Triode *Type DET 16*

(HF AMPLIFIER)

General. The DET 16 is a transmitting triode fitted with a thoriated tungsten filament and a carbon anode. It is suitable for use at frequencies up to 30 Mc/s. The valve may also be used as a zero bias Class B amplifier.

Cooling. As the valve runs hot in operation, free air circulation should be allowed.

Mounting. The valve must be mounted vertically.

APPROXIMATE DATA

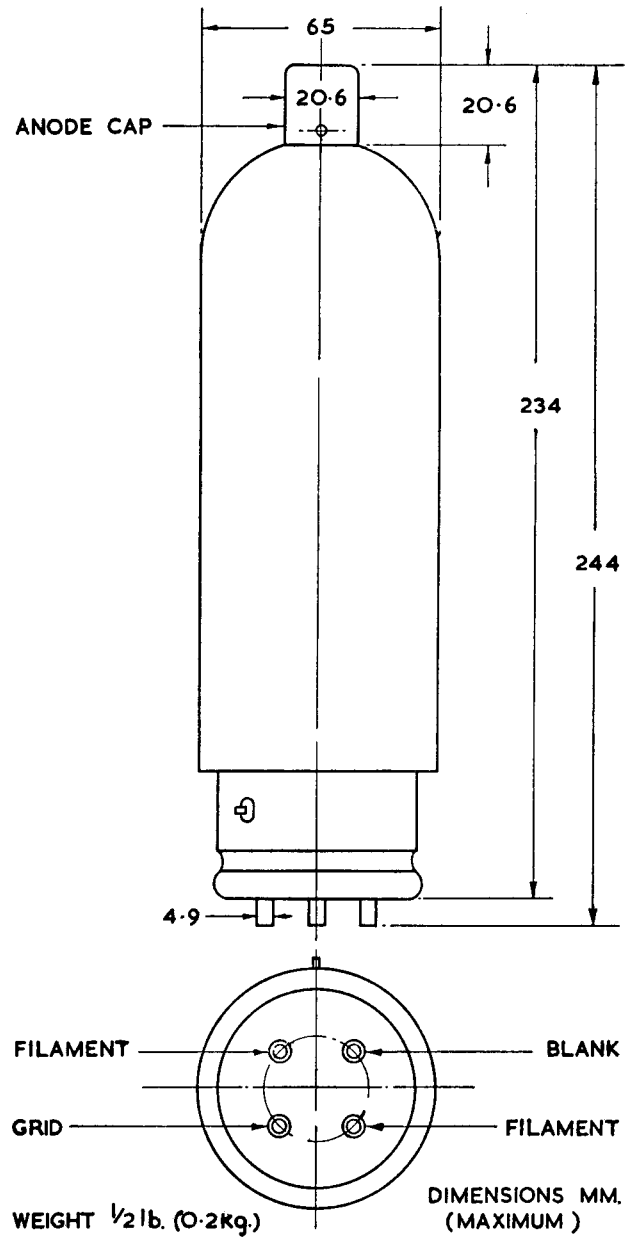
V_f		10·0	V
I_f		5·5	A
$V_{a(max)}$		3,000	V
$p_{a(max)}$		125	W
μ	taken at	61	
g_m	V_a 1,000 V	6·5	mA/V
r_a	I_a 125 mA	9,400	Ω
$c_{a\text{-}gl}$		18·25	pF
$c_{a\text{-}k}$		10·3	pF
$c_{gl\text{-}k}$		10	pF

Typical Operation

(1) HF POWER AMPLIFIER AND OSCILLATOR. CLASS C TELEGRAPHY

(*Unmodulated, one valve, key down conditions*)

V_a		3,000	V
I_a		125	mA
V_{gl}		−375	V
I_{gl}	(a)	25	mA
$R_{gl\text{-}k}$		15,000	Ω
p_a		125	W
P_{out}		250	W



