DOUBLE TETRODE

Application: U.H.F. amplifier, frequency trebler and oscillator.
Power output: 7W continuous rating.
Frequency: 960Mc/s at maximum ratings.
Construction: Glass, natural cooling.

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PRELIMINARY DATA

This data should be read in conjunction with GENERAL OPERATIONAL RECOMMENDATIONS – TRANSMITTING VALVES which precede this section of the handbook.

CATHODE

Indirectly heated, oxide coated. The heater is centre-tapped and the two sections may be operated in series or parallel.

	Series	*Parallel*	
*V_h	12.6	6.3	V
I_h	300	600	mA

*The heater has been designed to accept temporary fluctuations of ±10%.

MOUNTING POSITION

Any

CAPACITANCES

c_{a-g1} (each section)	145	mpF
c_{in} (two sections in push-pull)	4.5	pF
c_{out} (two sections in push-pull)	1.35	pF

CHARACTERISTICS (each section)

V_a	350	V
V_{g2}	250	V
I_a	25	mA
g_m	10.5	mA/V
μ_{g1-g2}	26	

COOLING

Radiation and convection

T_{bulb} max.	220	°C
T_{pins} max.	220	°C

WEIGHT

Valve only	1.2	oz
	35	g
Shipping weight	1.9	oz
	55	g

ACCESSORIES

Base socket assembly B8.700.71

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DOUBLE TETRODE

CLASS "C" TELEGRAPHY OR F.M. TELEPHONY

Limiting values (absolute ratings)	*C.C.S.*	*I.C.A.S.*	
f max.	960	960	Mc/s
V_a max.	400	400	V
I_a max.	2×45	2×50	mA
p_a max.	2×8.0	2×10	W
V_{g2} max.	225	225	V
p_{g2} max.	2×1.5	2×1.75	W
I_{g1} max.	2×4.0	2×5.0	mA
$-V_{g1}$ max	100	100	V

Operating conditions for push-pull amplifier			
f	960	960	Mc/s
V_a	250*	250	V
V_{g2}	160	170	V
V_{g1}	−15	−15	V
I_a	2×35	2×40	mA
I_{g2}	15	15	mA
I_{g1}	2×750	2×750	μA
$P_{load\ (driver)}$	1.4	1.4	W
p_a	2×5.4	2×5.4	W
P_{out}	7.0	8.0	W
η_a	40	40	%
P_{load}	4.0	5.0	W
$\eta_{transfer}$	57	62.5	%

*Adjust V_{g2} until $I_a = 2 \times 35$mA at P_{out} max.

PUSH-PULL FREQUENCY TREBLER

Limiting values (absolute ratings)	*C.C.S.*	*I.C.A.S.*	
f max.	960	960	Mc/s
V_a max.	400	400	V
I_a max.	2×40	2×40	mA
p_a max.	2×8.0	2×10	W
V_{g2} max.	225	250	V
p_{g2} max.	2×1.5	2×1.75	W
I_{g1} max.	2×4.0	2×5.0	mA
$-V_{g1}$ max.	100	100	V

Operating conditions			
f_{out}	960	960	Mc/s
V_a	250	250	V
V_{g2}	150	170	V
I_a	2×37.5	2×40	mA
I_{g2}	15	16	mA
I_{g1}	2×2.25	2×2.25	mA
$P_{load\ (driver)}$	3.0	3.0	W
p_a	2×8.0	2×8.5	W
P_{out}	2.75	3.0	W
η_a	14.7	15	%
P_{load}	1.5	1.8	W
$\eta_{transfer}$	54	60	%

DIMENSIONS

Maximum overall length	63	mm
Maximum seated height	50	mm
Maximum diameter	44.5	mm

