

R.F. POWER TRIODE

R.F. zero bias power triode intended for use as linear S.S.B. amplifier and A.F. class B amplifier

QUICK REFERENCE DATA				
Class B SSB			B mod. Two tubes	
Frequency (MHz)	V_a (V)	W_{load} (PEP) (W)	V_a (V)	W_o (W)
30	2500	580	3000	1310

HEATING: direct by A.C. or D.C.; filament thoriated tungsten

Filament voltage $V_f = 5.0 \text{ V}$

Filament current $I_f = 14.1 \text{ A}$

CAPACITANCES

Anode to filament $C_{af} = 0.033 \text{ pF}$

Grid to filament $C_{gf} = 8.0 \text{ pF}$

Anode to grid $C_{ag} = 5.0 \text{ pF}$

TYPICAL CHARACTERISTICS

Anode voltage $V_a = 5 \text{ kV}$

Anode current $I_a = 80 \text{ mA}$

Mutual conductance $S = 11 \text{ mA/V}$

Amplification factor $\mu = 350$

TEMPERATURE LIMITS (Absolute limits)

Anode seal temperature $t = \text{max. } 220 \text{ }^\circ\text{C}$

Pin seal temperature $t = \text{max. } 180 \text{ }^\circ\text{C}$

Bulb temperature $t = \text{max. } 350 \text{ }^\circ\text{C}$

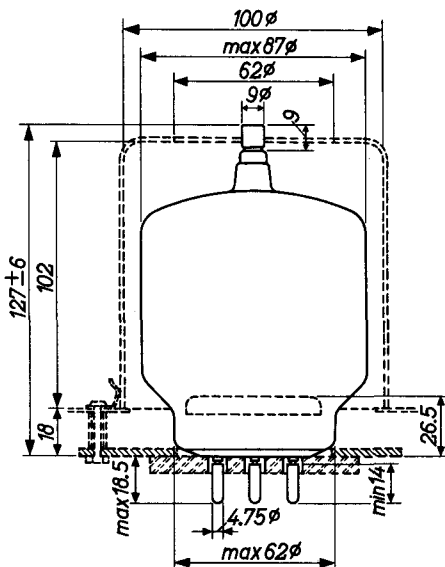
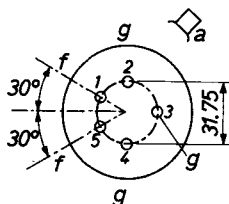
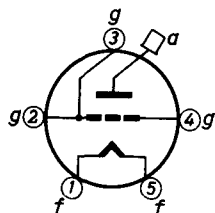
COOLING

Radiation and low velocity air flow

MECHANICAL DATA

Net weight: 210 g

Base : Giant 5p.



Mounting suggestion of
tube with chimney

Dimensions in mm

Mounting position: vertical with base up or down

In order to prevent overheating of the grid pins by high-frequency current it is recommended to include the three grid socket connections in the circuit.

ACCESSORIES

Anode connector 40624

Socket 2422 512 01001

Chimney 40666

R. F. CLASS B LINEAR POWER AMPLIFIER SINGLE SIDE BAND

suppressed carrier, zero bias, grounded grid

LIMITING VALUES (Absolute limits)

Frequency	f	up to	110	MHz
Anode voltage	V_a	=	max. 3000	V
Anode input power	W_{i_a}	=	max. 1200	W
Anode dissipation	W_a	=	max. 400	W
Anode current	I_a	=	max. 400	mA
Grid dissipation	W_g	=	max. 20	W

OPERATING CHARACTERISTICS

Frequency	f	=	30	MHz		
Anode voltage	V _a	=	2500	V		
Grid voltage	V _g	=	0	V		
			zero signal	single tone signal	double tone signal	
Peak cathode driving voltage	V _{k_p}	=	0	91	91	V
Anode current	I _a	=	72	400	270	mA
Grid current	I _g	=	–	140	80	mA
Driver output power	W _{dr}	=	–	35	35 (PEP)	W
Anode input power	W _{i_a}	=	180	1000	675	W
Anode dissipation	W _a	=	180	385	368	W
Output power	W _o	=	0	640 ¹⁾	640 (PEP) ²⁾	W
Output power in load	W _{load}	=	0	580	580 (PEP)	W ³⁾
Overall efficiency	η	=	–	58	43	%
Intermodulation distortion						
of the 3rd order	d ₃	=	–	–	–29	dB ⁴⁾
of the 5th order	d ₅	=	–	–	–34	dB ⁴⁾

1) Inclusive 25 W feedthrough power

2) Inclusive 25 W peak envelope feedthrough power

3) Measured in a circuit having an efficiency of 91 %

4) Maximum distortion level encountered at any driving level up to full drive, referred to the amplitude of either of the two tones in a double tone test signal at full drive.

A.F. CLASS B AMPLIFIER AND MODULATOR

LIMITING VALUES (Absolute limits)

Anode voltage	V_a	=	max. 3000	V
Anode input power	W_{ia}	=	max. 1200	W
Anode dissipation	W_a	=	max. 400	W
Anode current	I_a	=	max. 400	mA
Grid dissipation	W_g	=	max. 20	W

OPERATING CONDITIONS Class B, two tubes in push-pull

Anode voltage	V_a	=	3000	V
Load resistance	$R_{aa\sim}$	=	9500	Ω
Peak grid driving voltage	V_{ggp}	=	0	176 V
Anode current	I_a	=	2x90	2x333 mA
Grid current	I_g	=	0	2x120 mA
Driving power	W_{dr}	=	0	26 W
Anode input power	W_{ia}	=	2x270	2x1000 W
Anode dissipation	W_a	=	2x270	2x345 W
Output power	W_o	=	0	1310 W
Efficiency	η	=	-	65 %

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