MARCONI'S WIRELESS TELEGRAPH COMPANY LIMITED

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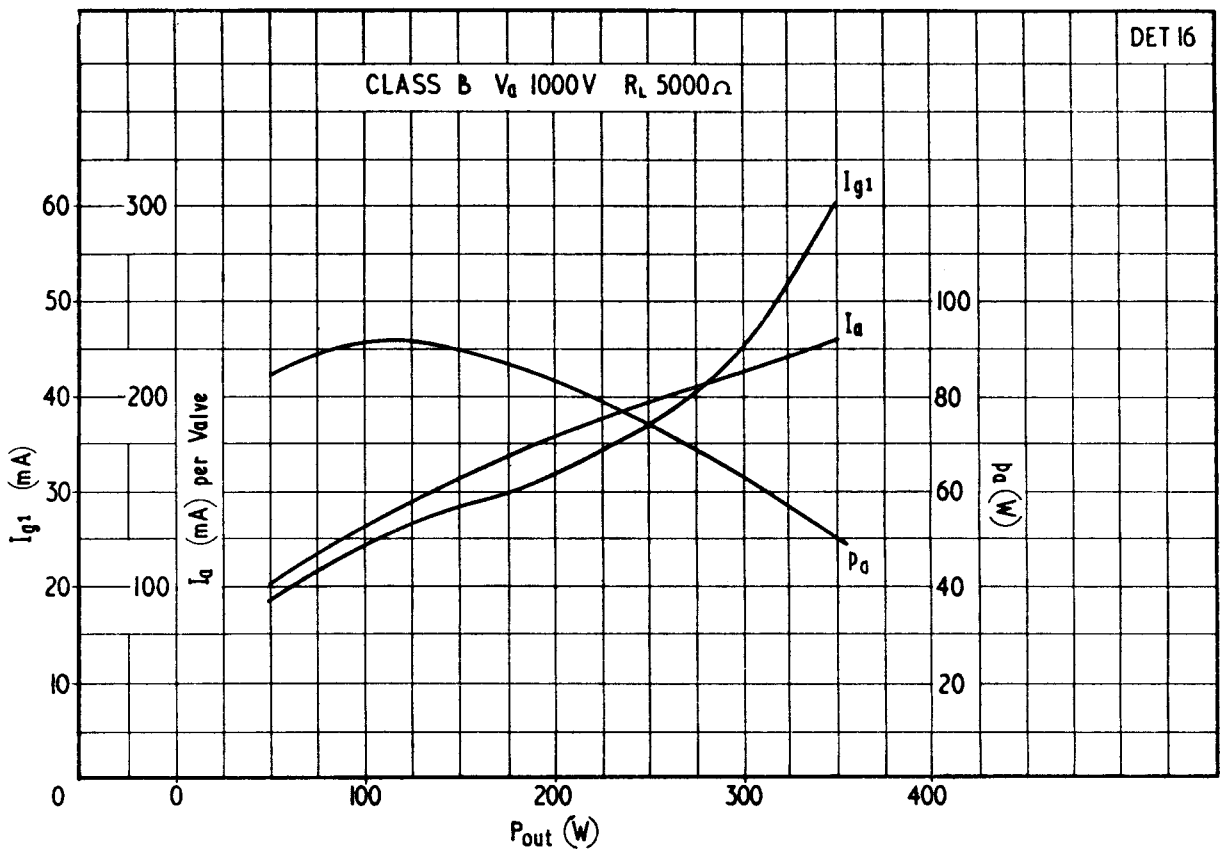
(2) PUSH-PULL AMPLIFIER. CLASS B

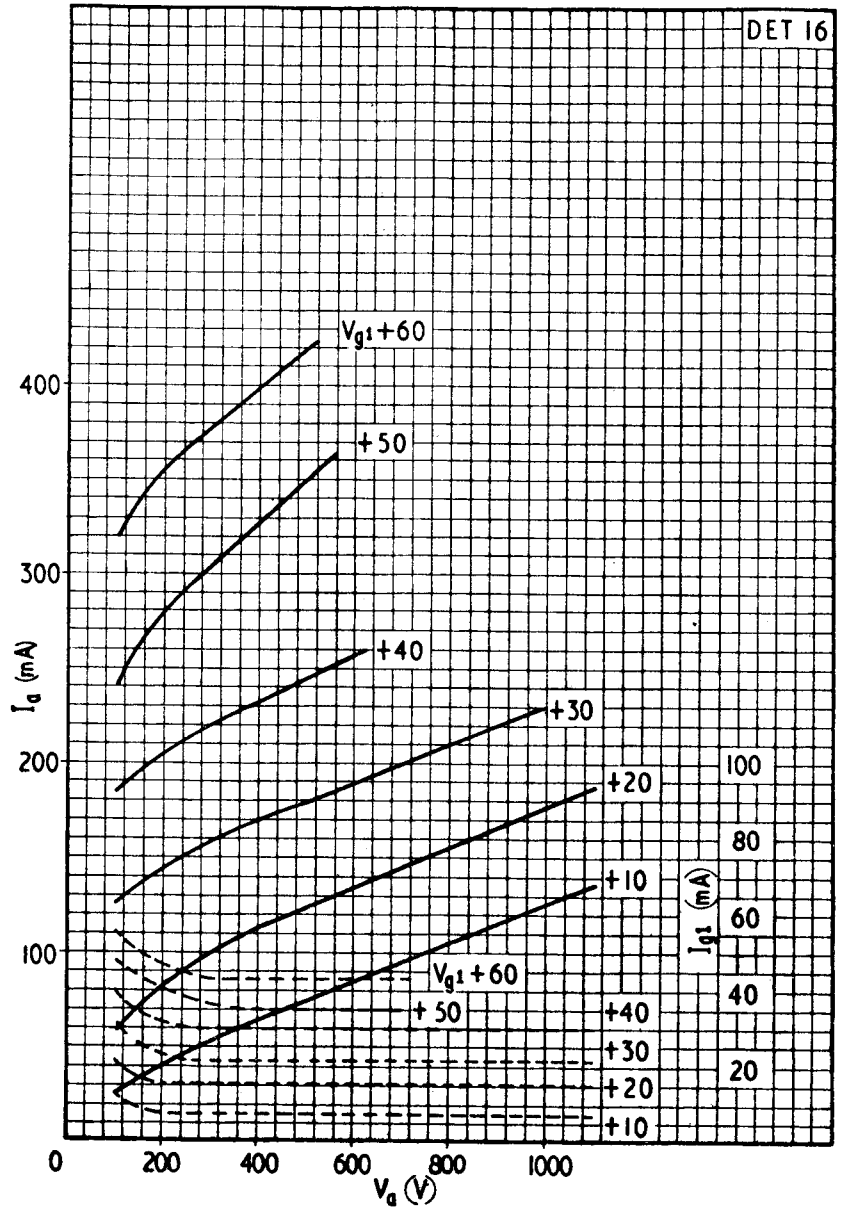
(Operating data per pair of valves unless otherwise stated)

