

OUTPUT PENTODE

EL31

Output pentode rated for a continuous dissipation of 25W at the anode and suitable for use in push-pull combination for effective outputs of the order of 100W in class AB amplifiers.

HEATER

V_h	6.3	V
I_h	1.4	A

CAPACITANCE

C_{a-g1}	1.2	$\mu\mu F$
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CHARACTERISTICS

V_a	275	600	V
V_{g2}	275	400	V
V_{g1}	-9.0	-22	V
I_a	91	42	mA
I_{g2}	11	5.0	mA
g_m	14	7.0	mA/V
r_a	20	43	k Ω
μ_{g1-g2}	16.5	—	

OPERATING CONDITIONS—TWO VALVES IN PUSH PULL

(Self Bias)

V_a	350	375	400	V
V_{g2}	350	375	400	V
R_k	100	122	145	Ω
$I_{a(o)}$	2×71	2×67	2×63	mA
I_a (max. sig.)	2×83	2×75	2×69	mA
$I_{g2(o)}$	2×8.8	2×8.8	2×8.3	mA
I_{g2} (max. sig.)	2×23.5	2×24.5	2×24	mA
R_{a-a}	5.0	6.0	7.0	k Ω
$V_{in (g-g)}$ r.m.s.	2×14.7	2×15	2×15.5	V
* P_{out}	38	37.5	37	W
D_{tot}	4.2	5.0	5.0	%

OPERATING CONDITIONS—TWO VALVES IN PUSH PULL

(Fixed bias)

V_a	400	600	800	V
V_{g2}	400	400	400	V
V_{g1}	-23	-25.2	-26	V
$I_{a(o)}$	2×40	2×30	2×30	mA
I_a (max. sig.)	2×110	2×103	2×107	mA
$I_{g2(o)}$	2×5.2	2×3.4	2×3.1	mA
I_{g2} (max. sig.)	2×26.8	2×28.5	2×28.5	mA
R_{a-a}	4.0	7.5	10	k Ω
$V_{in (g-g)}$ r.m.s.	2×15.7	2×17.3	2×18	V
* P_{out}	55	84	120	W
D_{tot}	3.2	5.0	5.0	%

*Measured at start of I_{g1} or 5% distortion.

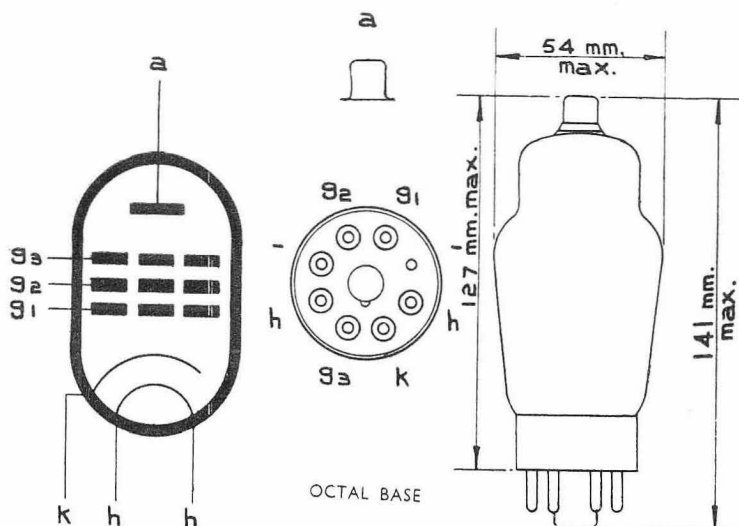
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LIMITING VALUES