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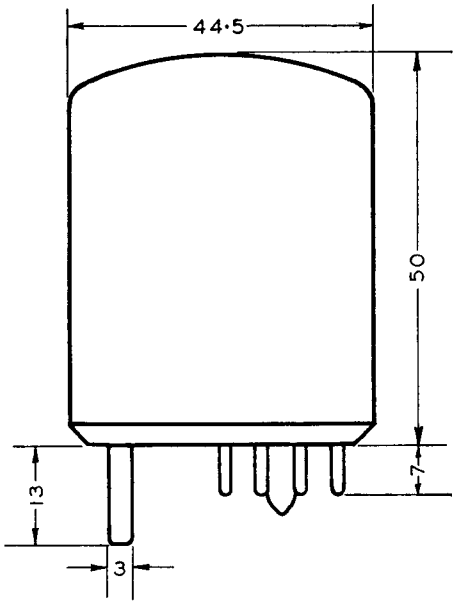
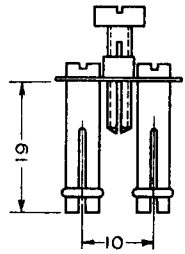
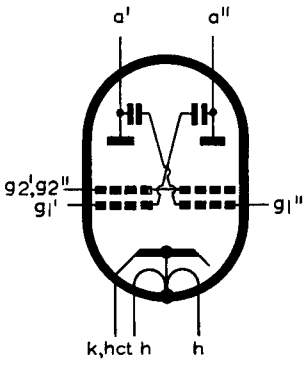




Typical anode connector at f = 960Mc/s

All dimensions in mm

6697



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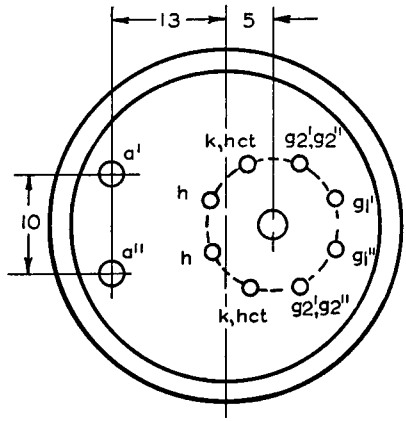