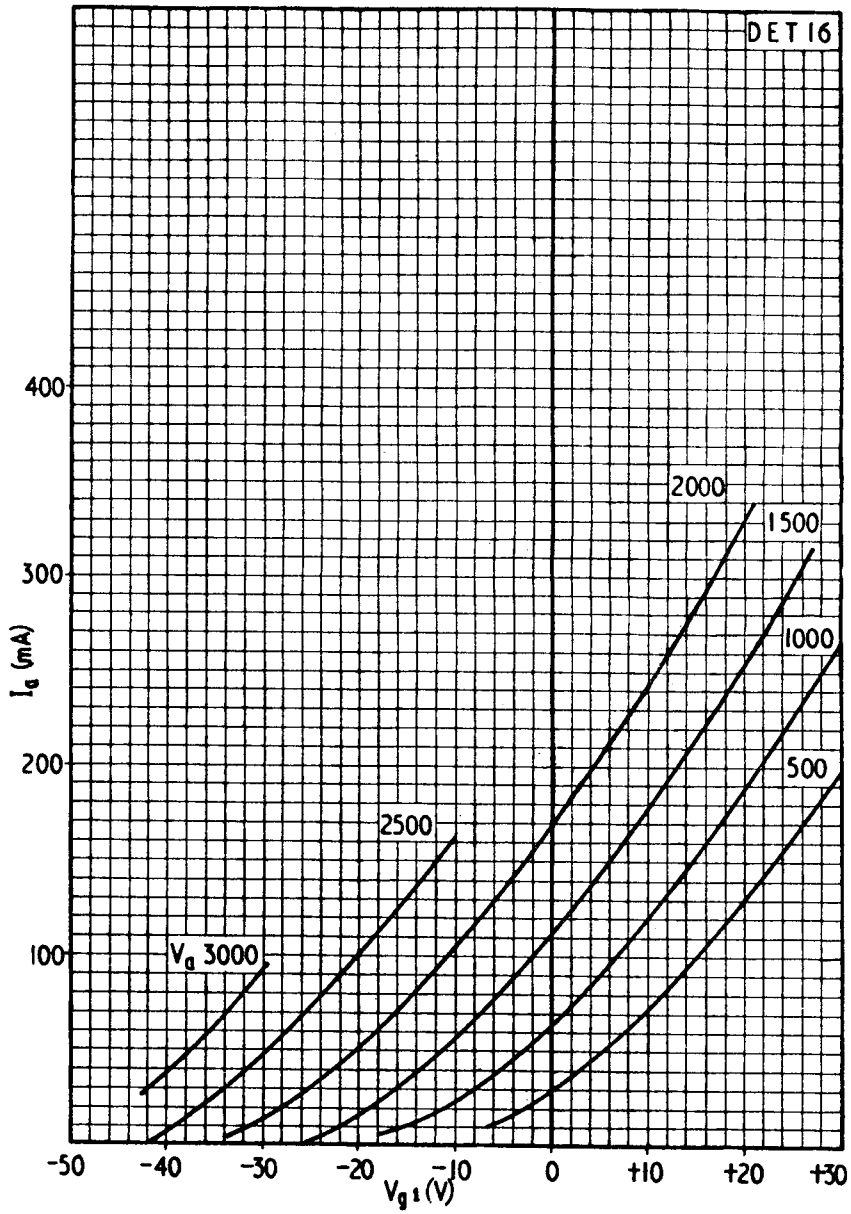
	Quiescent	Full Output	
V_a	1,150	1,000	V
V_{g1}	0	0	
I_a	160	460	mA
$R_{L(a'a'')}$	–	5,000	Ω
$V_{in(pk)\ (g_1'g_1'')}$	–	200	V
$I_{g1\ (mean)}$	–	60	mA
$p_{a\ (per\ valve)}$	92	55	W
P_{out}	–	350	W
D_{max}	–	5	%

