Triode *Type DA 250*

(POWER AMPLIFIER)

General. The DA 250 is a power amplifying triode fitted with a directly heated oxide-coated cathode. The valve has been designed for use principally in push-pull amplifiers.

Cooling. Adequate ventilation must be provided.

Mounting. The valve must be mounted vertically with anode uppermost.

APPROXIMATE DATA

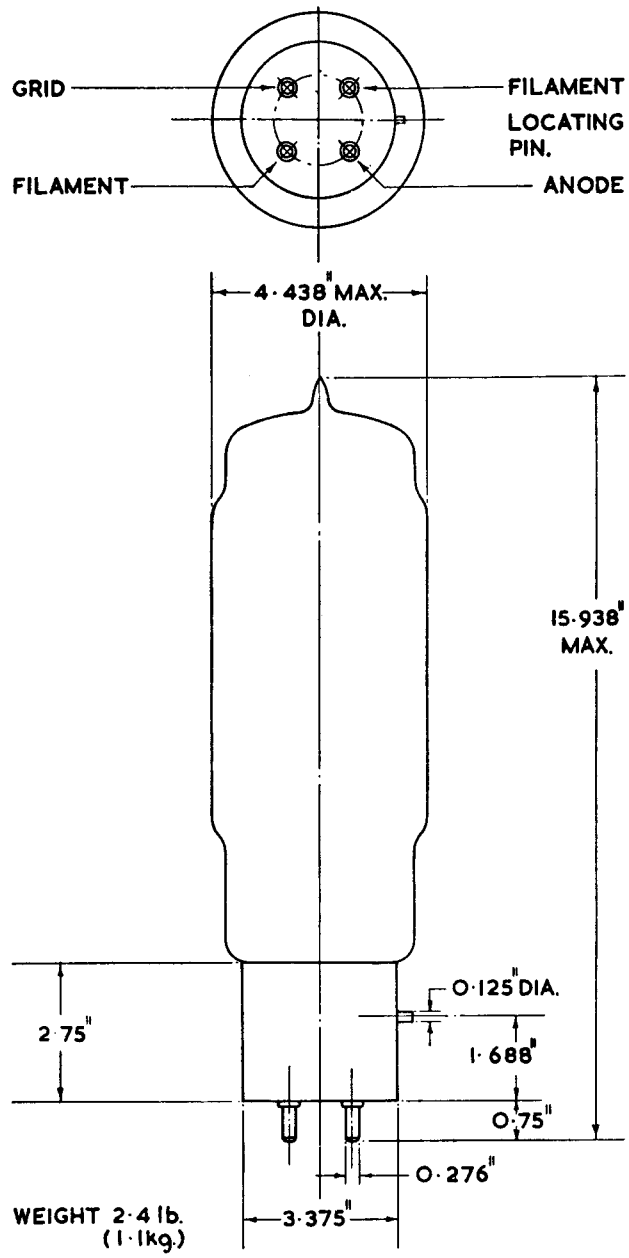
V_f		10·0	V
I_f		2·0	A
V_a		2,500	V
$p_{a(max)}$		250	W
μ	taken at V_a 2,500 V, p_a 250 W	16	
r_a		2,300	Ω
g_m		7·0	mA/V
$c_{a\text{-}g1}$		41	pF
$c_{a\text{-}k}$		6	pF
$c_{g1\text{-}k}$		21	pF

Typical Operation

(1) TWO VALVES. CLASS AB1. PUSH-PULL

(Operating data per pair of valves unless otherwise stated)

$V_{a(zero\text{-}sig)}$	2,700	V
$V_{a(max\text{-}sig)}$	2,500	V
$I_{a(zero\text{-}sig)}$	100	mA
$I_{a(max\text{-}sig)}$	360	mA
V_{g1}	−145	V
$V_{in(pk)}$ $(g_1'\text{-}g_1'')$	290	V
$R_{L(a'\text{-}a'')}$ per valve	12,000	Ω
$p_{a(zero\text{-}sig)}$ per valve	135	W
$p_{a(max\text{-}sig)}$ per valve	250	W
P_{out} (a)	400	W
$D_{(max)}$	5·0	%



MARCONI'S WIRELESS TELEGRAPH COMPANY LIMITED

Head Office: Marconi House, Chelmsford, England. Telephone: Chelmsford 3221. Telegraphic Address: Expanse, Chelmsford

(2) TWO VALVES. CLASS AB2. PUSH-PULL

(Operating data per pair of valves unless otherwise stated)

