

V.H.F. DOUBLE TRIODE

ECC91

Double triode with common cathode for use as r.f. power amplifier or oscillator.

HEATER

V_h	6.3	V
I_h	450	mA

CAPACITANCES

	Unshielded	Shielded	←
* C_{a-g}	1.6	1.6	pF
$C_{in'}$	2.1	2.6	pF
$C_{in''}$	2.1	2.8	pF
$C_{out'}$	0.45	1.5	pF
$C_{out''}$	0.35	1.0	pF
C_{h-k}	4.0	4.0	pF
$C_{a'-g''}$	140	60	mpF
$C_{a''-g'}$	40	20	mpF
$C_{a'-a''}$	220	160	mpF
$C_{g'-g''}$	430	400	mpF

*Each section.

CHARACTERISTICS (each section)

V_a	100	V
I_a	9.0	mA
g_m	5.6	mA/V
μ	38	
r_a	6.8	k Ω
V_g	-0.9	V

OPERATING CONDITIONS—CLASS "C" TELEGRAPHY PUSH-PULL ←

As r.f. amplifier

	50	100	150	200	250	Mc/s
f	50	100	150	200	250	Mc/s
V_a	150	150	150	150	150	V
* V_g	-10	-10	-10	-10	-10	V
$I_a(\text{tot})$	16.4	16.9	17.5	18	18.8	mA
$I_g(\text{tot})$	5.6	5.1	4.5	4	3.2	mA
P_{load}	1.56	1.47	1.33	1.17	0.92	W
η_{load}	63.4	58	50.8	43.3	32.6	%

As a frequency trebler

	50	100	150	200	250	Mc/s
f	50	100	150	200	250	Mc/s
V_a	150	150	150	150	150	V
* V_g	-100	-100	-100	-100	-100	V
$I_a(\text{tot})$	16	16.7	17.2	17.7	18.2	mA
$I_g(\text{tot})$	6	5.3	4.8	4.3	3.8	mA
P_{load}	0.95	0.89	0.82	0.72	0.56	W
η_{load}	39.6	35.5	31.8	27.1	20.5	%

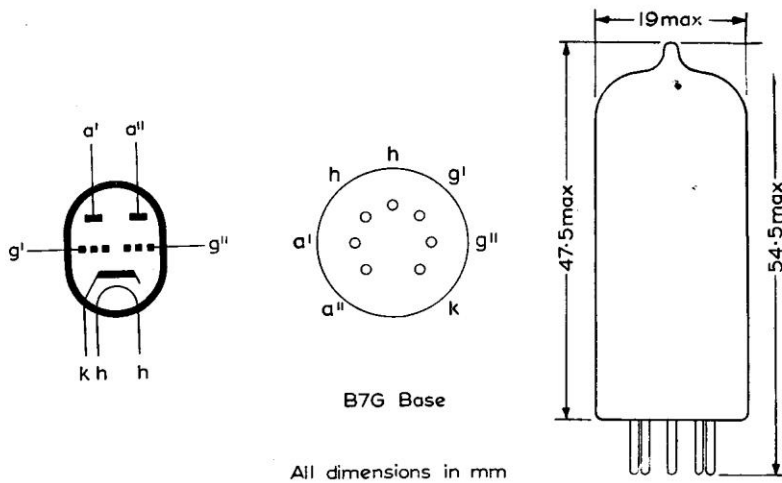
*This bias is obtained by grid current bias, or a combination of grid current and fixed or cathode bias.

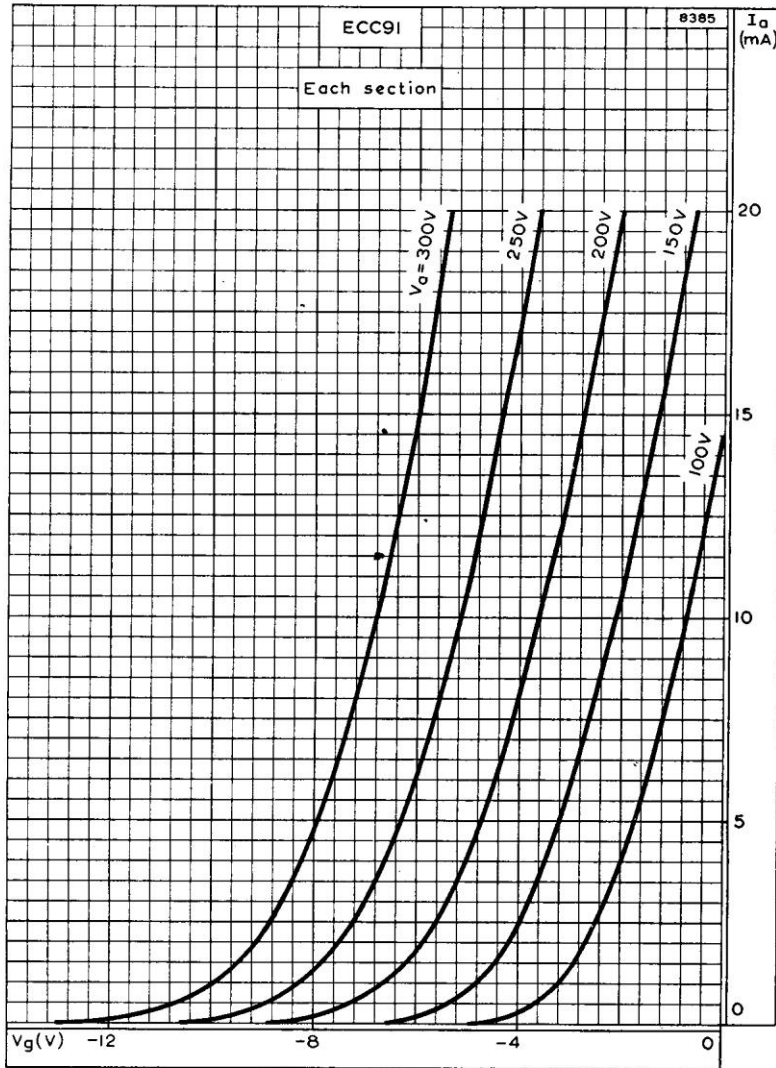
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LIMITING VALUES