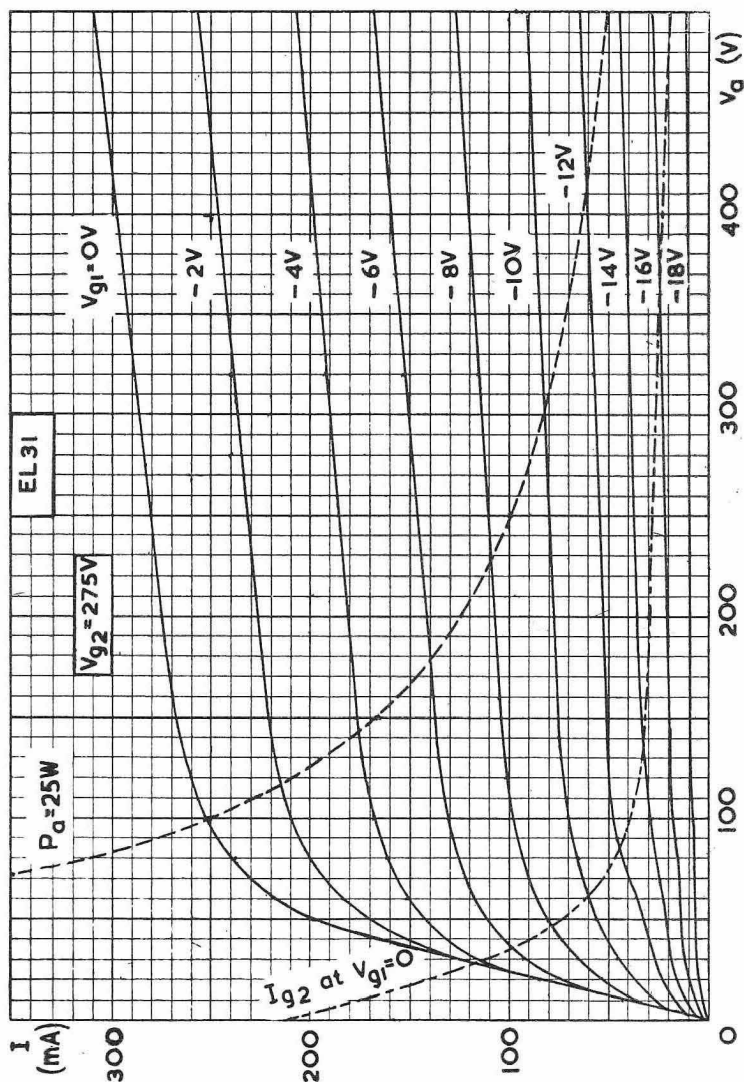
$V_{a(b)}$ max.	1.2	kV
V_a max.	800	V
$V_{g2(b)}$ max.	800	V
V_{g2} max.	400	V
p_a max.	25	W
p_{g2} max.	8	W
I_k max.	200	mA
V_{g1} ($I_{g1} = +0.3 \mu A$) max.	-1.3	V
V_{h-k} max.	100	V
R_{h-k} max.	20	k Ω
R_{g1-k} max. (self bias)	500	k Ω
R_{g1-k} max. (fixed bias)	100	k Ω



