SPECIAL QUALITY WIDEBAND OUTPUT PENTODE

E55L

Special quality high slope output pentode intended for general industrial applications where stability of characteristics and long life are required.

This data should be read in conjunction with GENERAL NOTES—SPECIAL QUALITY VALVES which precede this section of the handbook, and the index numbers are used to indicate where reference should be made to a specific note.

HEATER

V_h[1]	6.3	V
I_h	600	mA

CAPACITANCES[2]

Pentode connected

Shielded

	Minimum	*Average*	*Maximum*	
c_{a-g1}	—	80	120	mpF
c_{in}	15	18	21	pF
c_{in} (w) (I_k = 55.5mA)	—	28	—	pF
c_{out}	5.8	6.5	7.2	pF

Unshielded

c_{a-g1}	—	110	150	mpF
c_{in}	15	18	20	pF
c_{in} (w) (I_k = 55.5mA)	—	28	—	pF
c_{out}	3.6	4.0	4.4	pF

Triode connected

Shielded

c_{a-g}	5.5	6.2	6.9	pF
c_{in}	10	11.8	13.6	pF
c_{out}	9.4	10.5	11.6	pF
c_{h-k}	—	6.0	—	pF

Unshielded

c_{a-g}	5.6	6.3	7.0	pF
c_{in}	10	11.8	13.6	pF
c_{out}	7.0	7.8	8.6	pF
c_{h-k}	—	6.0	—	pF

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CHARACTERISTICS[3]

Pentode connected		
V_a	125	V
V_{g2}	125	V
V_{g3}	0	V
V_{g1}	-3.0	V
R_k	0	Ω
I_a	50	mA
I_{g2}	5.5	mA
g_m	45	mA/V
r_a	20	kΩ
μ_{g1-g2}	30	
r_{g1} (f = 50Mc/s)	1.0	kΩ
Triode connected		
V_a	125	V
I_a	55.5	mA
V_g	-3.0	V
g_m	50	mA/V
μ	30	
r_a	600	Ω

OPERATING CONDITIONS

V_{a-e}	140	V
V_{g2-e}	140	V
V_{g3-k}	0	V
V_{g1-e}	+12	V
R_k	270	Ω
I_a	50	mA
I_{g2}	5.5	mA
g_m	45	mA/V

CHARACTERISTIC RANGE VALUES FOR EQUIPMENT DESIGN ←

	Average	*Initial range*	*End of life**	
Anode Current at V_{a-e} = 140V, V_{g2-e} = 140V, V_{g1-e} = +12V, R_k = 270Ω	50	48 to 52	—	mA←
Grid-cathode voltage at V_{a-e} = 140V, V_{g2-e} = 140V, V_{g1-e} = +12V, R_k = 270Ω	-3.0	-2.3 to -3.7	-1.8	V←
Screen-grid current at V_{a-e} = 140V, V_{g2-e} = 140V, V_{g1-e} = +12V, R_k = 270Ω	5.5	4.5 to 6.5	—	mA←
Mutual conductance at V_{a-e} = 140V, V_{g2-e} = 140V, V_{g1-e} = +12V, R_k = 270Ω	45	38 to 52	Δg_m max. = 25%	mA/V←
Negative control-grid current (max.) at V_{a-e} = 140V, V_{g2-e} = 140V, V_{g1-e} = +12V, R_k = 270Ω	—	—	2.0	μA←

*To allow for valve deterioration during life, circuits should be designed to function with a valve in which one or more of the characteristics have changed to the values stated.

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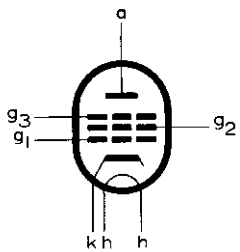
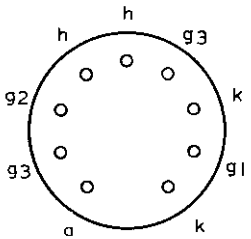
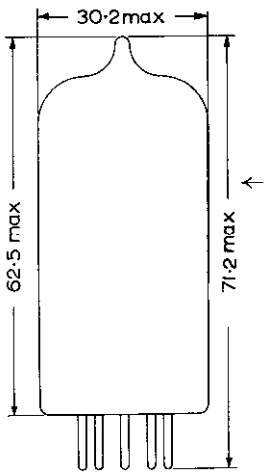