$V_{a(b)}$ max.	500	V
V_a max.	300	V
p_a max.	2×1.5	W
I_k max.	22	mA
V_g max.	-100	V
I_g max.	2×3	mA
V_{h-k}	100	V
R_{g-k} max.	250	k Ω
T_{bulb} max.	200	$^{\circ}$ C
f max.	250	Mc/s

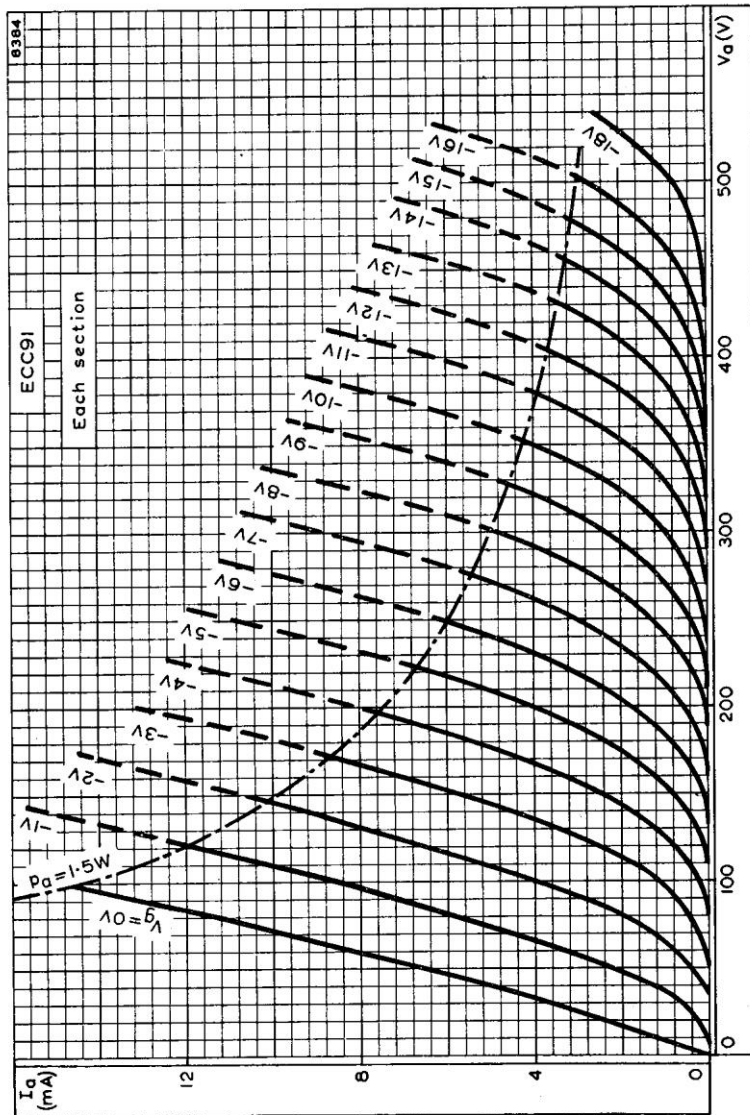




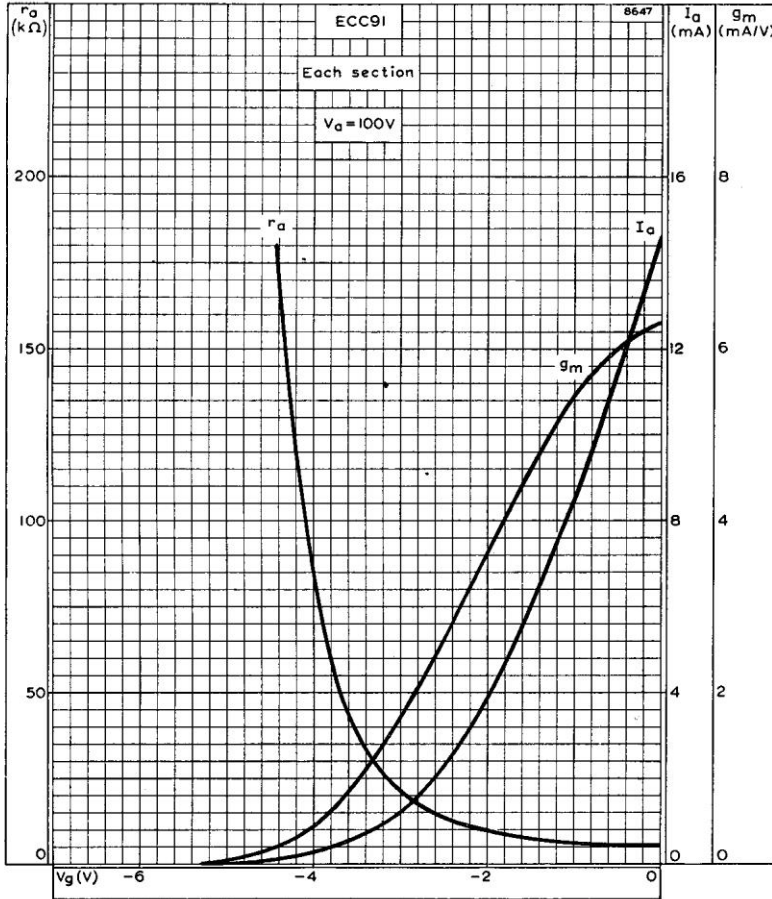
ANODE CURRENT PLOTTED AGAINST GRID VOLTAGE
WITH ANODE VOLTAGE AS PARAMETER

