

VOLTAGE AMPLIFYING PENTODES **A**

Double diode variable- μ H.F. or A.F. pentode

EBF 80

HEATER

V_h 6.3 V I_h 0.3 A Suitable for series or parallel operation

Preliminary
data

CAPACITANCES

	$C_{a'd-g_1}$	<0.0008	$\mu\mu F$
	$C_{a''d-g_1}$	<0.001	$\mu\mu F$
	$C_{a'd-a}$	<0.2	$\mu\mu F$
	$C_{a''d-a}$	<0.05	$\mu\mu F$
Pentode Section	C_{a-g_1}	<0.0025	$\mu\mu F$
	C_{out}	4.6	$\mu\mu F$
	C_{in}	4.0	$\mu\mu F$
	C_{g_1-h}	<0.07	$\mu\mu F$
Diode Section	$C_{a'd-k}$	2.15	$\mu\mu F$
	$C_{a''d-k}$	2.35	$\mu\mu F$
	$C_{a'd-a''d}$	<0.35	$\mu\mu F$

OPERATING CONDITIONS

As R.F. or I.F. amplifier

$V_a = V_b$	250	V
R_{g_2}	95	K Ω
V_{g_2}	85	V
V_{g_3}	0	
I_a	5.0	mA
I_{g_2}	1.75	mA
V_{g_1}	-2.0	V
R_k	300	Ω
g_m	2.2	mA/V
r_a	1.5	M Ω
$\mu_{g_1-g_2}$	18	
R_{eq}	6,800	Ω
V_{g_1} for 100:1 reduction in g_m	-41.5	V

OPERATING CONDITIONS

As R.C. coupled A.F. amplifier

V_b	250	250	250	250	V
R_a	0.22	0.1	0.22	0.1	M Ω
I_a	0.75	1.5	0.75	1.5	mA
R_{g_2}	0.82	0.39	0.1	0.47	M Ω
I_{g_2}	0.30	0.53	0.25	0.50	mA
R_k	1,800	1,000	0	0	Ω
R_{g_1}	1	1	10	10	M Ω
V_{out}/V_{in}	110	80	160	110	
$*V_{out} = (r, m, s.)$	19	18	19	19	V
$**R_{g_1}$	0.68	0.33	0.68	0.33	M Ω

* $D_{tot} = 5\%$

**Grid resistor of following valve



4 VALVE DATA PREFERRED TYPES

A VOLTAGE AMPLIFYING PENTODES

EBF 80 (contd.)

LIMITING VALUES Pentode Section

$V_{a(b)}$ max.	550	V
V_a max.	300	V
p_a max.	1.5	W
$V_{g2(b)}$ max.	550	V
V_{g2} max. ($I_a < 2.5$ mA)	300	V
V_{g2} max. ($I_a = 5$ mA)	125	V
p_{g2} max.	0.3	W
I_k max.	10	mA
* R_{g1-k} max.	3	M Ω
V_{h-k} max.	100	V
$V_{ad(p_k)}$ max.	200	V
I_{ad} max.	0.8	mA
* R_{g1-k} max. = 22M Ω if grid current bias is employed.		

Diode Section



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BASE:
B9A
(Noval)

DIMENSIONS:
L=67 mm
D=22.2 mm

EF 22

H.F. pentode with variable-mu characteristics

HEATER

V_h 6.3 V I_h 0.2 A Suitable for series or parallel operation

CAPACITANCES

C_{a-g1}	<0.002	$\mu\mu\text{F}$
C_{in}	5.5	$\mu\mu\text{F}$
C_{out}	6.4	$\mu\mu\text{F}$

OPERATING CONDITIONS

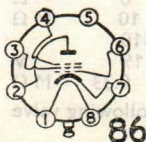
V_a	250	250	250	V
V_{g3}	0	0	0	V
R_{g2}	82	82	82	K Ω
R_k	330	330	330	Ω
V_{g1}	-2.5	-46	-58	V
V_{g2}	100	—	250	V
I_a	6	—	—	mA
I_{g2}	1.7	—	—	mA
g_m	2,200	22	4.5	$\mu\text{A/V}$
r_a	1.2	>10	>10	M Ω
μ_{g1-g2}	17	—	—	—
R_{oq}	6.2	—	—	K Ω

LIMITING VALUES

$V_{a(b)}$ max.	550	V
V_a max.	300	V
p_a max.	2	W
$V_{g2(b)}$ max.	550	V
V_{g2} ($I_a < 3.0$ mA) max.	300	V
V_{g2} ($I_a = 6.0$ mA) max.	125	V
p_{g2} max.	0.3	W
I_k max.	10	mA

BASE:
B8G

DIMENSIONS:
L=91 mm
D=29 mm



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