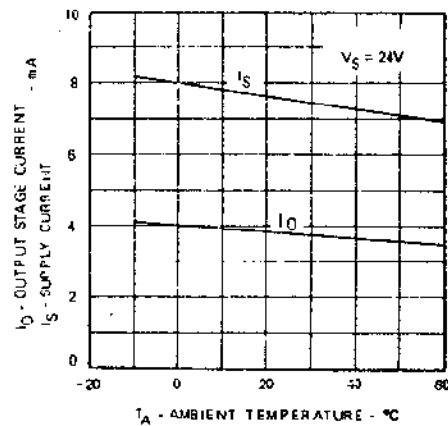
QUIESCENT OUTPUT STAGE CURRENT AND SUPPLY CURRENT VERSUS SUPPLY VOLTAGE



OUTPUT VOLTAGE VERSUS AMBIENT TEMPERATURE

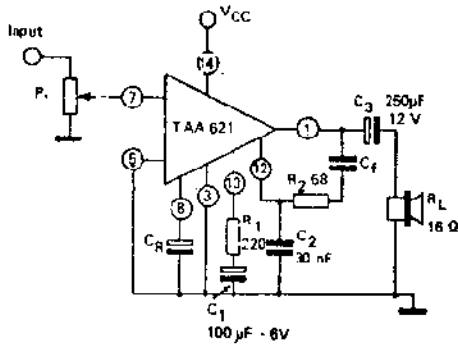


QUIESCENT OUTPUT STAGE CURRENT AND SUPPLY CURRENT VERSUS AMBIENT TEMPERATURE





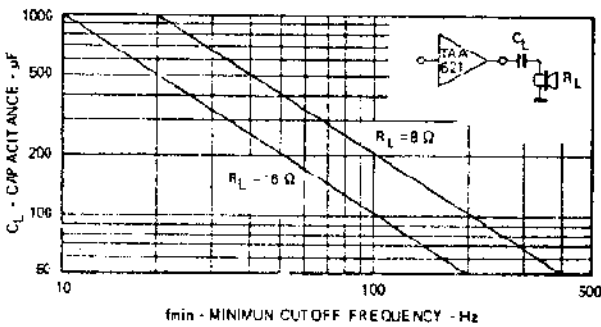
## TYPICAL APPLICATION: COMPLETE AUDIO AMPLIFIER



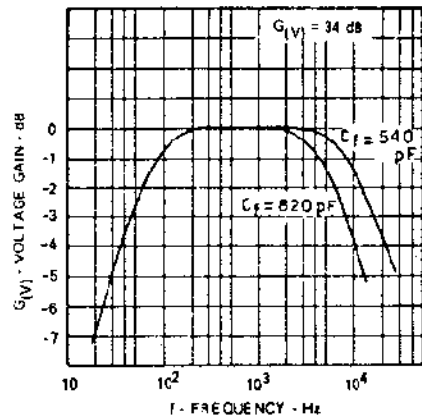
### PERFORMANCE (Typ.: $V_S = 24\text{ V}$ )

Voltage Gain	$P_o = 50\text{ mW}$	34 dB
Sensitivity	$P_o = 2\text{ W}$	16 mV
$Z_{in}$	$f = 1\text{ KHz}$	98 mV
Frequency Response	$C_f = 540\text{ pF}$	$\geq 750\text{ K}\Omega$
	$C_f = 820\text{ pF}$	50 Hz - 15 KHz
Quiescent Current	$P_o = 0$	50 Hz - 8 KHz
Current Drain	$P_o = 4\text{ W}$	8 mA
Max Power	THD $\leq 10\%$	230 mA
Open Loop Voltage Gain		4 W
		5000

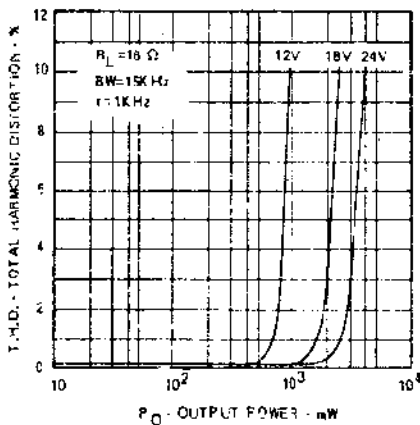
### COUPLING CAPACITANCE VERSUS MINIMUM CUTOFF FREQUENCY