Loctal base with separate anode pins

All dimensions in mm

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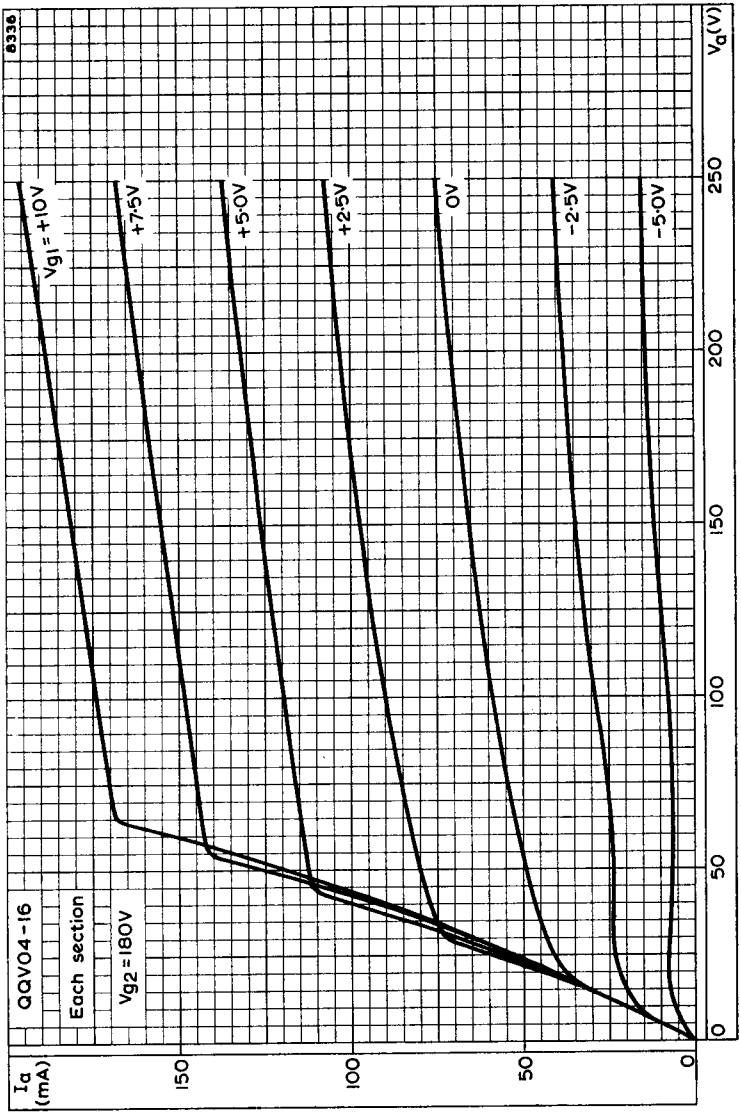
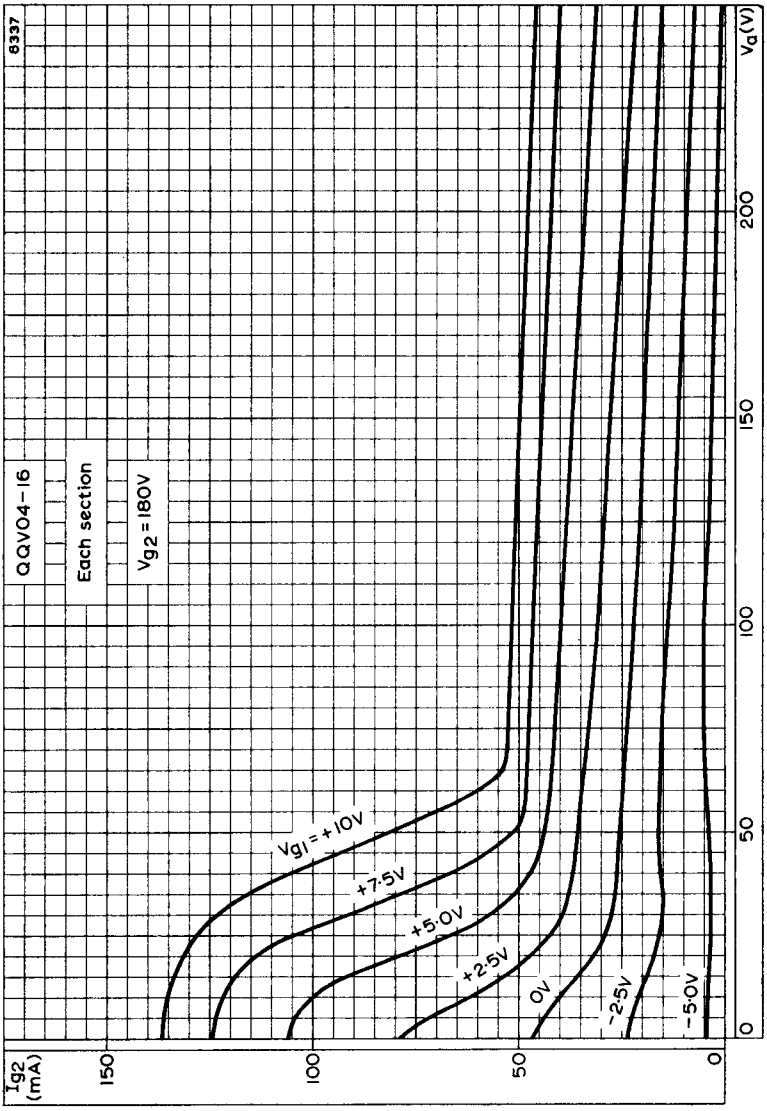