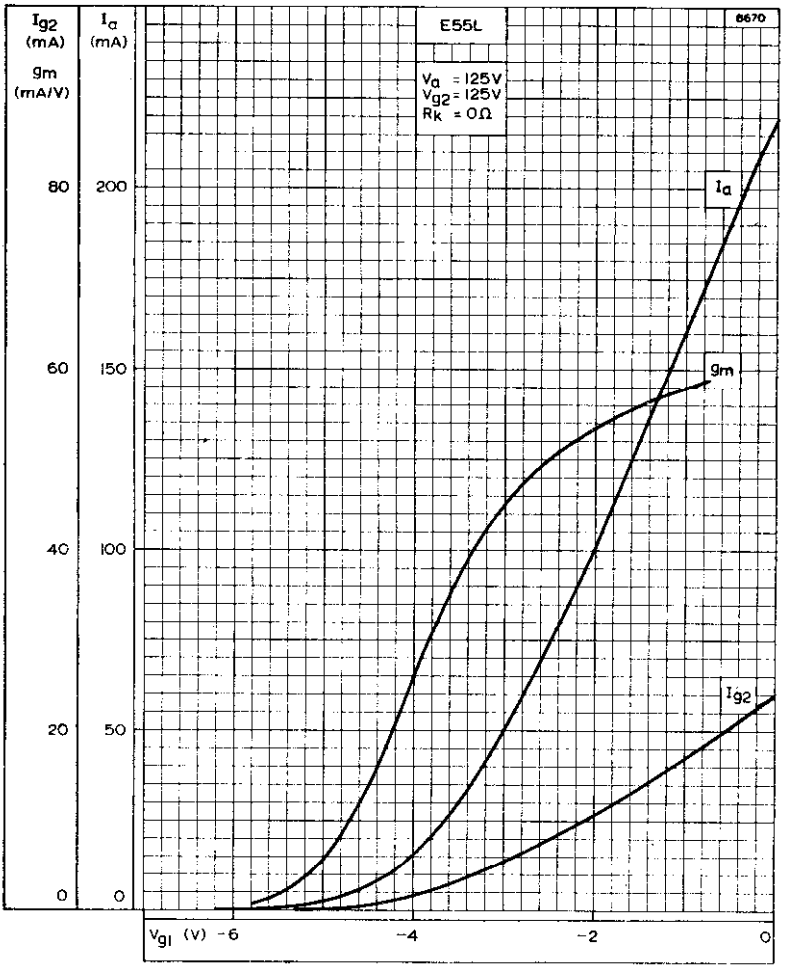


B9D Base



9862

All dimensions in mm



ANODE AND SCREEN-GRID CURRENT AND MUTUAL CONDUCTANCE PLOTTED AGAINST CONTROL-GRID VOLTAGE. V_{g2} = 125V

