

R.F. POWER TETRODE

QV05-25

Indirectly heated beam tetrode, rated for a maximum anode dissipation of 25 watts, and suitable for use as an A.F. Amplifier or modulator, or as an R.F. Power Amplifier or oscillator.

This Data Sheet should be read in conjunction with "Operating Notes, Part I—Power Valves" included in this volume of the Handbook.

HEATER

V_h	6.3	V
I_h	0.9	A
Heating Time	15	secs.

MOUNTING POSITION

Any

CAPACITANCES

C_{in}	11	$\mu\mu F$
* C_{out}	7.0	$\mu\mu F$
C_{a-g1}	< 0.2	$\mu\mu F$

*Measured with external shield

CHARACTERISTICS

At $V_a = 600$ V, $V_{g2} = 300$ V, $I_a = 72$ mA.

μ_{g1-g2}	8.0	
g_m	6.0	mA/V

LIMITING VALUES

V_a max.	600	V
$V_{a(pk)}$ max.	2,000	V
V_{g2} max.	300	V
V_{g1} max.	200	V
i_k max.	150	mA
$i_{k(pk)}$ max.	400	mA
I_{g2} max.	10	mA
I_{g1} max.	5.0	mA
$i_{g1(pk)}$ max.	25	mA
p_a max.	25	W
p_{g2} max.	3.5	W
R_{g1-k} max.	25	k Ω
V_{h-k} max.	100	V

Operating
Frequency
(Mc/s.)

60
75

Max. anode
voltage
(V)

600
500

Max. anode
input power
(W)

60
50

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OPERATING CONDITIONS

For Push-pull pair as Class "AB₂" A.F. power amplifier and modulator

V _a	400	500	600	V
V _{g2}	300	300	300	V
V _{g1}	-25	-25	-30	V
I _{a(o)}	2 × 50	2 × 50	2 × 30	mA
I _{g2(o)}	2 × 2.5	2 × 2.5	2 × 2.5	mA
V _{in(pk)}	2 × 39	2 × 39	2 × 39	V
I _a (max. sig.)	2 × 120	2 × 120	2 × 100	mA
I _{g2} (max. sig.)	2 × 5.0	2 × 5.0	2 × 5.0	mA
R _{a-a}	3.2	4.24	6.4	k Ω
*P _{drive} (max. sig.) approx.	0.2	0.2	0.1	W
P _{out} approx.	55	75	80	W

* The effective resistance of the grid circuit should be below 500 ohms, and the effective impedance should not exceed 700 ohms at the highest response frequency required.

OPERATING CONDITIONS

For single valve as R.F. amplifier Class B telephony

V _a	400	500	600	V
V _{g2}	250	250	250	V
V _{g1}	-25	-25	-25	V
I _a	75	75	62.5	mA
I _{g2}	4.0	4.0	3.0	mA
V _{in(pk)}	30	30	20	V
P _{drive} approx.	0.25	0.25	0.2	W
P _{out} approx.	9.0	12.5	12.5	W

OPERATING CONDITIONS

For single valve as R.F. amplifier Class C telephony anode modulated

V _a	325	400	475	V
*V _{g2}	225	225	225	V
R _{g2}	20	30	50	k Ω
**V _{g1}	-75	-80	-85	V
R _{g1-k}	25	22.8	21.3	k Ω
I _a	80	80	83	mA
I _{g2} approx.	5.0	5.75	5.0	mA
I _{g1}	3.0	3.5	4.0	mA
V _{in(pk)}	90	95	110	V
P _{drive} approx.	0.25	0.3	0.4	W
P _{out} approx.	17.5	22.5	27.5	W

* Preferably obtained from modulated anode supply through resistor (R_{g2}) of value shown.

** May be obtained either from separate supply, or by a grid resistor of value shown, or by a combination of these methods.



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OPERATING CONDITIONS

For single valve as R.F. amplifier and oscillator Class C telegraphy

V_a	400	500	600	V
* V_{g2}	250	250	250	V
R_{g2}	20	42	50	k Ω
** V_{g1}	-45	-45	-45	V
R_{g1-k}	12.8	12.8	12.8	k Ω
R_k	410	410	410	Ω
I_a	100	100	100	mA
I_{g2}	7.5	6.0	7.0	mA
I_{g1} approx.	3.5	3.5	3.5	mA
$V_{in(pk)}$	65	65	65	V
P_{drive} approx.	0.2	0.2	0.2	W
P_{out} approx.	25	30	40	W

* May be obtained from a separate supply, or from a potentiometer, or from the anode supply through resistor (R_{g2}) of value shown.

