

Miniature output pentode

EL 91

HEATER

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

CAPACITANCES

C_{in}	4.2	μF
C_{out}	3.2	μF
C_{a-g1}	<0.5	μF

OPERATING CONDITIONS

As single valve Class "A" amplifier

V_a	250	V
V_{g2}	250	V
I_a	16	mA
I_{g2}	2.4	mA
g_m	2.6	mA/V
μ_{g1-g2}	12	
r_a	130	K Ω
R_k	680	Ω
R_a	16	K Ω
$V_{in(rms)}$	5.3	V
P_{out}	1.4	W
D_{tot}	10	%

As push-pull pair (self bias)

V_a	250	V
V_{g2}	250	V
$I_{a(o)}$	2×11	mA
$I_{g2(o)}$	2×1.6	mA
R_k	600	Ω
R_{a-a}	24	K Ω
$V_{in(rms)}$ ($P_{out}=50$ mW)	2×0.8	V
I_a (max. sig.)	2×12.8	mA
I_{g2} (max. sig.)	2×4.1	mA
$V_{in(rms)}$	2×12	V
P_{out}	4.0	W
D_{tot}	3.2	%

As push-pull pair (fixed bias)

V_a	250	V
V_{g2}	250	V
V_{g1}	-19	V
$I_{a(o)}$	2×5	mA
$I_{g2(o)}$	2×0.65	mA
R_{a-a}	20	K Ω
$V_{in(rms)}$ ($P_{out}=50$ mW)	2×1.5	V
I_a (max. sig.)	2×16	mA
I_{g2} (max. sig.)	2×4.5	mA
$V_{in(rms)}$	2×13	V
P_{out} (start of I_{g1})	4.8	W
D_{tot} (start of I_{g1})	3.3	%



4 VALVE DATA PREFERRED TYPES

E OUTPUT PENTODES

EL 91 (contd.)

LIMITING VALUES



V_a max.	250	V
V_{g2} max.	250	V
p_a max.	4.0	W
p_{g2} max.	0.6	W
I_k max.	25	mA
V_{h-k} max.	50	V
R_{g1-k} max. (cathode bias)	0.7	M Ω

BASE :
B7G

DIMENSIONS :
L=54 mm
D=19 mm

KL 35

Output pentode

FILAMENT

V_f 2.0 V I_f 0.15 A Suitable for D.C. operation only

CHARACTERISTICS

V_a	135	V
V_{g2}	135	V
I_a	5.6	mA
g_m	2.2	mA/V
r_s	0.15	M Ω

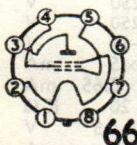
OPERATING CONDITIONS

As single Class "A" amplifier

	Fixed bias	Self bias
V_a	135	135
V_{g2}	135	135
V_{g1}	-4.5	-4.8
I_a	5.6	5.0
R_a	19	20
$V_{in(r.m.s.)}$	3.0	2.9
P_{out}	340	310
D_{tot}	10	10
		%

LIMITING VALUES

V_a max.	150	V
p_a max.	1.0	W
V_{g2} max.	150	V
I_k max.	10	mA
R_{g1-r} (fixed bias) max.	1.0	M Ω
R_{g1-r} (self bias) max.	1.5	M Ω
* V_{g1} ($I_{g1}=+1 \mu A$)	+0.3 to +0.8	V
*At $V_a=V_{g2}=135$ V		



BASE:
Octal

DIMENSIONS:
L=106 mm
D=41 mm

KLL 32

Double output pentode

FILAMENT

V_f 2.0 V I_f 0.3 A Suitable for D.C. operation only

