

R.F. DOUBLE TRIODE

ECC86

Double triode for use as an r.f. amplifier or self-oscillating mixer in equipment operating directly from a 6V, 12V or 24V battery on or off charge.

HEATER

V_h	6.3	V
I_h	330	mA

CAPACITANCES

* C_{a-g}	1.3	pF
* C_{in}	3.0	pF
* C_{out}	1.8	pF
$C_{a'-a''}$	< 0.05	pF
$C_{g'-g''}$	< 0.005	pF
$C_{a'-g''}$	< 0.005	pF
$C_{a''-g'}$	< 0.005	pF

*Each section

CHARACTERISTICS (each section)

V_a	6.3	V
I_a	900	μ A
V_g	-0.4	V
g_m	2.6	mA/V
μ	14	
R_{eq}	1.0	k Ω

OPERATING CONDITIONS

As r.f. amplifier

V_a	6.3	12.6	25	V
$\ddagger V_{g(b)}$	0	0	0	V
R_g	100	100	100	k Ω
I_a	0.9	2.5	7.5	mA
g_m	2.6	4.6	7.8	mA/V
r_a	5.0	3.4	2.1	k Ω

$\ddagger V_{g(b)}$ is the voltage at "earthy" end of grid leak.

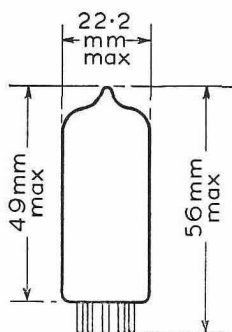
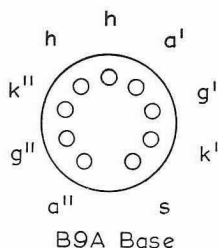
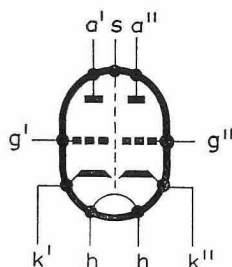
As self-oscillating mixer

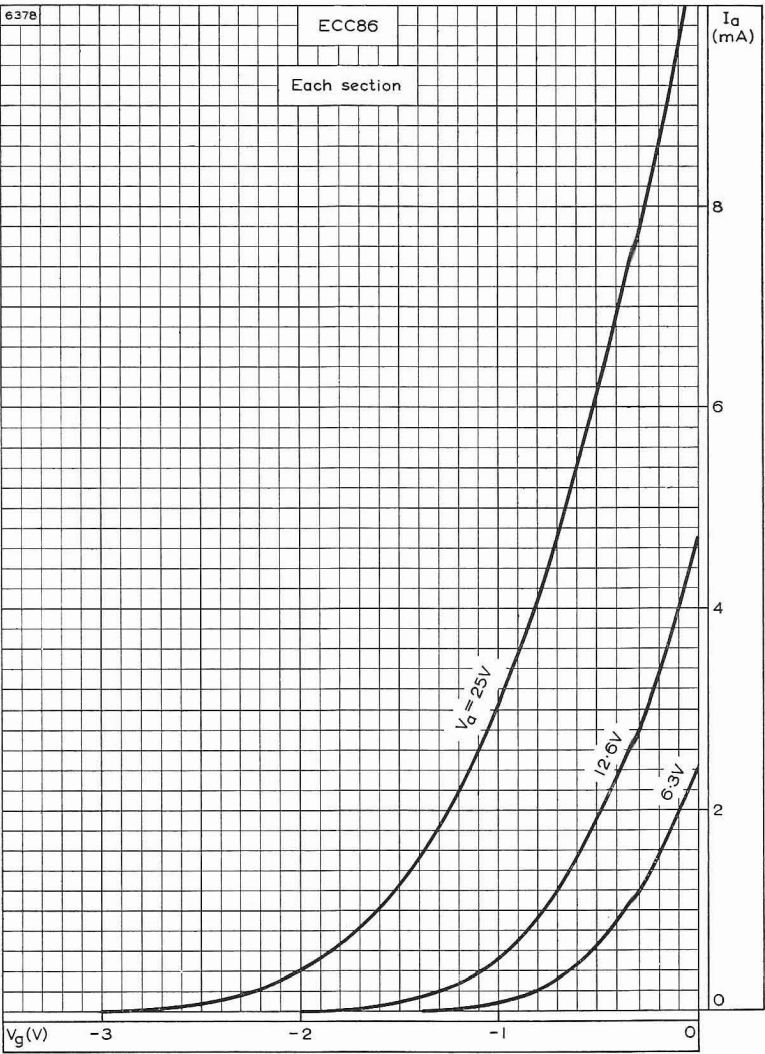
$V_{a(b)}$	6.3	12.6	25	V
R_a	500	500	500	Ω
$V_{osc(r.m.s.)}$	0.7	1.0	1.5	V
I_a	0.4	1.0	2.6	mA
g_c	0.8	1.3	2.0	mA/V
R_g	220	220	220	k Ω
r_a	11	8.0	5.3	k Ω

