

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 1000 MHz.

QUICK REFERENCE DATA			
Frequency (MHz)	Transposer service (combined sound and vision)		
	V_a (V)	W_l (W)	Power gain (dB)
470 to 1000	1700	50	18

HEATING : indirect; oxide coated cathode

Heater voltage	V_f	5	$V \pm 2\%$
Heater current	I_f	2.1	A
Cathode heating time	T_h	min. 120	s

CAPACITANCES

Anode to grid	C_{ag}	3.5	pF
Grid to cathode and heater	$C_{g/kf}$	15	pF
Anode to cathode and heater	$C_{a/kf}$	0.04	pF

TYPICAL CHARACTERISTICS

Anode voltage	V_a	1700	V
Anode current	I_a	170	mA
Transconductance	S	50	mA/V
Amplification factor	μ	200	

TEMPERATURE LIMITS

Absolute max. seal temperature	t	max. 225	$^{\circ}\text{C}$
--------------------------------	-----	----------	--------------------

Data based on pre-production tubes.

R.F. CLASS AB AMPLIFIER FOR TELEVISION TRANSPOSER SERVICE

Unless otherwise specified the voltages are given with respect to cathode.

LIMITING VALUES (Absolute max. rating system)

Frequency	f	up to	1000	MHz
Anode voltage	V_a	max.	1800	V
Grid voltage	$-V_g$	max.	5 50	V
Anode current	I_a	max.	200	mA
Anode dissipation	W_a	max.	300	W

OPERATING CONDITIONS , grounded grid

CCIR Standard G 1)

Frequency	f	780	MHz
Bandwidth (0 dB)	B	8	MHz
(-1 dB)	B	11	MHz
Anode voltage	V_a	1700	V
Grid voltage	V_g	-5	V 2)
Anode current, no-signal condition	I_a	120	mA
Anode current	I_a	185	mA 3)
Driving power (sync)	W_{dr}	0.8	W
Output power in load (sync)	W_l	50	W
Power gain	G	18	dB
Intermodulation products	d	-52	dB 4)

1) Negative modulation, positive synchronisation, combined sound and vision.

2) To be adjusted for the stated no-signal anode current.

3) I_a at zero dB level = 50 W (0 dB level corresponding with peak sync).

4) In-band intermodulation products with reference to peak sync level, measured with a three-tone test method (vision carrier -8 dB, sound carrier -7 dB, side-band signal -17 dB with respect to the sum signal amplitude of the composite signal corresponding to zero dB level.).