ANODE CURRENT PLOTTED AGAINST ANODE VOLTAGE WITH CONTROL-GRID VOLTAGE AS PARAMETER. V_{g2} = 180V



SCREEN-GRID CURRENT PLOTTED AGAINST ANODE VOLTAGE WITH CONTROL-GRID VOLTAGE AS PARAMETER. V_{g2} = 180V

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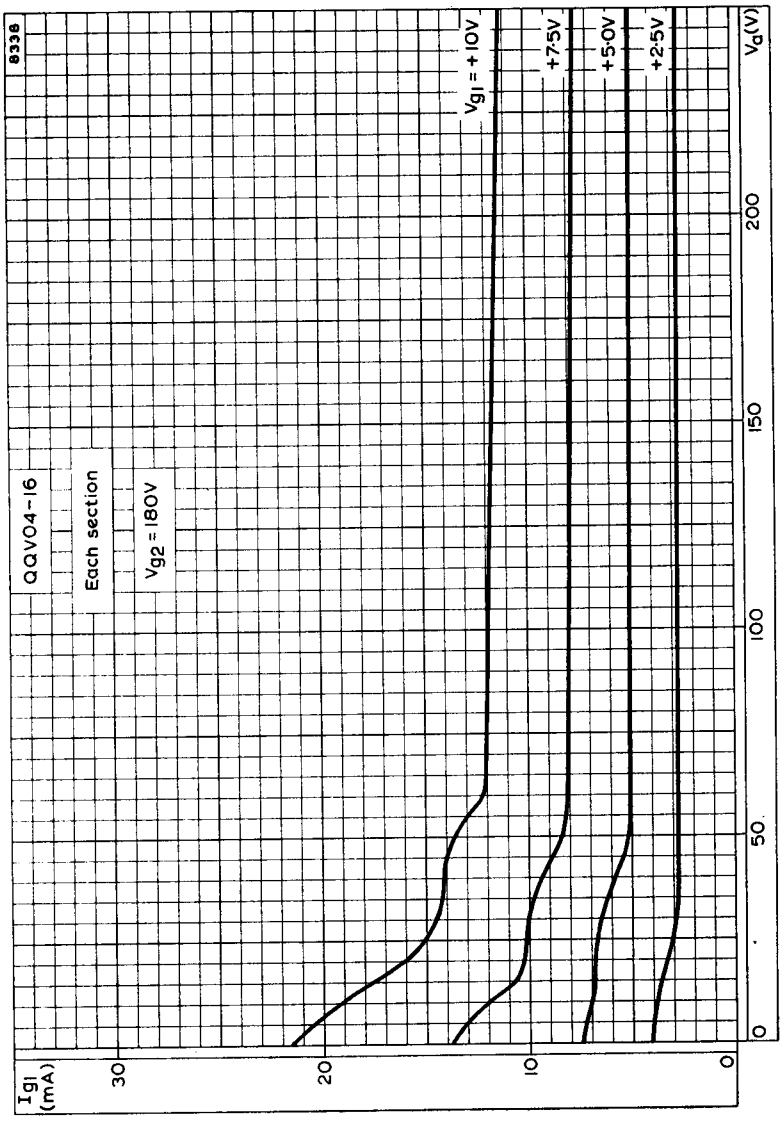
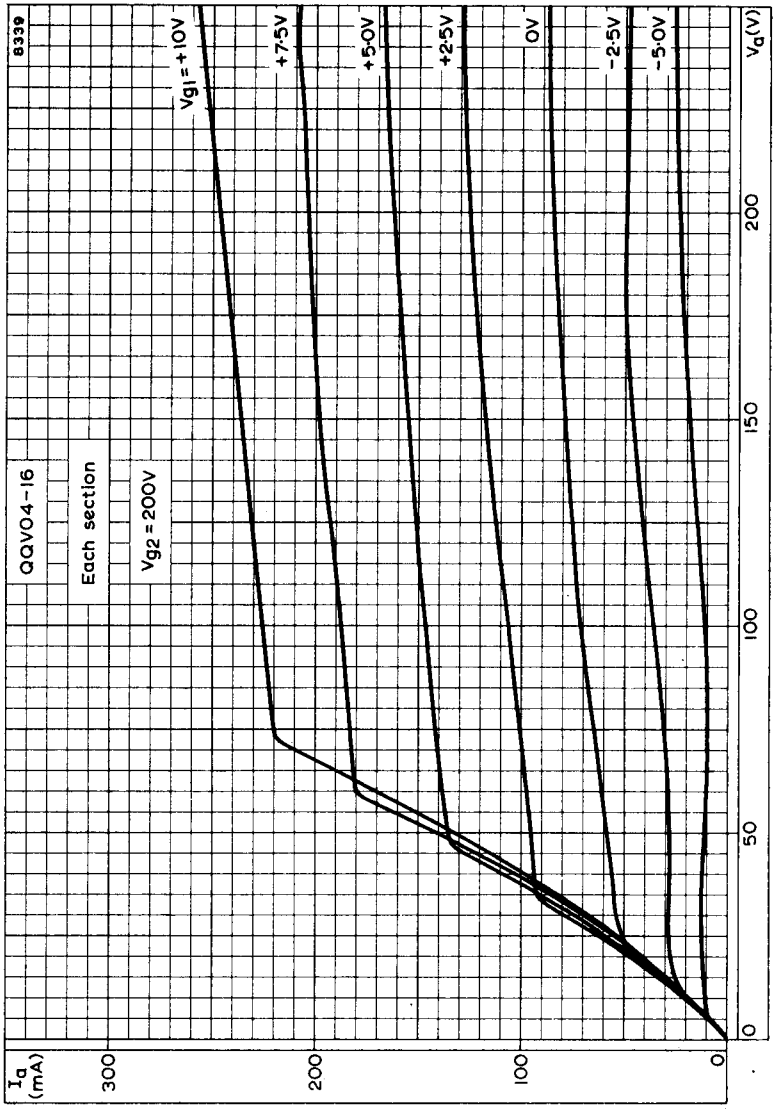