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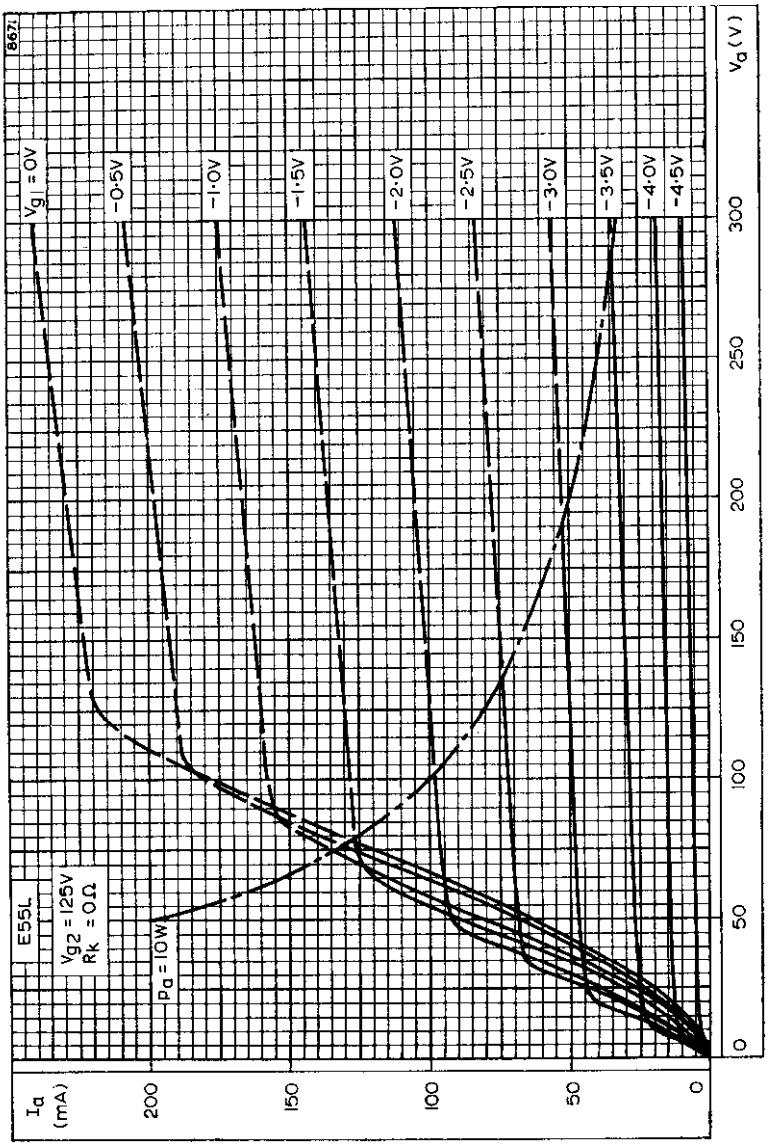
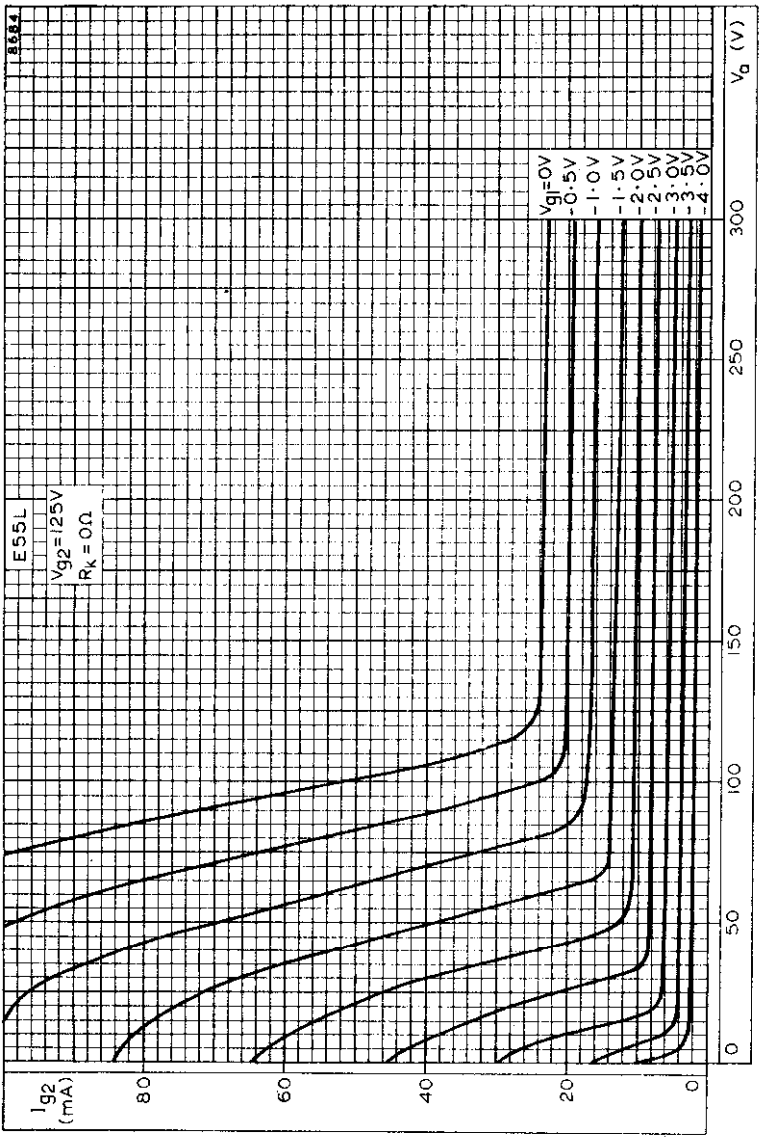
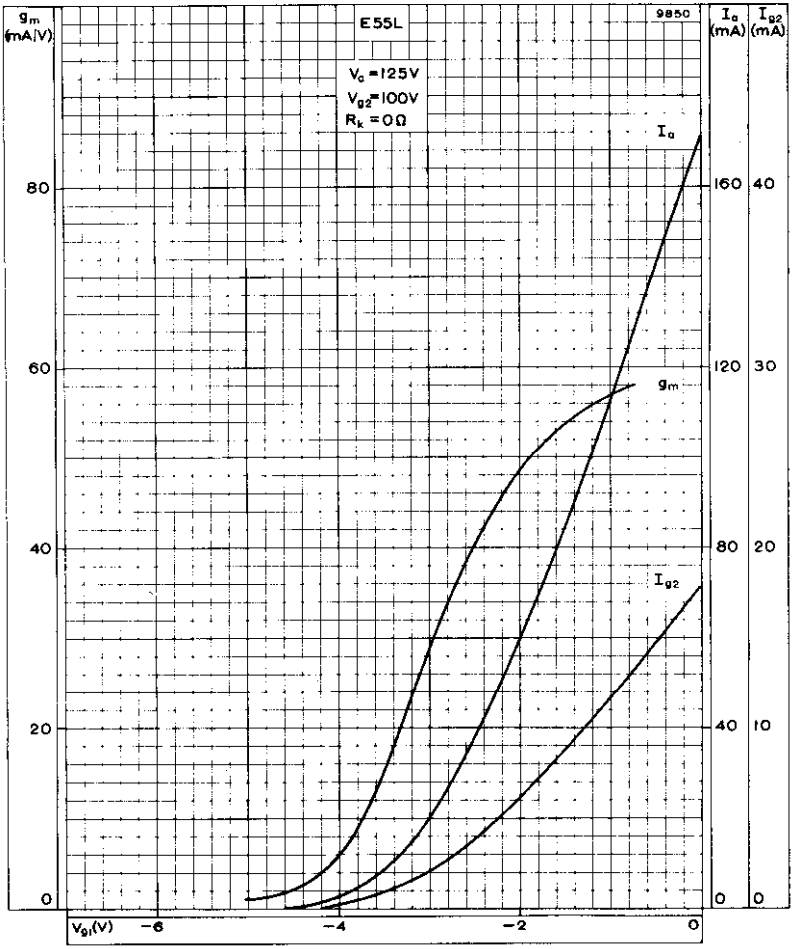