DESIGN CENTRE RATINGS

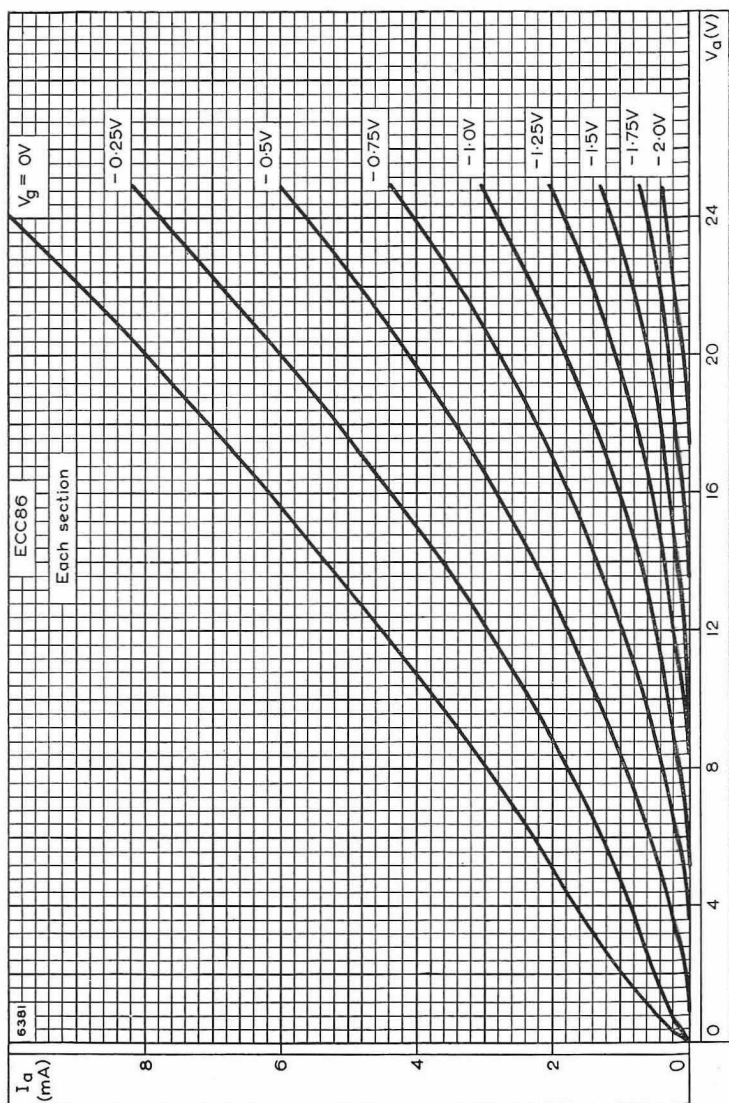
V_a max.	30	V
p_a max.	600	mW
I_k max.	20	mA
R_g max.	1.0	M Ω
V_{h-k} max.	30	V
R_{h-k} max.	20	k Ω

