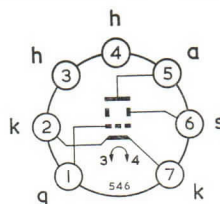


R.F. TRIODE



B7G Base

GENERAL

This triode, having low anode to grid capacitance, is for use as an R.F. amplifier in V.H.F. television receivers.

Heater Current	I_h	0.3	A
Heater Voltage	V_h	3.9	V

DESIGN CENTRE RATINGS

Maximum Anode Dissipation	$P_a(\max)$	2.2	W
Maximum Anode Supply Voltage	$V_{a(b)\max}$	550	V
Maximum Anode Voltage	$V_a(\max)$	200	V
Maximum Negative Grid Voltage	$-V_g(\max)$	50	V
Maximum Heater to Cathode Voltage	$V_{h-k}(\max)$	100*	V
Maximum Cathode Current	$I_k(\max)$	20	mA
Maximum Grid to Cathode Resistance	$R_{g-k}(\max)$	1.0†	MΩ

* To fulfil modulation hum requirement, V_{h-k} should not exceed 55Vr.m.s.

† In a.g.c. circuits $R_{g-k}(\max)$ may be 3.0 MΩ.

INTER-ELECTRODE CAPACITANCES (Shielded)

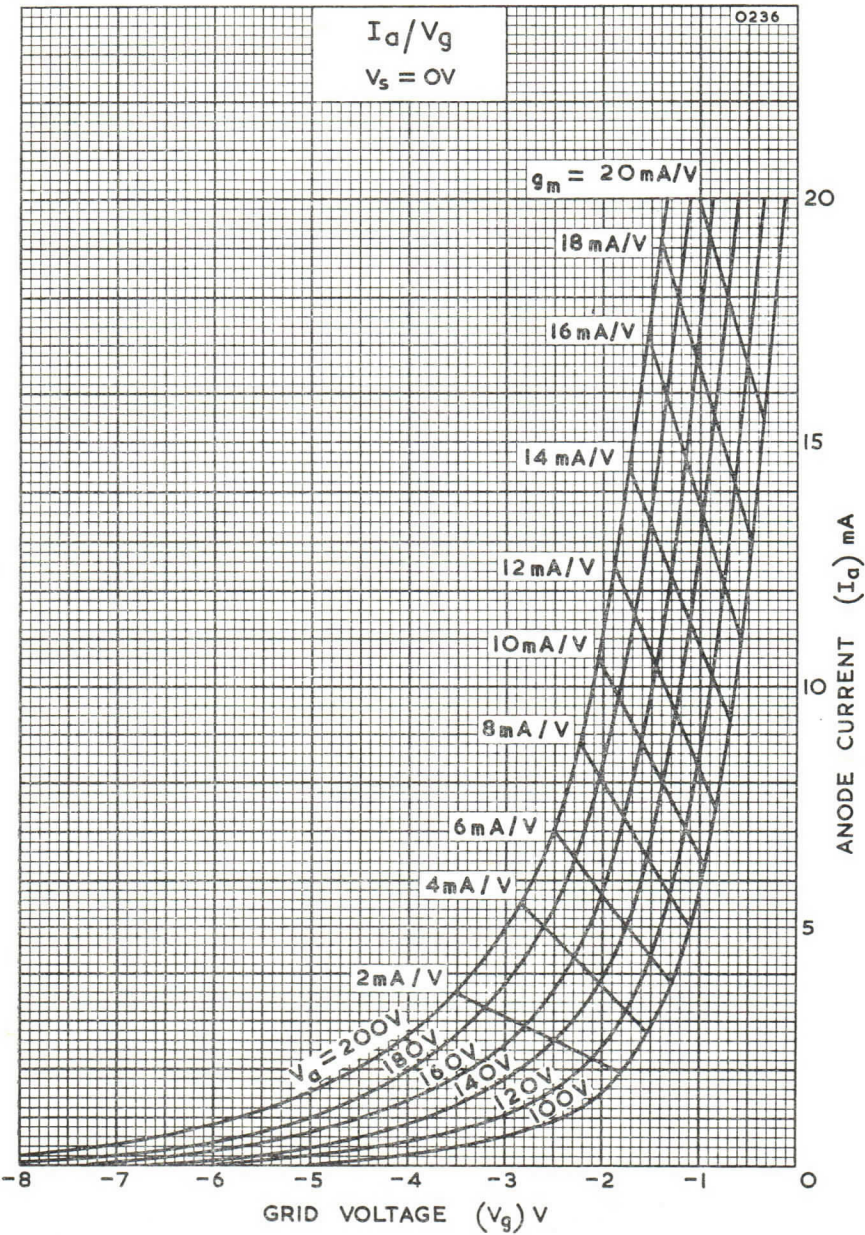
Anode to Grid	C_{a-g}	0.35	pF
Grid to Cathode	C_{g-k}	3.3	pF
Anode to Cathode	C_{a-k}	0.08	pF
Grid to Cathode, Heater and Shield	$C_{g-k,h,s}$	4.5	pF
Anode to Cathode, Heater and Shield	$C_{a-k,h,s}$	3.0	pF
Grid to Heater	C_{g-h}	<0.07	pF
Cathode to Heater	C_{k-h}	2.3	pF