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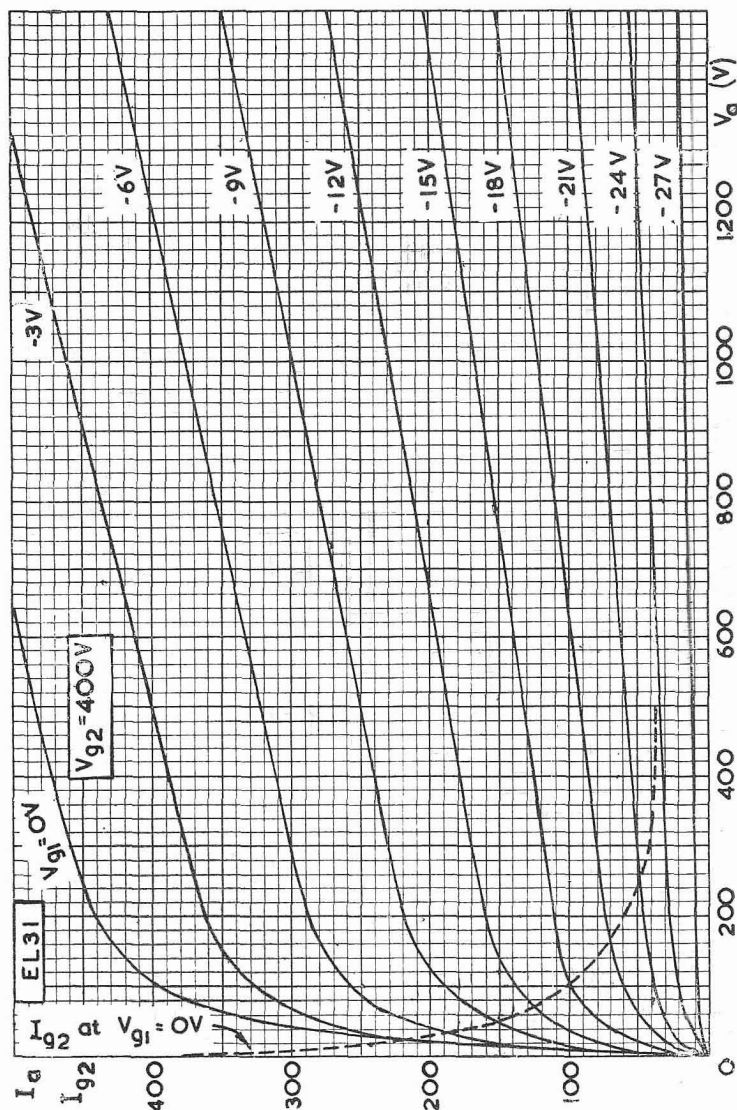


Anode current plotted against anode voltage for a screen voltage of 275V

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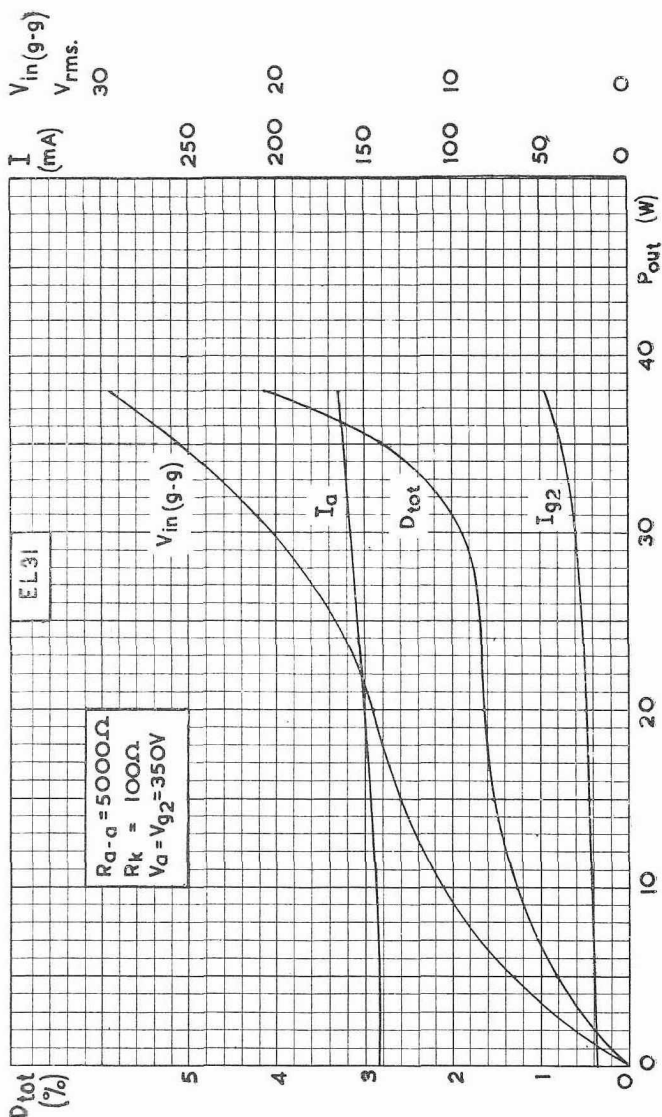