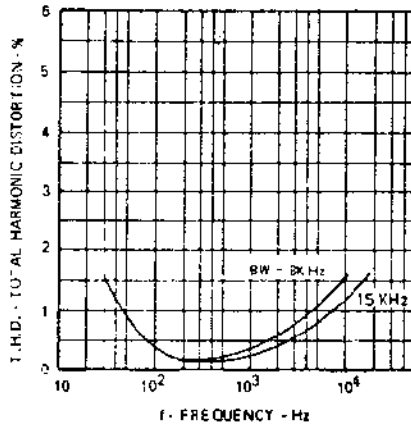
### VOLTAGE GAIN VERSUS FREQUENCY



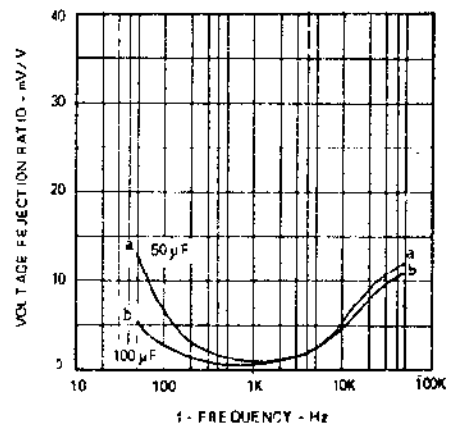
### TOTAL HARMONIC DISTORTION VERSUS OUTPUT POWER



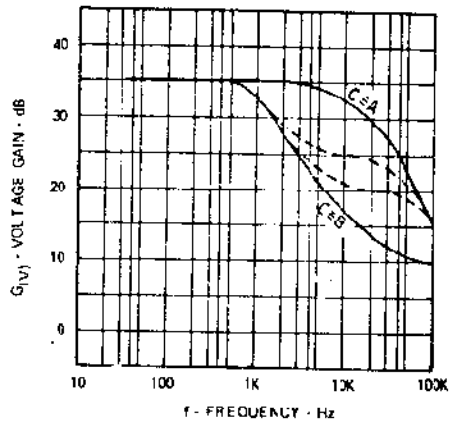
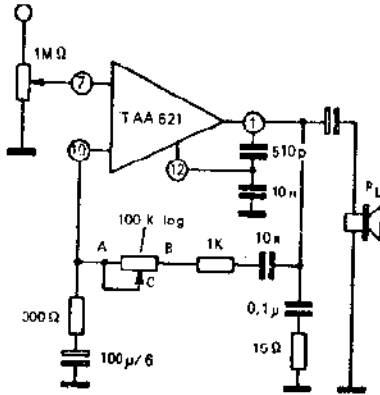
### TOTAL HARMONIC DISTORTION VERSUS FREQUENCY



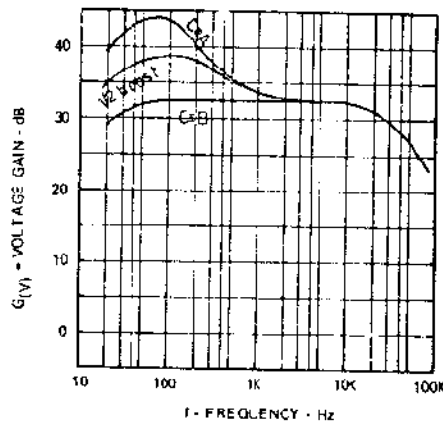
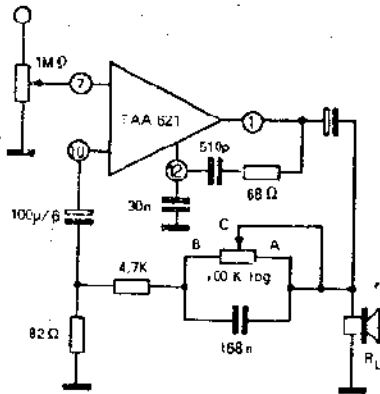
### SUPPLY VOLTAGE REJECTION RATIO VERSUS FREQUENCY



## TONE CONTROL:



## HIGH FREQUENCY RESPONSE ATTENUATION, AND RESPONSE CURVE



## LOW FREQUENCY EMPHASIS, AND RESPONSE CURVE