AIR COOLED R.F. POWER TRIODE

Forced air cooled coaxial power triode in metal-ceramic construction primarily intended for use as R.F. class AB linear broad-band amplifier in T.V. transposer service at frequencies up to 960 MHz.

QUICK REFERENCE DATA						
Frequency	Transposer service (combined sound and vision)			Vision amplifier		
	V_a	W_ℓ (sync)	Power gain	V_a	W_ℓ (sync)	Power gain
(MHz)	(V)	(W)	(dB)	(V)	(W)	(dB)
470 to 860	3000	220	16	2500	250	15

HEATING indirect by A.C. (50 Hz to 400 Hz) or D.C.; oxide coated cathode.

Heater voltage For transposer application a heater voltage deviation within ± 2% is recommended.	V_f	6.3	V ± 5%
Heater current	I_f	6.5	A
Cathode heating time	T_h	min. 120	s

CAPACITANCES

Anode to grid	C_{ag}	8.5	pF
Grid to cathode and heater	$C_{g/kf}$	28	pF
Anode to cathode and heater	$C_{a/kf}$	0.15	pF

TYPICAL CHARACTERISTICS

Anode voltage	V_a	2	kV
Anode current	I_a	400	mA
Transconductance	S	50	mA/V
Amplification factor	μ	110	

TEMPERATURE LIMITS

Absolute max. temperature measured at reference point	t	max. 250	°C

Data based on pre-production tubes.

COOLING

Anode: forced air

W_a (W)	t_i (^oC)	q_{min} (m^3/min)	p_i (mmH_2O)
1800	25	2	20

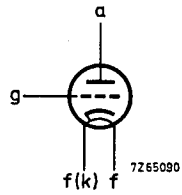
Other terminals: low velocity air flow.
When only the heater voltage is applied the heater and heater/cathode terminals should also be cooled.
Cooling air and voltages may be switched off simultaneously.

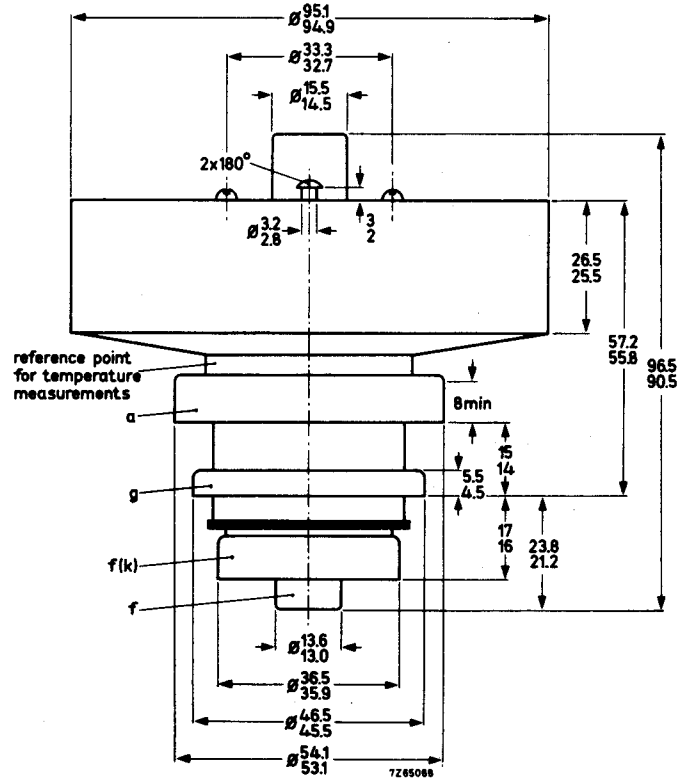
MECHANICAL DATA

Dimensions in mm

Net weight: approx.

Mounting position: any





R.F. CLASS AB AMPLIFIER FOR TELEVISION TRANSPOSER SERVICE grounded grid.

LIMITING VALUES (Absolute max. rating System)

Frequency	f	up to 960	MHz
Anode voltage	V_a	max. 3500	V
Grid voltage	$-V_g$	max. 200	V
Anode dissipation	W_a	max. 1800	W
Grid dissipation	W_g	max. 0.5	W
Cathode current	I_k	max. 700	mA

OPERATING CONDITIONS, grounded grid CCIR standard G[1)]

Frequency	f	470 to 860	MHz
Anode voltage	V_a	3000	V
Grid voltage [2)]	V_g	-19	V
Anode current, no signal condition	I_a	420	mA
Anode current [3)]	I_a	510	mA
Grid current	I_g	0 to -2	mA
Driving power (sync)	W_{dr}	5	W
Output power in load	W_ℓ	220	W
Power gain	G	$\approx$ 16	dB
Intermodulation products [4)]	d	$\leq$ -52	dB

1) Negative modulation, positive synchronization, combined sound and vision.
2) To be adjusted for the stated no-signal anode current. Range values -15 V to -22 V
3) Average anode current measured with a three tone test signal (see 4).
4) Three tone test method (vision carrier - 8 dB, sound carrier - 7 dB, sideband signal - 17 dB with respect to the sum signal amplitude of the composite signal).

OPERATING CONDITIONS AS VISION AMPLIFIER , grounded grid

Frequency	f	470 to 860	MHz
Anode voltage	V_a	2500	V
Grid voltage [1]	V_g	-20	V
Anode current, no-signal condition	I_a	250	mA
Anode current [2]	I_a	500	mA
Grid current	I_g	0	mA
Driving power (sync)	W_{dr}	8	W
Output power in load	W_ℓ	250	W
Power gain	G	≈15	dB

1) To be adjusted for the stated no-signal anode current.
Range values: -10 V to -30 V.

2) I_a at C.W. output power = 250 W.