Anode current plotted against anode voltage for a screen voltage of 400V

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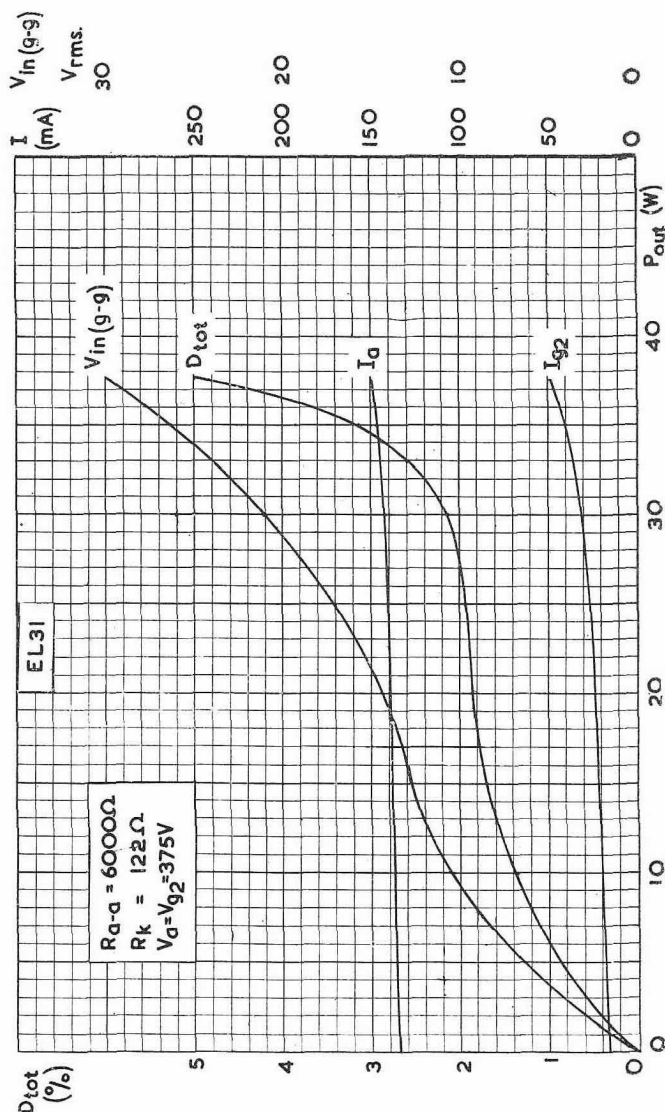


Distortion and input voltage plotted against output power for push-pull operation with self bias

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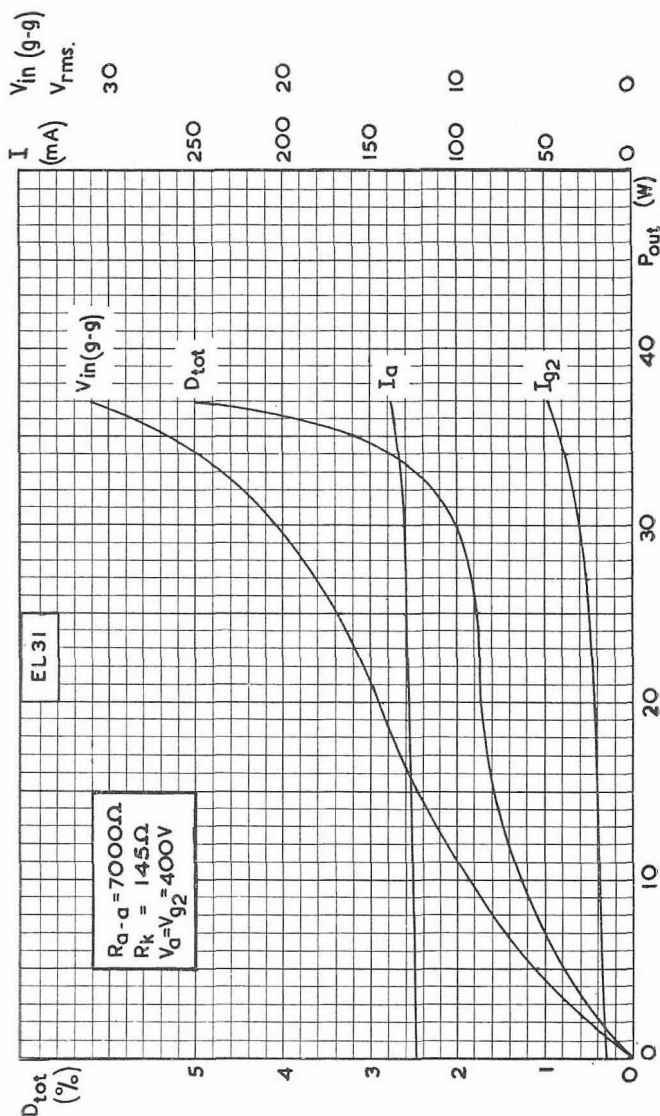