CONTROL-GRID CURRENT PLOTTED AGAINST ANODE VOLTAGE WITH CONTROL-GRID VOLTAGE AS PARAMETER. V_{g2} = 180V



ANODE CURRENT PLOTTED AGAINST ANODE VOLTAGE WITH CONTROL-GRID VOLTAGE AS PARAMETER. V_{g2} = 200V

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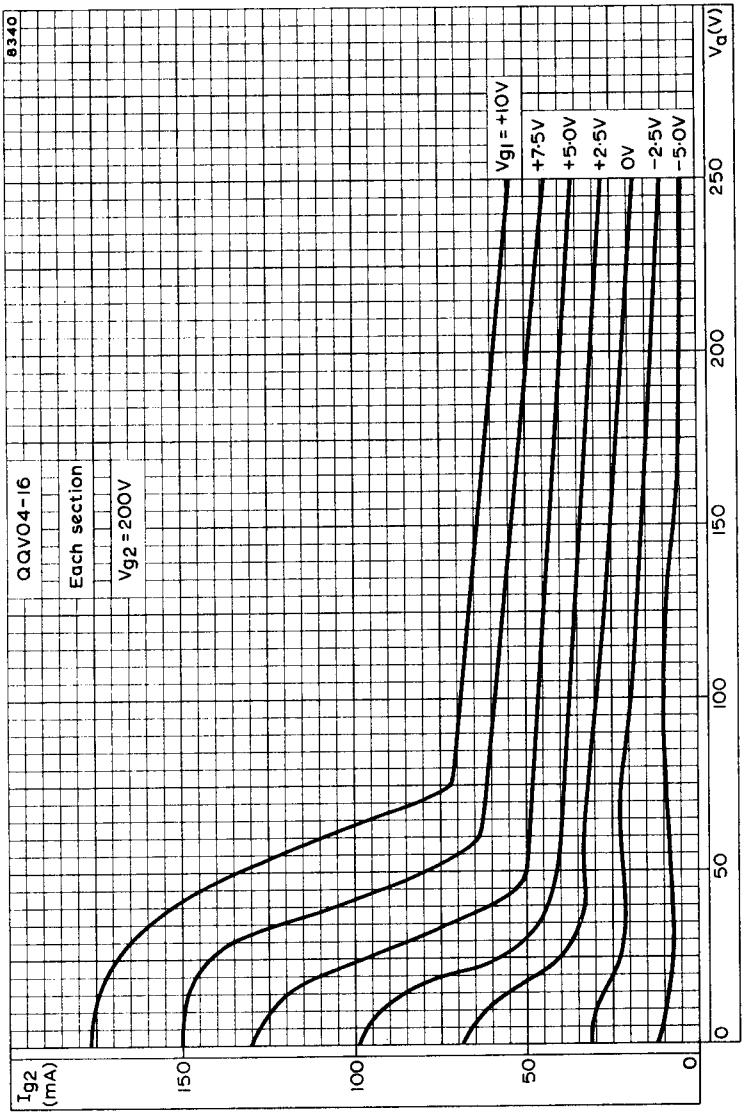