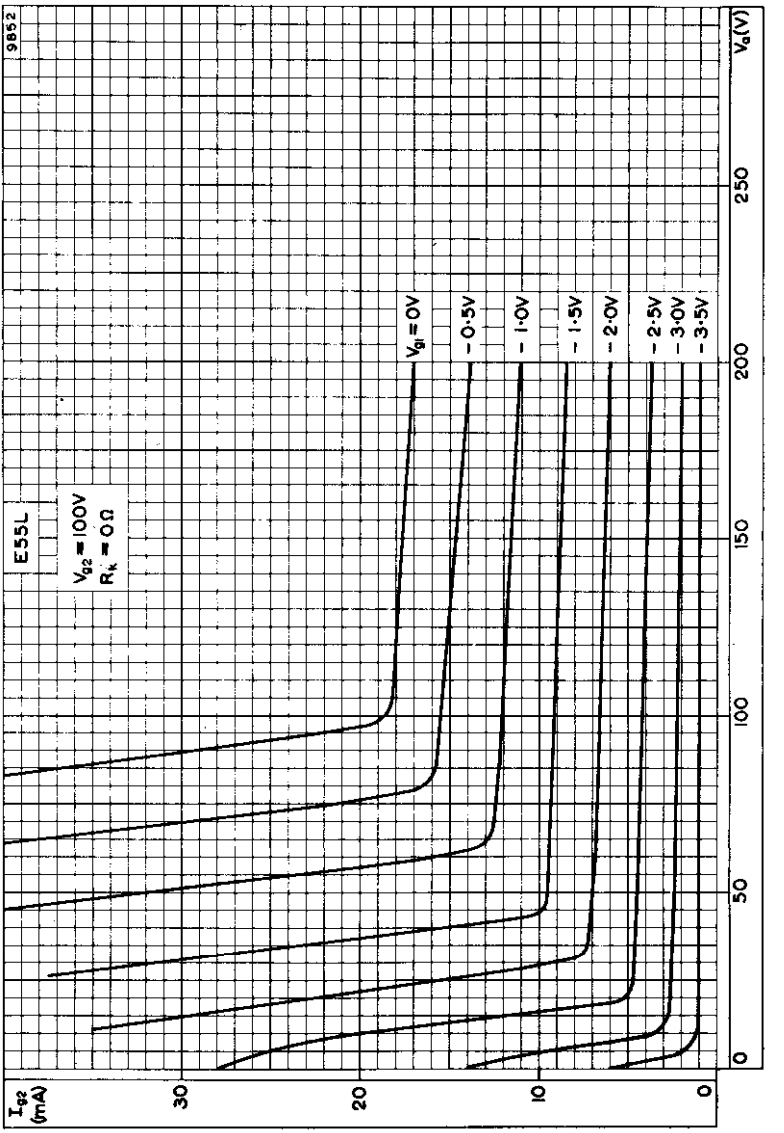
ANODE CURRENT PLOTTED AGAINST ANODE VOLTAGE WITH CONTROL-GRID VOLTAGE AS PARAMETER