$V_{a(zero\text{-}sig)}$	2,700	V
$V_{a(max\text{-}sig)}$	2,500	V
$I_{a(zero\text{-}sig)}$	100	mA
$I_{a(max\text{-}sig)}$	500	mA
V_{g1}	−145	V
$I_{g1(max\text{-}sig)}$	20	mA
$V_{in(pk)\ (g_1'\text{-}g_1'')}$	400	V
$R_{L(a'\text{-}a'')}$	12,000	Ω
$P_{a(zero\text{-}sig)}$ per valve	135	W
$P_{a(max\text{-}sig)}$ per valve	190	W
P_{out} (a)	800	W
D	6·0	%

(3) OPERATION AT REDUCED ANODE VOLTAGES. TWO VALVES. CLASS AB2. PUSH-PULL

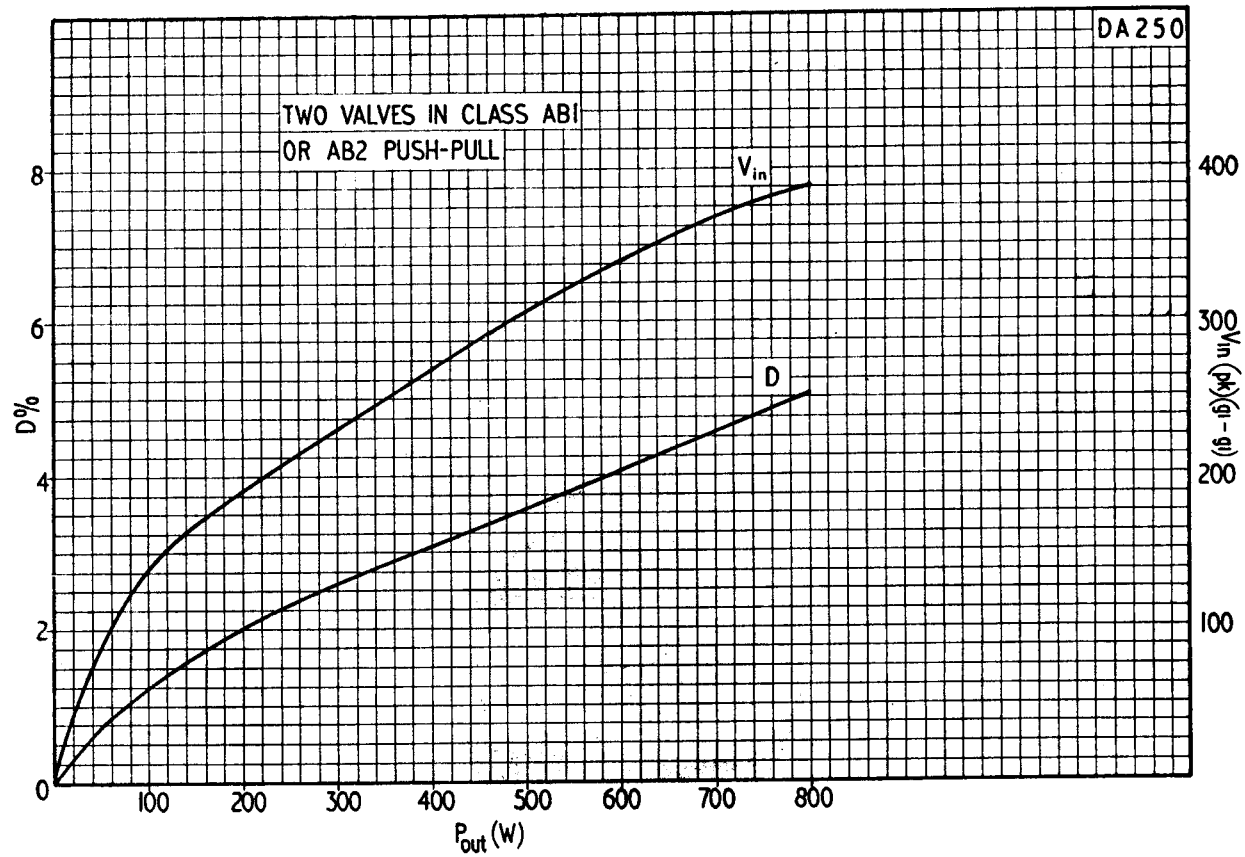
(Operating data per pdir of valves unless otherwise stated)

