

TRANSMITTING VALVES AND
MERCURY VAPOUR RECTIFIERS

Push-pull R.F. power tetrode with a maximum anode dissipation of 20 watts per section and primarily intended for use as a Class "C" amplifier or oscillator at frequencies up to 250 Mc/s.

The cathode is indirectly heated with centre tapped heater for series or parallel connection.

HEATER

	Series	Parallel	V
V_h	12.6	6.3	V
I_h	1.25	2.5	A

MOUNTING POSITION

Vertical—base down Horizontal—plane of anodes vertical

CAPACITANCES

Each section

C_{in}	14.5	$\mu\mu F$
C_{out}	7.0	$\mu\mu F$
* C_{a-g1}	<0.12	$\mu\mu F$
C_{g2-k} (including internal by-pass capacitor)	65	$\mu\mu F$ approx.

*With external shield up to the flange seal

CHARACTERISTICS

Each section (at $I_a=60$ mA $V_a=750$ V $V_{g2}=225$ V)

g_m	8.5	mA/V
μ_{g1-g2}	9	

OPERATING CONDITIONS

As push-pull R.F. power amplifier or oscillator, Class "C" telegraphy

V_a	500	750	V
* V_{g2}	200	200	V
R_{g2}	9.3	18.3	K Ω
** V_{g1}	-45	-55	V
R_{g1-k}	3.75	4.6	K Ω
R_k	160	270	Ω
I_a	2×120	2×80	mA
I_{g2}	2×16	2×15	mA
I_{g1} (approx.)	2×6	2×6	mA
V_{in} (pk)	2×62	2×70	V
P_{drive} (approx.)	0.7	0.8	W
P_{out} (approx.)	83	87	W

As Class "C" anode-modulated push-pull R.F. amplifier

V_a	425	600	V
* V_{g2}	200	200	V
R_{g2}	6.4	13.3	K Ω
** V_{g1}	-60	-70	V
R_{g1-k}	5.5	5.8	K Ω
I_a	2×106	2×75	mA
I_{g2}	2×18	2×15	mA
I_{g1} (approx.)	2×5.5	2×6	mA
V_{in} (pk)	2×77	2×86	V
P_{drive} (approx.)	0.8	0.9	W
P_{out} (approx.)	63	70	W

4 VALVE DATA PREFERRED TYPES

H TRANSMITTING VALVES AND MERCURY VAPOUR RECTIFIERS

QQV

07-40

(contd.)

OPERATING CONDITIONS (contd.)

As Class "C" grid-modulated push-pull R.F. power amplifier

V_a	500	750	V
V_{g2}	200	200	V
V_{g1}	-38	-55	V
I_a	2×60	2×40	mA
I_{g2}	2×5	2×2.5	mA
I_{g1}	2×1	0	mA approx.
$V_{in} (pk)$ (R.F.)	2×41	2×52	V
$V_{mod} (pk)$	17	15	V
P_{drive}	0.5	0.7	W approx.
P_{out}	23	24	W approx.

*Obtained from separate supply or from anode supply through series resistor (R_{g2}) of value shown, in which case provision must be made to ensure that $V_{g2(b)}$ does not exceed 600 V.

**Obtained from fixed supply or by means of grid or cathode resistor of value shown, or by a combination of these methods.

LIMITING VALUES

V_a max.	750	V
p_a max.	2×20	W
$v_a (pk)$ max.	2,500	V
$V_{g2(b)}$ max.	600	V
V_{g2} max.	225	V
p_{g2} max.	2×3.5	W
I_{g2} max.	2×17	mA
I_k max.	2×145	mA
* $i_k (pk)$ max.	550	mA
V_{g1} max.	-175	V
I_{g1} max.	2×7.5	mA
* $i_{g1} (pk)$ max.	30	mA
* R_{g1-k} max.	30	K Ω
V_{h-k} max.	100	V
**Max. bulb temp.	175	$^{\circ}C$

*Per section.

**Forced air cooling may be required to limit the bulb temperature to the figure quoted. At normal dissipation an air flow of approx. 5 cu. ft./min. is required.



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Operating
frequency
(Mc/s)

100
150
200
250

Max. anode
voltage
(V)

750
700
600
500

Max. anode
input power
(W)

120
120
120
100

BASE :
B7A

DIMENSIONS :
L=109 mm
D=61 mm