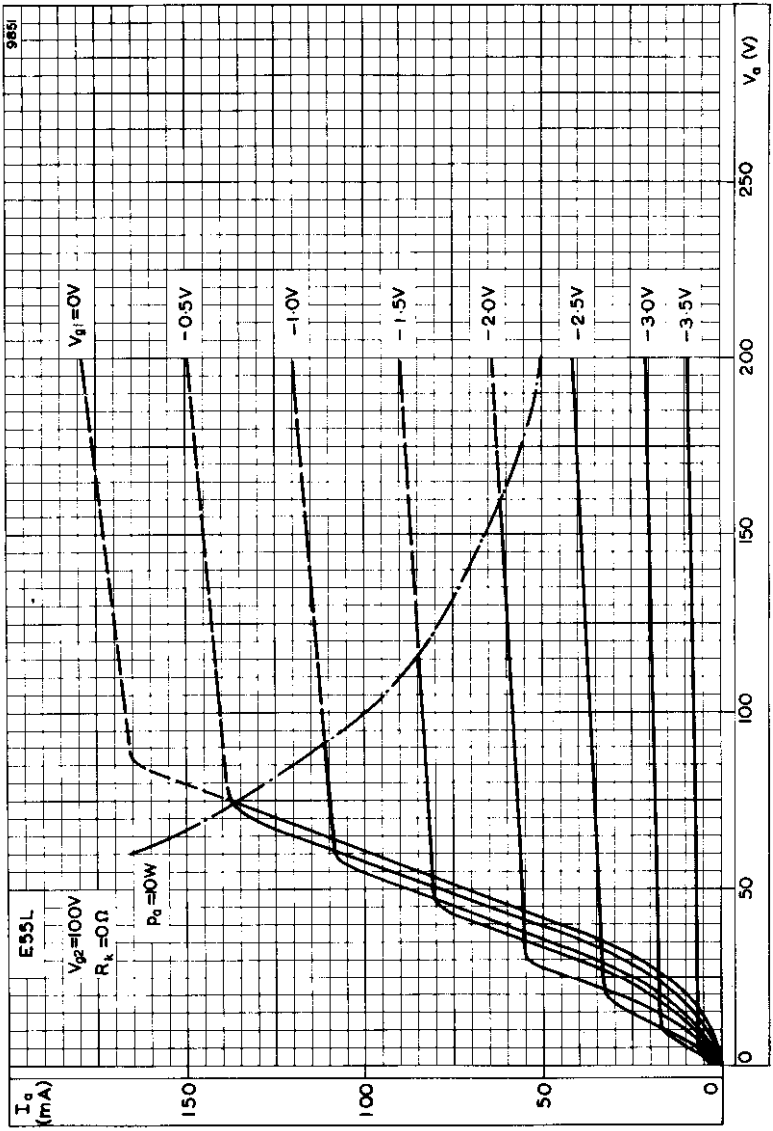
SCREEN-GRID CURRENT PLOTTED AGAINST ANODE VOLTAGE WITH CONTROL-GRID VOLTAGE AS PARAMETER. V_{g2} = 125V