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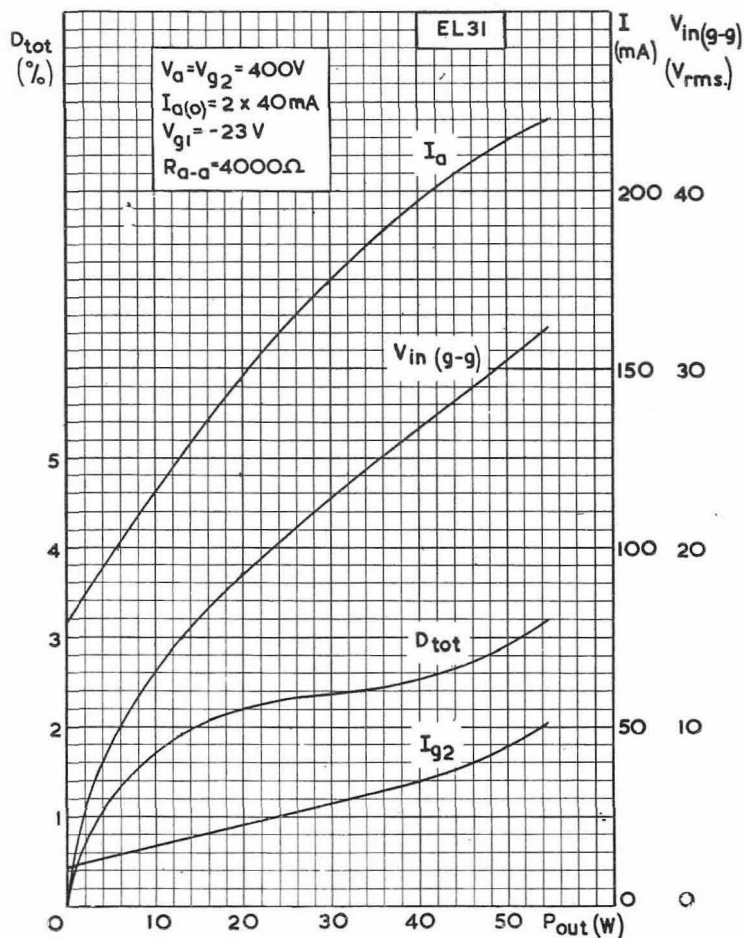