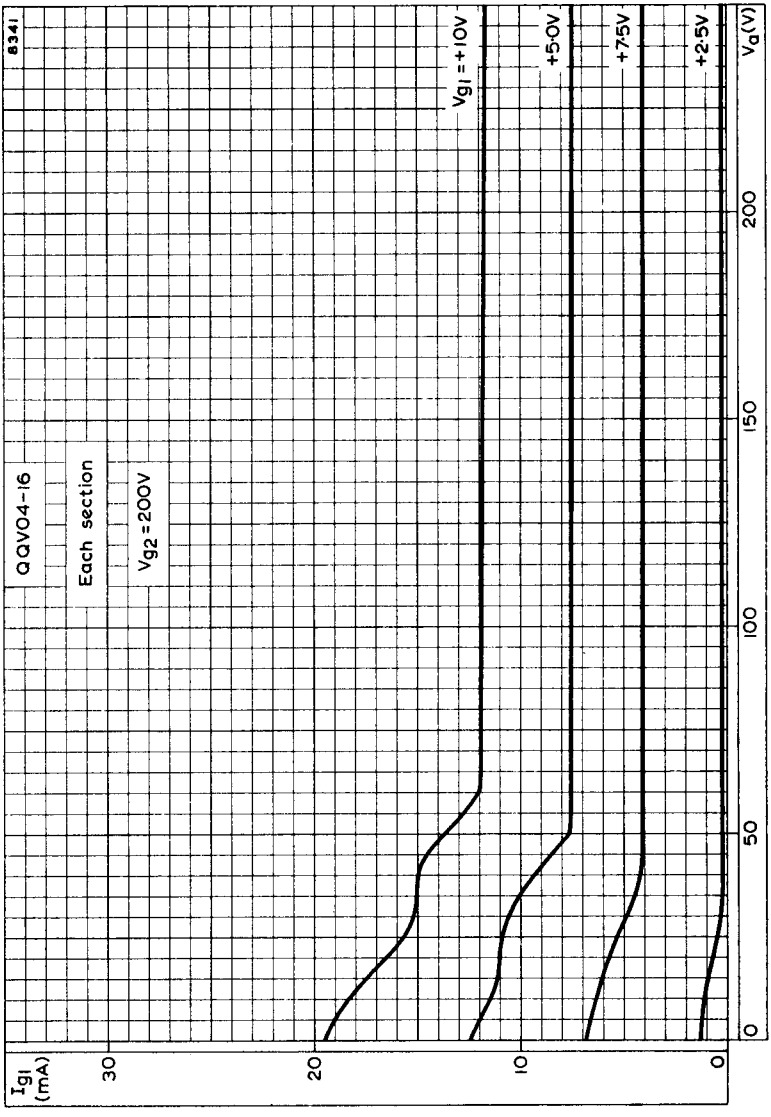


SCREEN-GRID CURRENT PLOTTED AGAINST ANODE VOLTAGE WITH CONTROL-GRID VOLTAGE AS PARAMETER. $V_{g2} = 200V$



CONTROL-GRID CURRENT PLOTTED AGAINST ANODE VOLTAGE WITH CONTROL-GRID VOLTAGE AS PARAMETER. $V_{g2} = 200V$