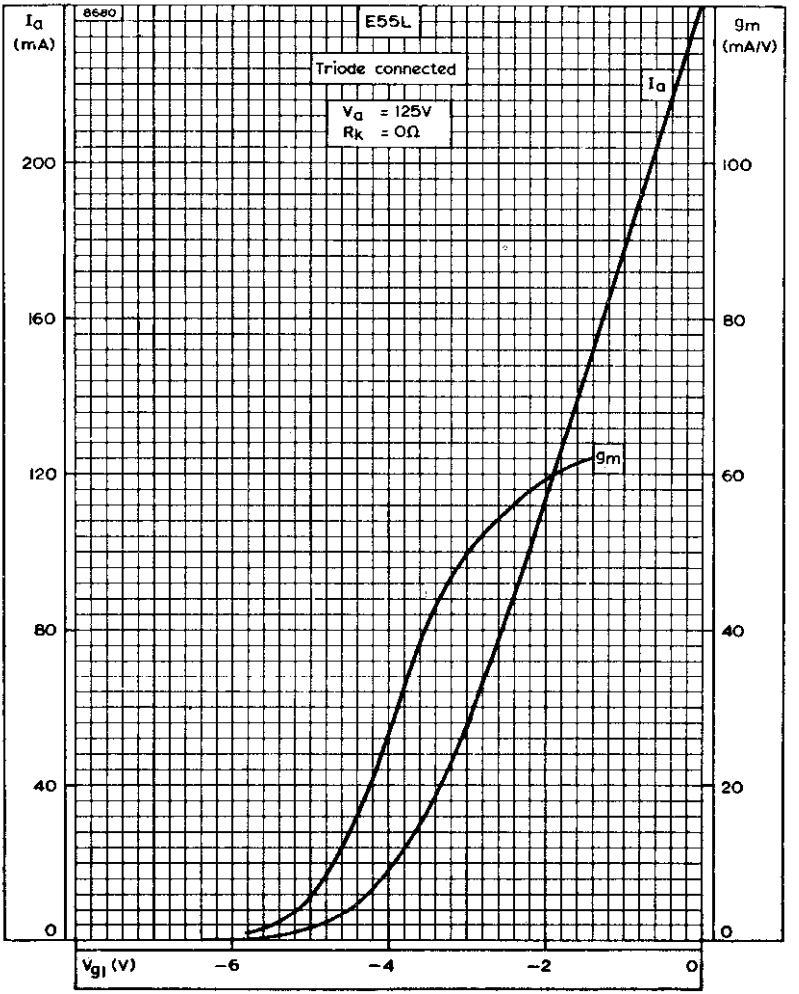
ANODE AND SCREEN-GRID CURRENT AND MUTUAL CONDUCTANCE PLOTTED AGAINST CONTROL-GRID VOLTAGE. V_{g2} = 100V