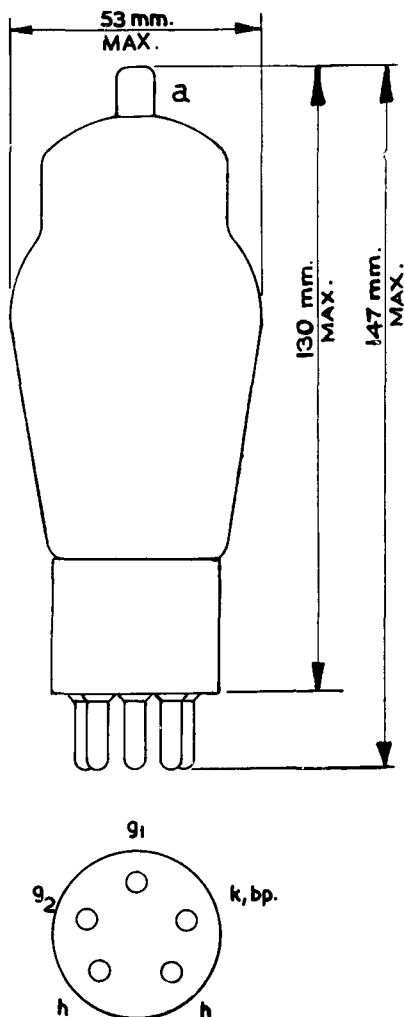
** May be obtained from a separate supply, or from a grid or cathode resistor of value shown, or by a combination of these methods.

WEIGHT Valve only ; $2\frac{1}{2}$ oz. (0.08 kg.)

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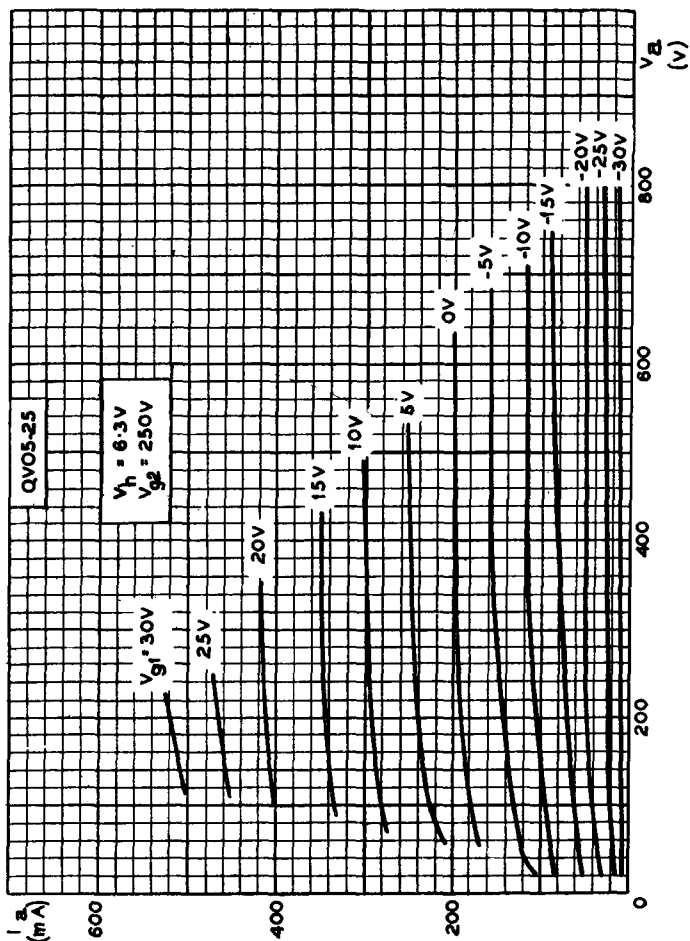


