TAA 621

LINEAR INTEGRATED CIRCUIT

NOT FOR NEW DESIGNS

4W AUDIO AMPLIFIER

- SELF CENTERING BIAS
- LOW QUIESCENT OUTPUT CURRENT
- NO CROSS OVER DISTORTION
- HIGH EFFICIENCY

The TAA 621 is a monolithic integrated circuit in a 14-lead quad in-line plastic package with or without external bar. It is particularly designed for use in television sets as audio amplifier.
Special features of the circuit include:

– Self centering bias for any supply voltage from 6 to 24V.
– Direct coupled high impedance input and high supply voltage rejection.

The package has very low thermal resistance. To decrease the thermal resistance further, an external heatsink can easily be mounted by means of ordinary hardware.

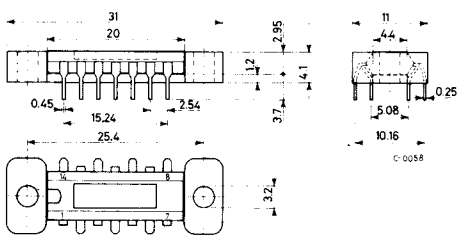
ABSOLUTE MAXUMUM RATINGS

V_s	DC supply voltage	27	V
V_i	Input voltage	V_s	
I_o	Output peak current (repetitive)	1	A
P_{tot}	Power dissipation at $T_{amb} = 25$ °C	2	W
	at $T_{case} = 70$ °C	4.5	W
T_{stg}, T_j	Storage and junction temperature	-40 to 150	°C

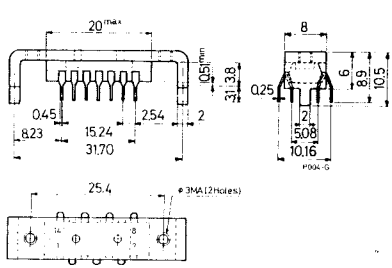
ORDERING NUMBERS: TAA 621 A72 (for quad in-line plastic package with spacer)
TAA 621 A11 (for quad in-line plastic package with inverted external bar)

MECHANICAL DATA

Dimensions in mm



TAA 621 A72



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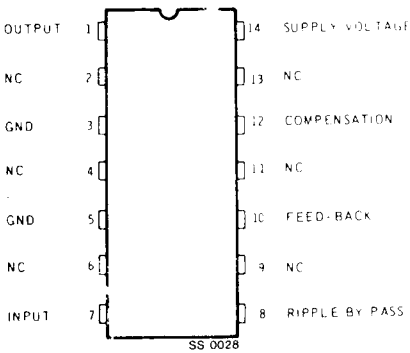
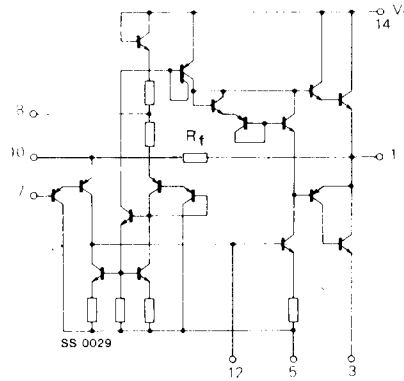
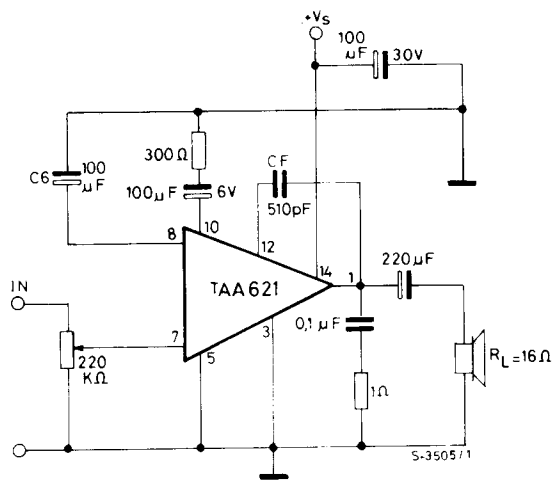
CONNECTION AND SCHEMATIC DIAGRAMS
(top view)





The heatsink is connected to the substrate (pin 5)

TEST AND APPLICATION CIRCUIT (G_v = 34 dB)



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THERMAL DATA

$R_{th\ j\text{-}case}$	Thermal resistance junction-case	max	17	°C/W
$R_{th\ j\text{-}amb}$	Thermal resistance junction-ambient	max	63	°C/W

ELECTRICAL CHARACTERISTICS (Refer to the test circuit, T_{amb}= 25°C unless otherwise specified)

Parameter		Test conditions	Min.	Typ.	Max.	Unit
I_q	Total quiescent drain current	V_s = 18V V_s = 24V		6.2 7.5		mA mA
I_d	Quiescent drain current of output transistors	V_s = 18V V_s = 24V		2.5 3		mA mA
I_s	Drain current	d = 10% R_L= 16Ω P_o = 2.2W V_s = 18V P_o = 4W V_s = 24V		175 220		mA mA
I_b	Input bias current	V_s = 18V V_s = 24V		180 250		nA nA
P_o*	Output power	d = 2% V_s = 18V R_L= 16Ω V_s = 24V R_L= 16Ω		1.7 2.7		W W
		d = 10% V_s = 18V R_L= 16Ω V_s = 24V R_L= 16Ω	3	2.2 4		W W
R_f	Internal feedback resistance (see schematic diagram)			15		kΩ
Z_i	Input impedance	V_s = 18V f = 1 KHz V_s = 24V		150 110		kΩ kΩ
d	Distortion	P_o = 50 mW f = 1 kHz R_L= 16Ω V_s = 18V V_s = 24V		0.1 0.1		% %
G_v	Voltage gain (open loop)	R_L= 16Ω V_s = 18V V_s = 24V		72 74		dB dB
SVR	Supply voltage rejection	R_L= 16Ω V_s = 24V $f_{(ripple)}$ = 100 Hz C_6 = 100 μf C_6 = 50 μF		52 46		dB dB

* External heatsink not required except for the conditions V_s = 24V, R_L= 16Ω.