

Monolithic Integrated Circuit

Application: Audio power amplifier, especially for TV-receivers

Features:

- High output current, up to 1.5 A
- Wide range of supply voltage, 5 to 30 V
- High output power
 - without heat sink 2.5 W
 - with heat sink 5.0 W
- Very high efficiency 70%

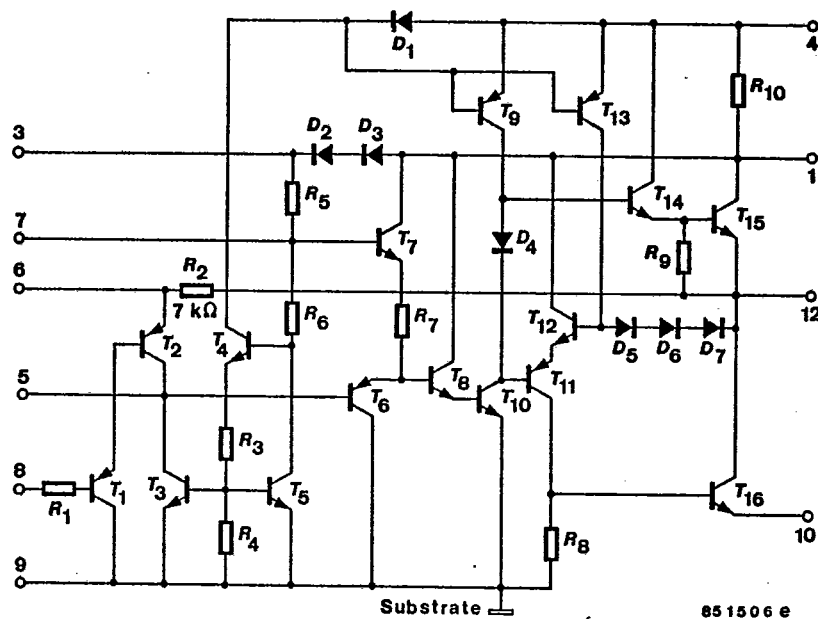


Fig.1 Diagram and pin connections

Absolute maximum ratings

Reference point Pin 9,10

Supply voltage	Pin 1, 3	V_S	30	V
Surge output current (non repetitive)	Pin 12	I_{OP}	2	A
Peak output current (repetitive)		I_{OM}	1.5	A
Power dissipation	Fig. 2, 3	P_{tot}	1	W
$T_{amb} = 80$		P_{tot}	5	W
$T_{case} = 90^\circ\text{C}$		T_J	+150	$^\circ\text{C}$
Junction temperature		T_{stg}	-40...+150	$^\circ\text{C}$
Storage temperature range				

T1.2/1325.0586 E1

TBA 800

T-74-05-01

Thermal resistance

Min. Typ. Max.

Junction ambient

R_{thJA}

70

K/W

Junction case

R_{thJC}

12

K/W

Electrical characteristics

$V_S = 24\text{ V}$, $R_i = 56\ \Omega$, reference points Pin 9, 10, $T_{amb} = 25^\circ\text{C}$, unless otherwise specified