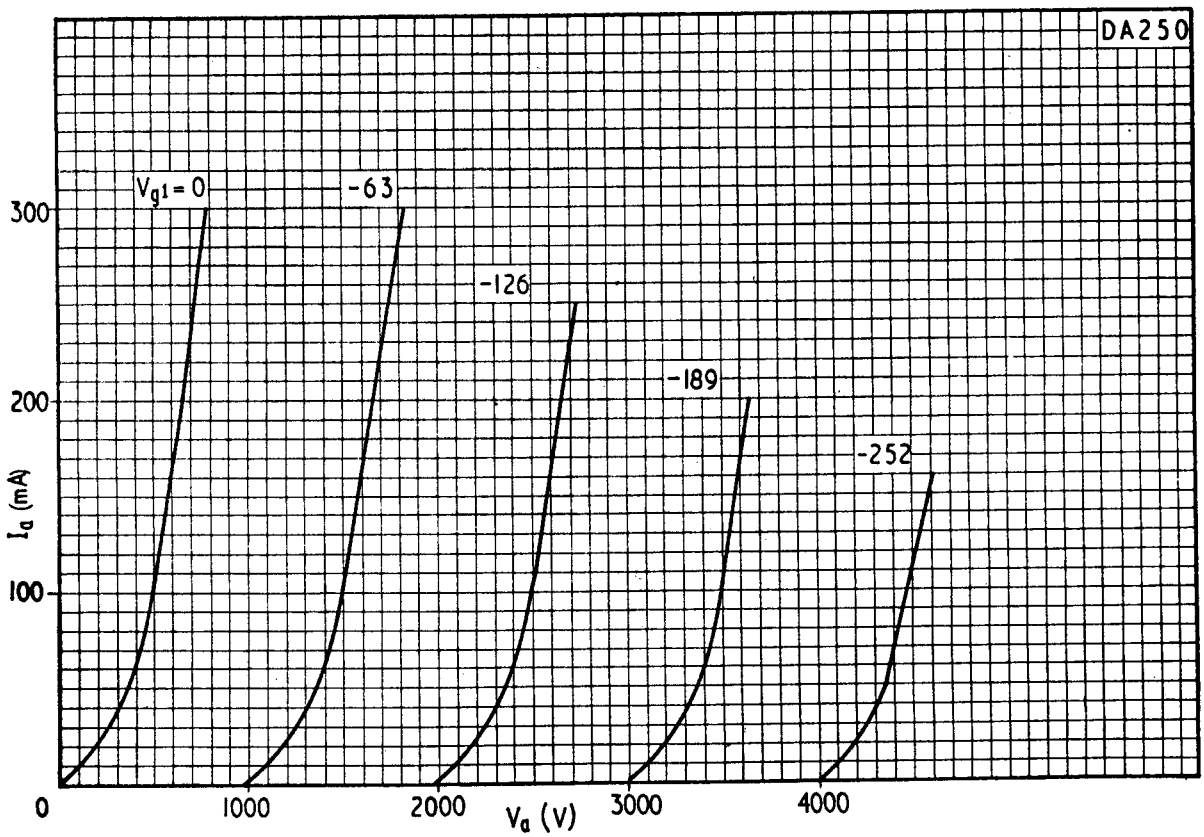
V_a	2,000	2,250	2,500	V
$I_{a(zero\text{-}sig)}$	100	100	100	mA
$I_{a(max\text{-}sig)}$	400	450	500	mA
V_{g1}	−115	130	−145	V
$V_{in(pk)\ (g_1'\text{-}g_1'')}$	330	370	400	V
$R_{L(a'\text{-}a'')}$	12,000	12,000	12,000	Ω
P_{out}	525	700	800	W

NOTES

(a) This value may vary by ±6%.

1. The outputs obtainable under reduced anode voltage Class AB1 conditions are approximately one-half of those given in Table 3.
2. The power supply should have an impedance not greater than 400 Ω.
3. The peak anode dissipation under Class AB2 push-pull conditions occurs at approximately half full output.


DA250
TWO VALVES IN CLASS AB1
OR AB2 PUSH-PULL
V_{in}
D
D%
V_{in} (dx)(g1 - g1)
P_{out} (W)
0
2
4
6
8
100
200
300
400
500
600
700
800


DA250
$V_{g1} = 0$
-63
-126
-189
-252
I_a (mA)
V_a (V)
0
100
200
300
1000
2000
3000
4000

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