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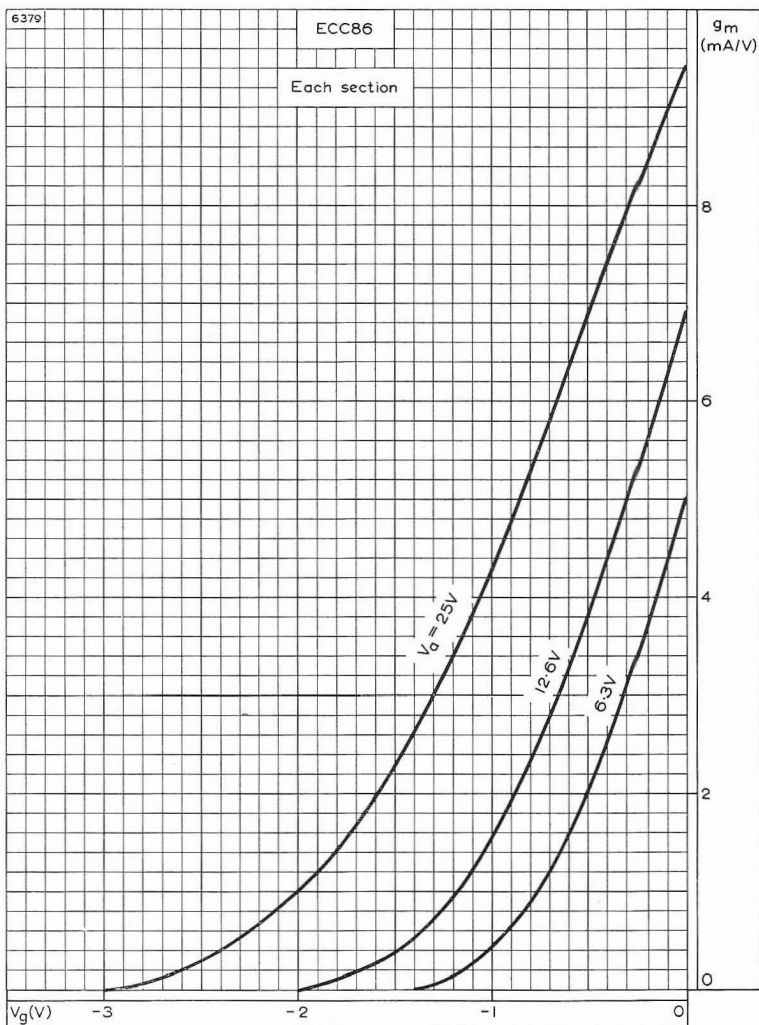




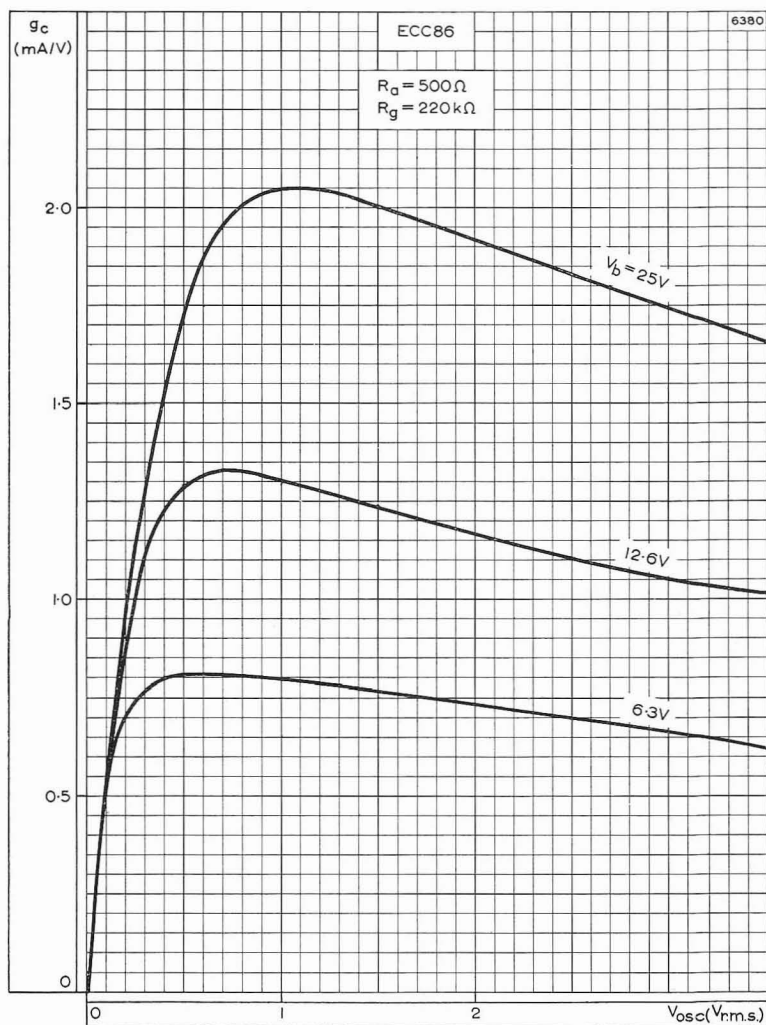
ANODE CURRENT PLOTTED AGAINST GRID VOLTAGE WITH ANODE VOLTAGE AS PARAMETER



ANODE CURRENT PLOTTED AGAINST ANODE VOLTAGE WITH GRID VOLTAGE AS PARAMETER



MUTUAL CONDUCTANCE PLOTTED AGAINST GRID VOLTAGE WITH
ANODE VOLTAGE AS PARAMETER



CONVERSION CONDUCTANCE PLOTTED AGAINST OSCILLATOR VOLTAGE
WHEN USED AS A SELF-OSCILLATING MIXER