AMERICAN MEDIUM 5-PIN BASE

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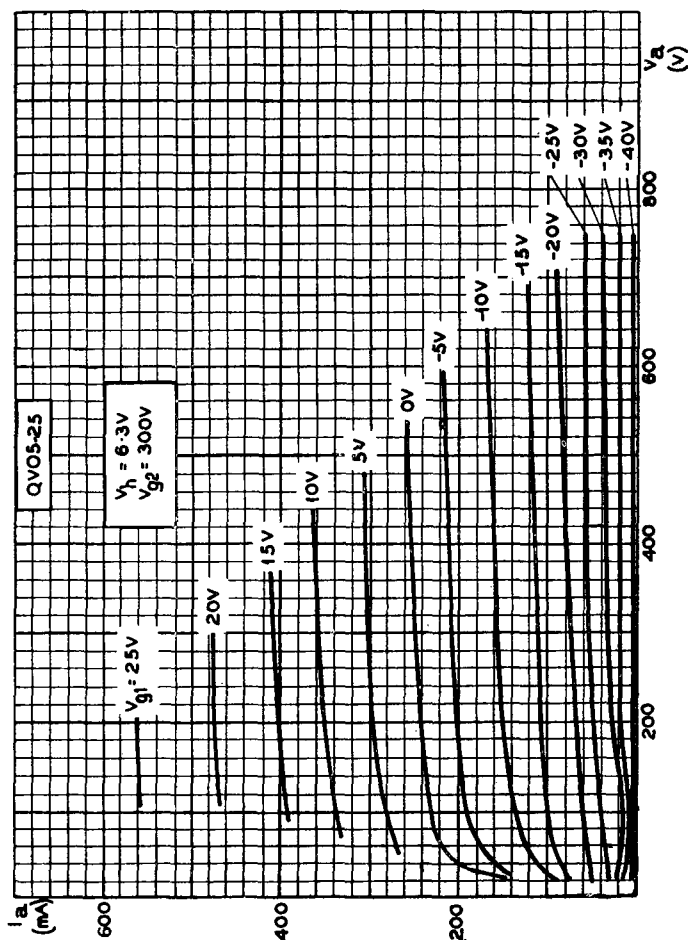


ANODE CURRENT PLOTTED AGAINST ANODE VOLTAGE
FOR SCREEN VOLTAGE = 250V

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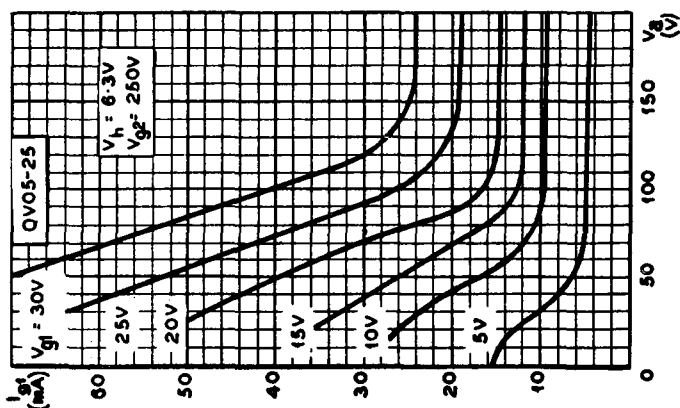


ANODE CURRENT PLOTTED AGAINST ANODE VOLTAGE
FOR SCREEN VOLTAGE = 300V

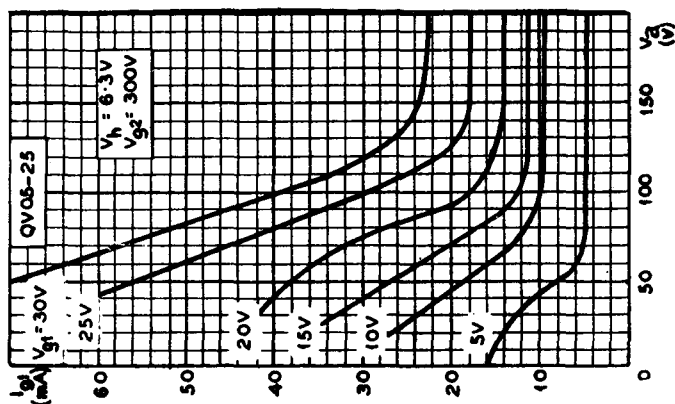
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CONTROL GRID CURRENT PLOTTED AGAINST ANODE VOLTAGE
FOR SCREEN VOLTAGE = 250V



CONTROL GRID CURRENT PLOTTED AGAINST ANODE VOLTAGE
FOR SCREEN VOLTAGE = 300V

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