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WITH GRID VOLTAGE AS PARAMETER

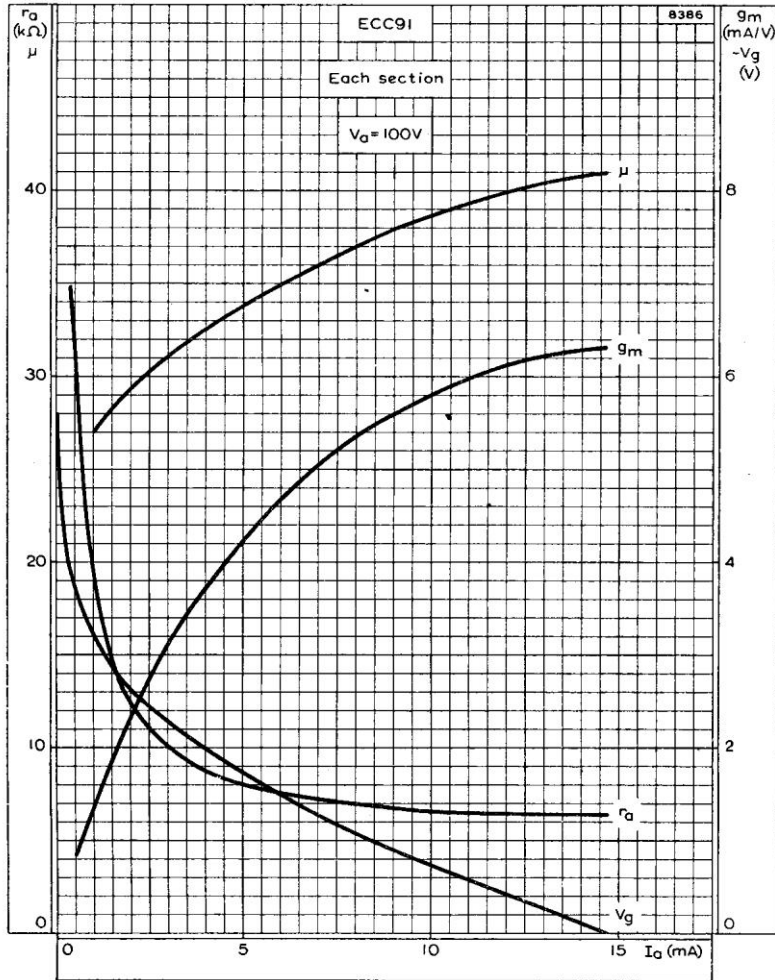


ANODE CURRENT, MUTUAL CONDUCTANCE AND ANODE IMPEDANCE
PLOTTED AGAINST GRID VOLTAGE FOR EACH SECTION



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ANODE IMPEDANCE, AMPLIFICATION FACTOR, MUTUAL CONDUCTANCE AND GRID VOLTAGE PLOTTED AGAINST ANODE CURRENT FOR EACH SECTION