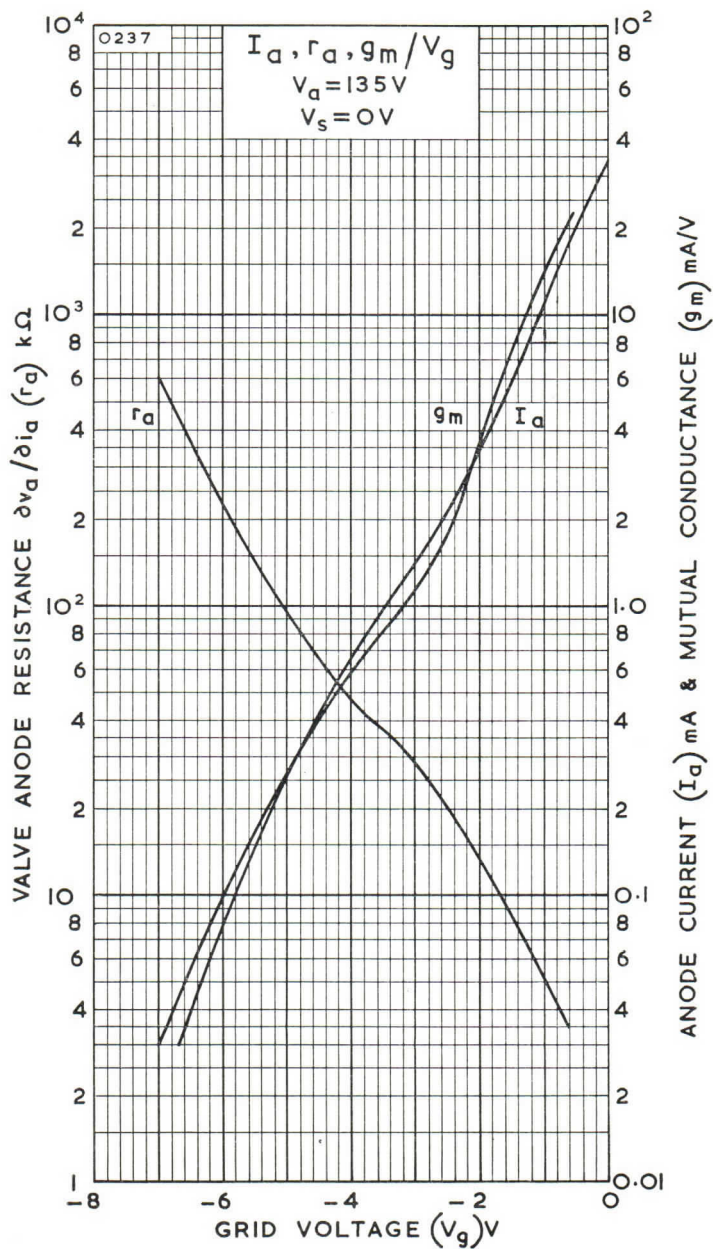
CHARACTERISTICS

Anode Voltage	V_a	135	V
Shield Voltage	V_s	0	V
Grid Voltage	V_g	-1.0	V
Anode Current	I_a	11.5	mA
Mutual Conductance	g_m	14.5	mA/V
Valve Anode Resistance ($\delta V_a / \delta I_a$)	r_a	5.25	kΩ
Amplification Factor	μ	76	