SCREEN-GRID CURRENT PLOTTED AGAINST ANODE VOLTAGE WITH CONTROL-GRID VOLTAGE AS PARAMETER. V_{g2} = 100V



ANODE CURRENT PLOTTED AGAINST ANODE VOLTAGE WITH CONTROL-GRID VOLTAGE AS PARAMETER. V_{g2} = 100V



ANODE CURRENT AND MUTUAL CONDUCTANCE PLOTTED AGAINST CONTROL-GRID VOLTAGE, WHEN TRIODE CONNECTED

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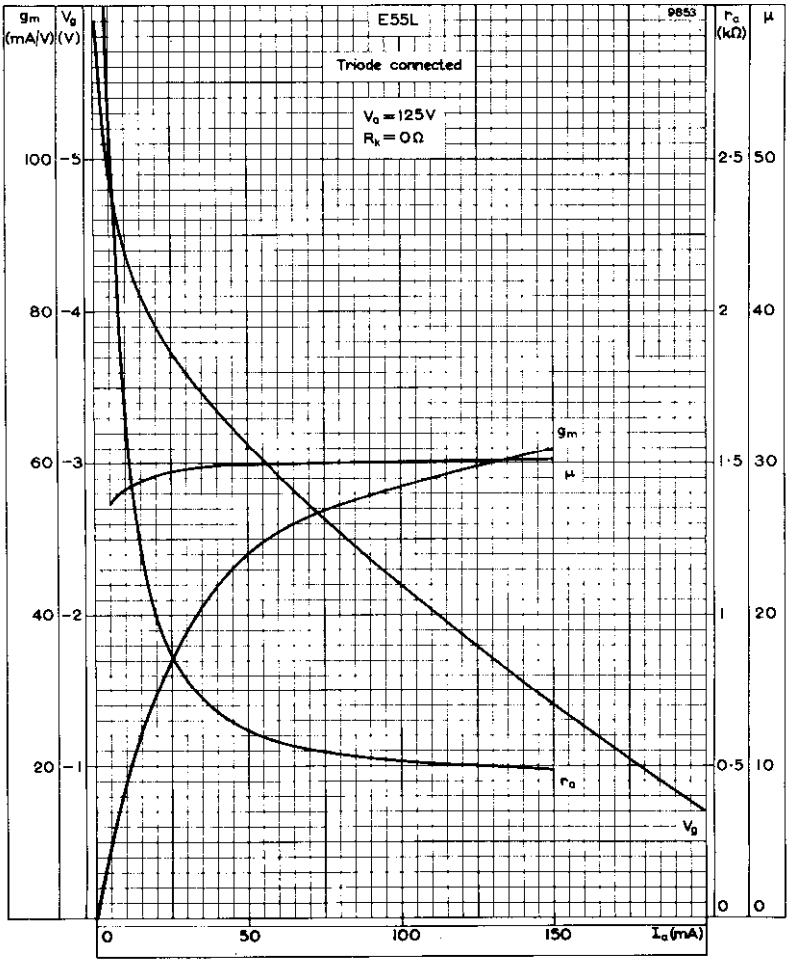