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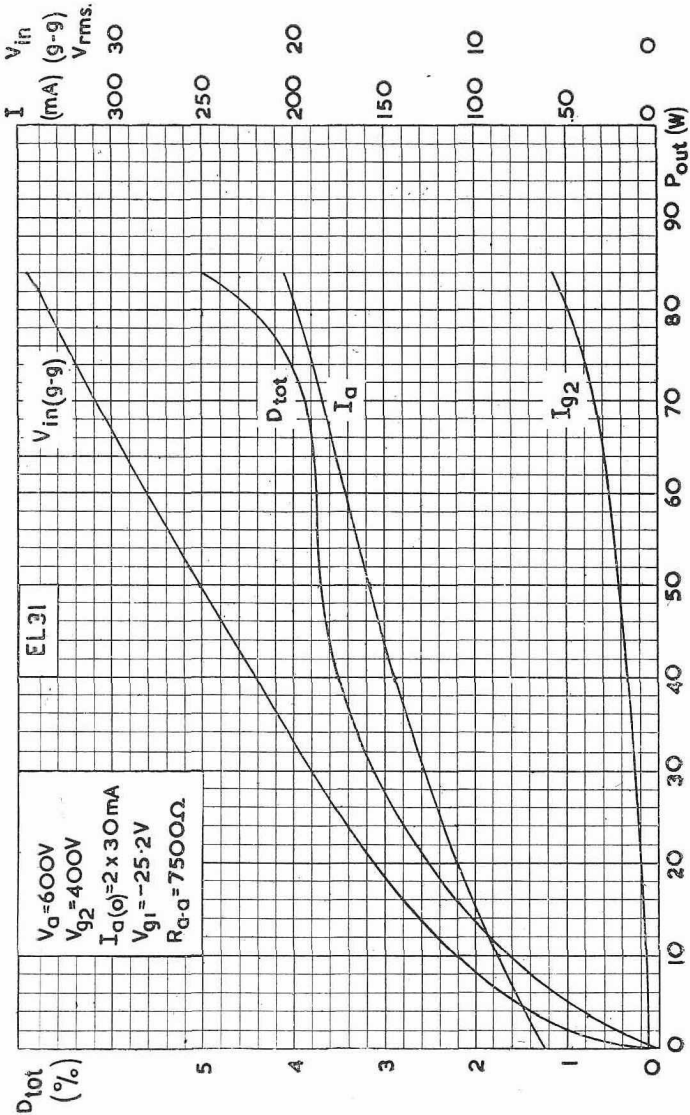


Distortion and input voltage plotted against output power for push-pull operation with fixed bias

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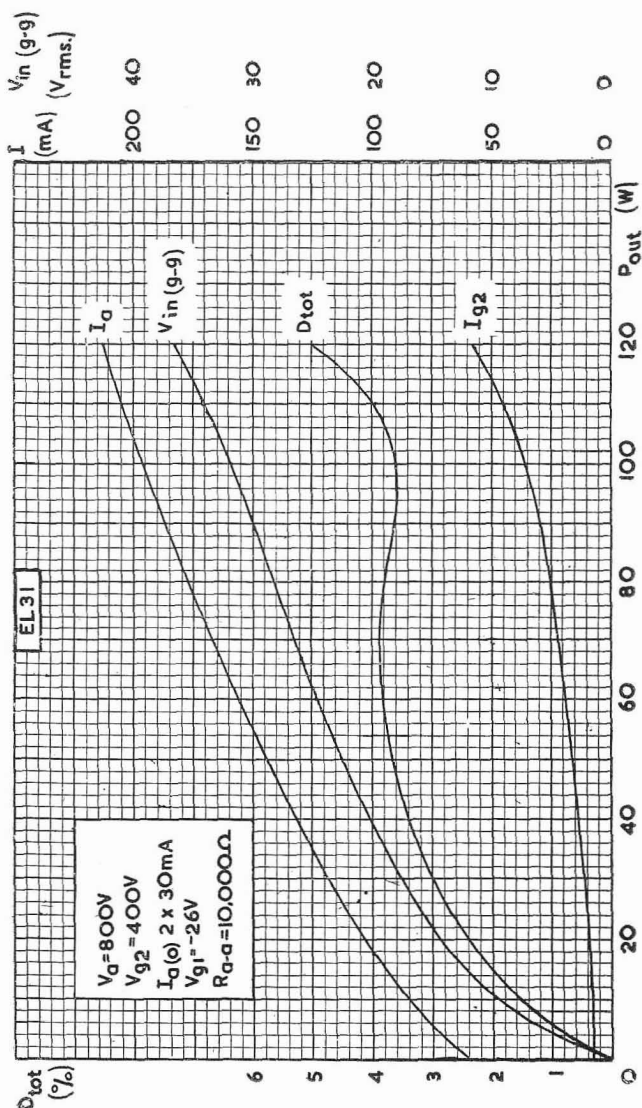


Distortion and input voltage plotted against output power for push-pull operation with fixed bias

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