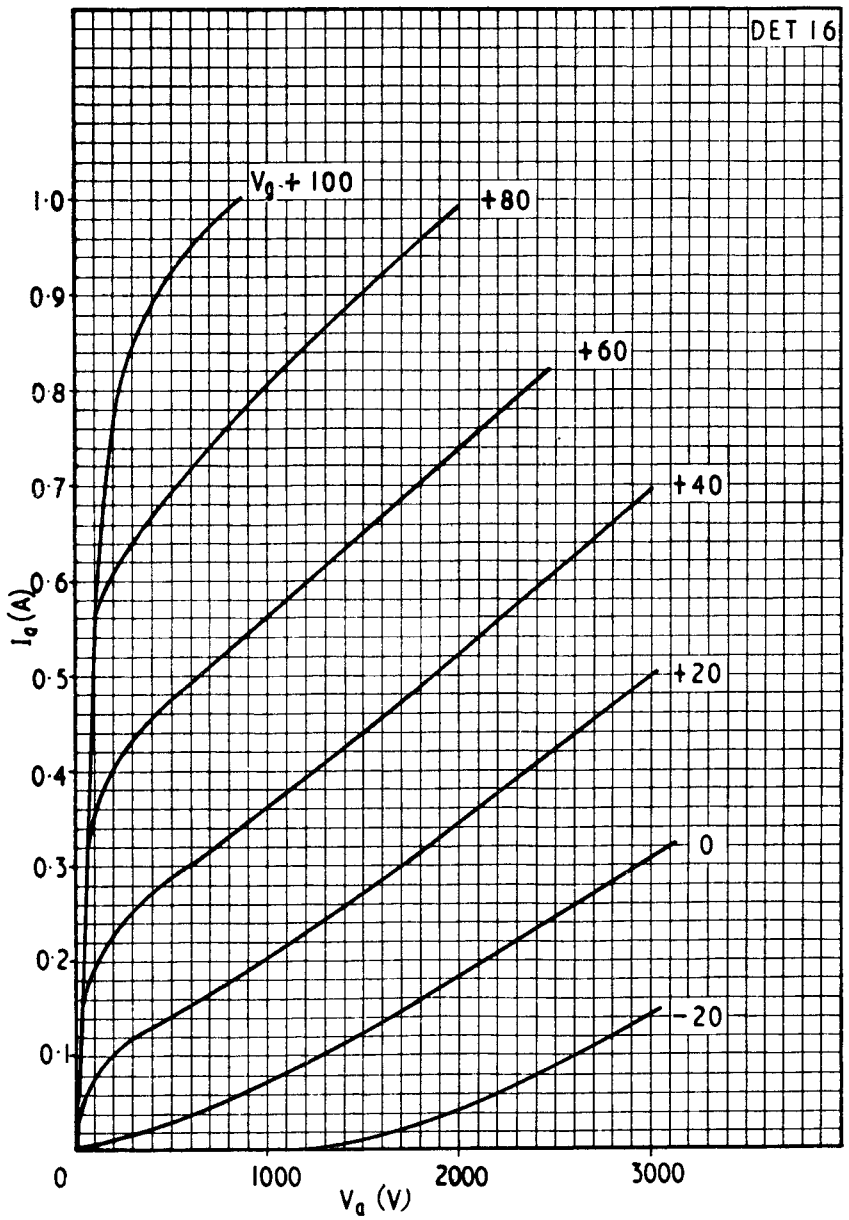
NOTE

(a) Subject to wide variation. The figures are approximate only.




DET 16
V_{g1} +60
+50
+40
+30
+20
+10
V_{g1} +60
+50
+40
+30
+20
+10
400
300
200
100
0
200
400
600
800
1000
I_a (mA)
V_a (V)
100
80
60
40
20
I_{g1} (mA)


DET 16
2000
1500
1000
500
2500
V_a 3000
400
300
200
100
-50
-40
-30
-20
-10
0
+10
+20
+30
I_a (mA)
V_{g1} (V)



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