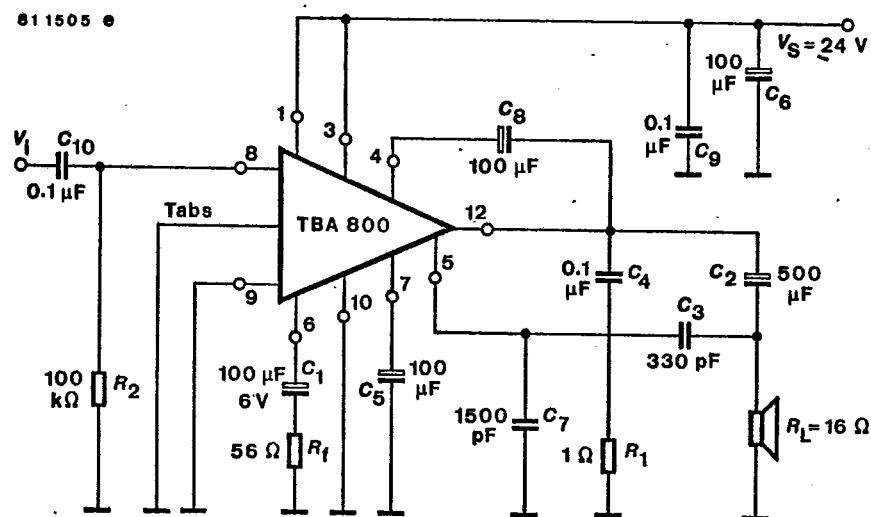
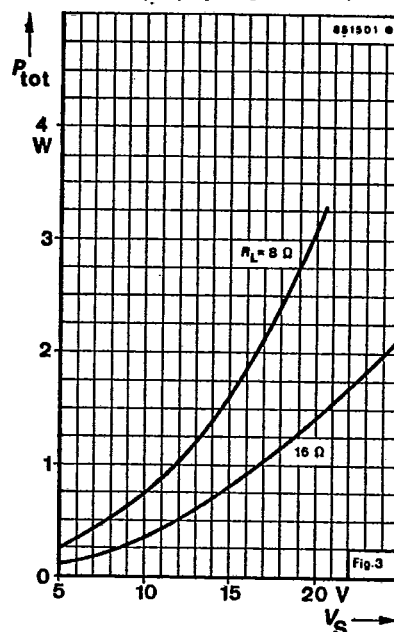
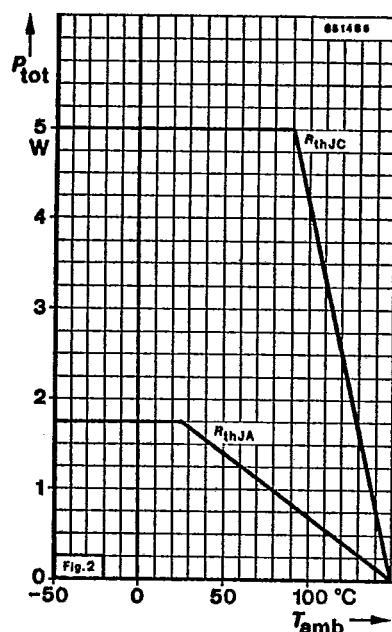
Supply voltage range	Pin 1, 3	V_S	5	30	V	
Quiescent output voltage	Pin 12	V_{OB}	11	12	13	V
Quiescent drain current	Pin 1, 3	I_{SB}	9	20	mA	
Input current	Pin 8	I_i	1	5	μ A	
Output power $R_L = 16\ \Omega$, $f = 1\text{ kHz}$, $d = 10\%$		P_o	4.4	5	W	
Input voltage	Pin 8	V_i		220	mV	
Input voltage $P_o = 5\text{ W}$, $f = 1\text{ kHz}$, $R_L = 16\ \Omega$	Pin 8	V_i		80	mV	
Input resistance	Pin 8	R_i		5	M Ω	
Band width (-3 dB) $R_L = 16\ \Omega$, $C_3 = 330\text{ pF}$		B		40...20 000	Hz	
Distortion $R_L = 16\ \Omega$, $f = 1\text{ kHz}$, $P_o = 50\text{ mW}$ to 2.5 W	Fig. 4, 6, 7	d		0.5	%	
Voltage gain $R_L = 16\ \Omega$, $f = 1\text{ kHz}$	Fig. 4					
Open loop		G_{vog}		80	dB	
Closed loop		G_{vof}	39	42	45	dB
Input noise voltage $B = 40\ldots 20\,000\text{ Hz}$	Pin 8	V_{ni}		5	μ V	
Input noise current $B = 40\ldots 20\,000\text{ HZ}$	Pin 8	I_{ni}		0.2	nA	
Efficiency $P_o = 4\text{ W}$, $R_L = 16\ \Omega$, $f = 1\text{ kHz}$		η		70	%	

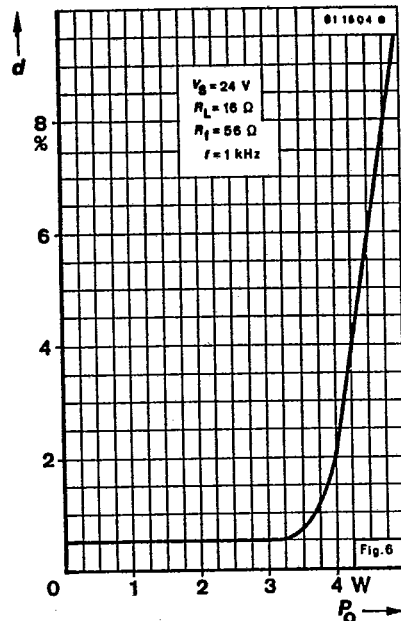
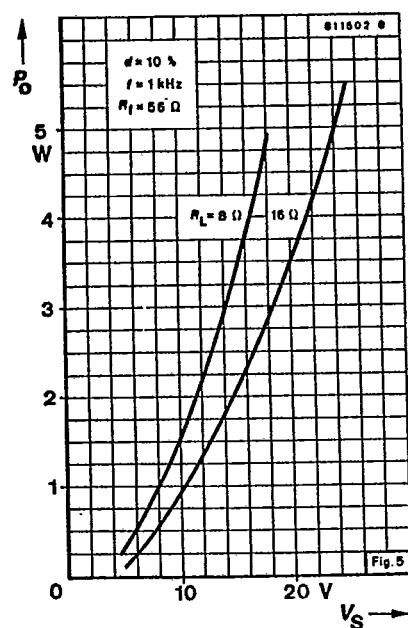
Fig. 4, 6, 7.

Fig. 4

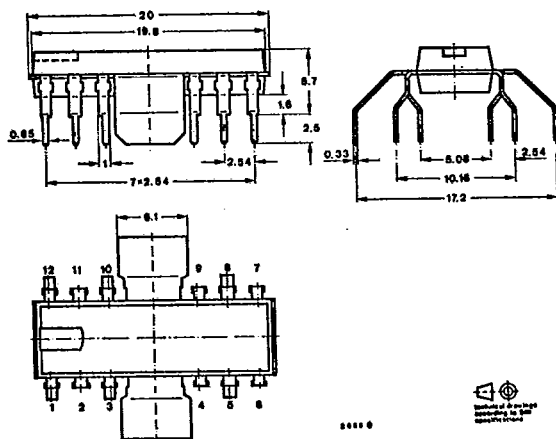
TBA 800

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Fig. 4 Test circuit for: P_{ov} , P_{tot} , d , η Supply voltage must be disconnected before inserting the integrated circuit in the socket.



Dimensions in mm

QIP-Special
Weight max. 1.5 g