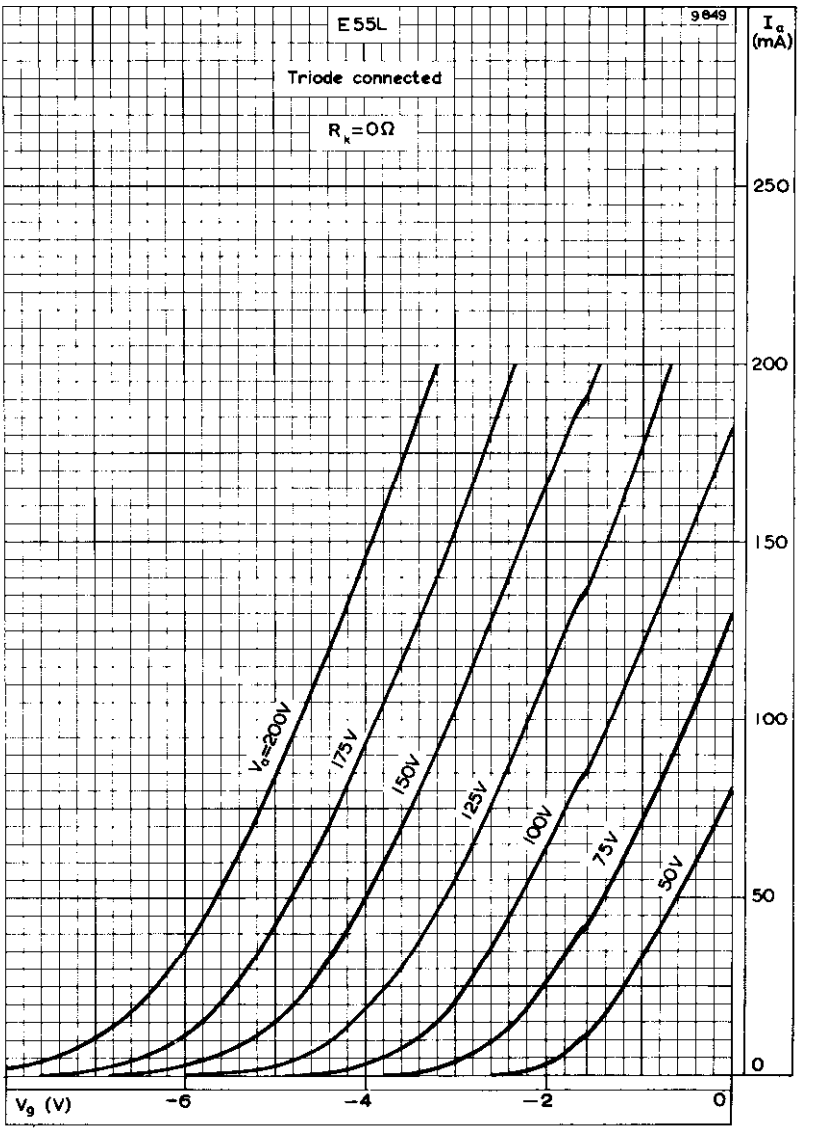
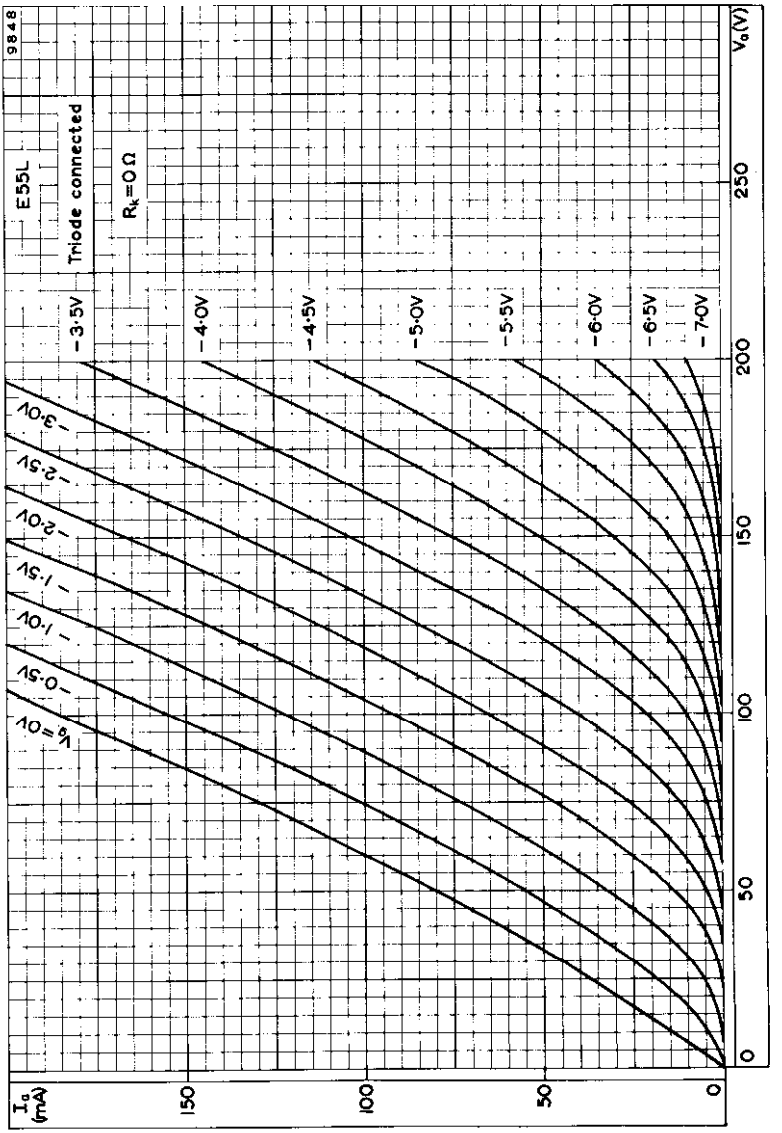


ANODE IMPEDANCE, AMPLIFICATION FACTOR, MUTUAL CONDUCTANCE AND GRID VOLTAGE PLOTTED AGAINST ANODE CURRENT, WHEN TRIODE CONNECTED



ANODE CURRENT PLOTTED AGAINST CONTROL-GRID VOLTAGE WITH ANODE VOLTAGE AS PARAMETER, WHEN TRIODE CONNECTED



ANODE CURRENT PLOTTED AGAINST ANODE VOLTAGE WITH CONTROL-GRID VOLTAGE AS PARAMETER, WHEN TRIODE CONNECTED