TYPICAL OPERATION

Supply Voltage	V_b	135	200	200	V
Anode Load Resistance	R_a	1.5	5.6	5.6	kΩ
Shield Voltage	V_s	0	0	0	V
Cathode Resistance	R_k	0	0	87	Ω
Anode Current	I_a	16.5	16.5	11.5	mA
Grid Current	I_g	20	20	0	μA
Mutual Conductance	g_m	20	20	14.5	mA/V
Amplification Factor	μ	84	84	76	
Grid Voltage for gm reduction 10 : 1	$V_{g(gm/10)}$	-2.3	-3.2	-3.8	V
Grid Voltage for gm reduction 100 : 1	$V_{g(gm/100)}$	-5.3	-7.7	-8.3	V

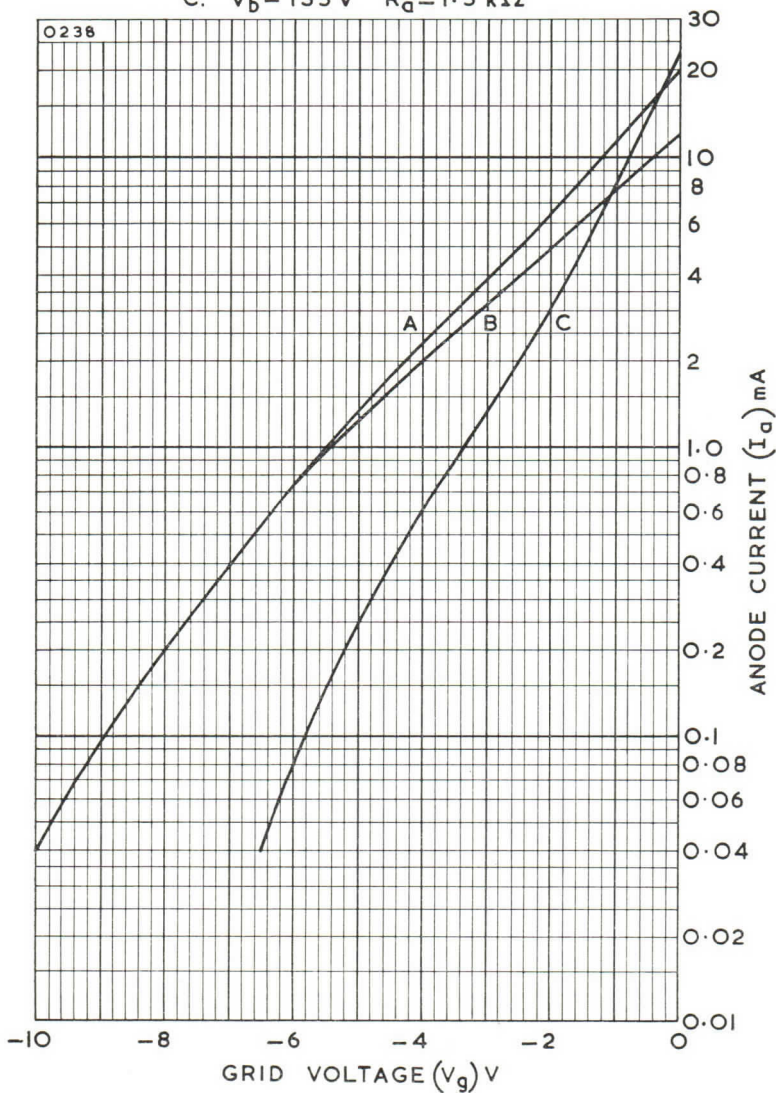




$$\frac{I_a}{V_g}$$

$$V_s = 0$$

- A. $V_b = 200\text{V}$ $R_a = 5.6\text{k}\Omega$
 B. $V_b = 200\text{V}$ $R_a = 5.6\text{k}\Omega$ $R_k = 87\Omega$
 C. $V_b = 135\text{V}$ $R_a = 1.5\text{k}\Omega$



$$g_m / V_g$$

$$V_s = 0$$

- A. $V_b = 200V$ $R_a = 5.6k\Omega$
 B. $V_b = 200V$ $R_a = 5.6k\Omega$ $R_k = 87\Omega$
 C. $V_b = 135V$ $R_a = 1.5k\Omega$

