

MINIATURE OUTPUT PENTODE

DL92

Output pentode with centre-tapped filament
for use in battery operated equipment.

FILAMENT

This valve is suitable for D.C. operation only.

Series	V_f applied across the two filament sections in series, between pins 1 and 7. V_{g1} referred to pin 1.
Parallel	V_f applied across the two filament sections in parallel, between pin 5 and pins 1 and 7 connected together. V_{g1} referred to pin 5.
Single Section	V_f applied across one section of the filament only, between pin 5 and either pin 1 or pin 7.

	Series	Parallel	Single Section	V
V_f	2.8	1.4	1.4	
I_f	0.05	0.1	0.05	A

MOUNTING POSITION

Any

CAPACITANCES

C_{a-g1}	<0.4	$\mu\mu\text{F}$
C_{in}	4.35	$\mu\mu\text{F}$
C_{out}	6.0	$\mu\mu\text{F}$

CHARACTERISTICS

	Filament Connection				
	Series		Parallel		
V_a	45	90	45	90	V
V_{g2}	45	67.5	45	67.5	V
V_{g1}	-4.5	-7	-4.5	-7	V
I_a	3.0	6.1	3.8	7.4	mA
I_{g2}	0.7	1.1	0.8	1.4	mA
g_m	1.1	1.42	1.15	1.57	mA/V
μ_{g1-g2}	5.0	5.0	5.0	5.0	
r_a	100	100	100	100	k Ω

OPERATING CONDITIONS AS SINGLE VALVE CLASS "A" AMPLIFIER

Series filament connection

V_a	45	67.5	90	V
V_{g2}	45	67.5	67.5	V
V_{g1}	-4.5	-7	-7	V
$I_{a(0)}$	3.0	6.0	6.1	mA
$I_{g2(0)}$	0.7	1.2	1.1	mA
R_a	8.0	5.0	8.0	k Ω
V_{in} (r.m.s.)	3.5	5.5	5.5	V
P_{out}	50	160	235	mW
D_{tot}	12.5	12	13	%

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Parallel filament connection

V_a	45	67.5	90	82	V
V_{g2}	45	67.5	67.5	82	V
V_{g1}	-4.5	-7	-7	-8.2	V
$I_{a(0)}$	3.8	7.2	7.4	10	mA
$I_{g2(0)}$	0.8	1.5	1.4	2.2	mA
R_a	8.0	5.0	8.0	5.5	k Ω
$V_{in(r.m.s.)}$	3.5	5.5	5.5	6.3	V
P_{out}	65	180	270	320	mW
D_{tot}	12	10	12	13	%

Single section of filament

V_a	62	82	V
V_{g2}	62	82	V
V_{g1}	-5.6	-8.3	V
$I_{a(0)}$	3.8	5.0	mA
$I_{g2(0)}$	0.8	1.1	mA
R_a	12	12	k Ω
$V_{in(r.m.s.)}$	4.6	6.6	V
P_{out}	91	192	mW
D_{tot}	10.5	12.3	%

OPERATING CONDITIONS FOR TWO VALVES IN PUSH-PULL

Series or parallel filament connection

V_a	67.5	76	90	V
V_{g2}	67.5	76	90	V
V_{g1}	-12	-13.6	-16.5	V
$I_{a(0)}$	2×1.5	2×1.5	2×2.0	mA
I_a (max. sig.)	2×5.6	2×7.0	2×8.4	mA
$I_{g2(0)}$	2×0.25	2×0.35	2×0.35	mA
I_{g2} (max. sig.)	2×1.5	2×2.6	2×2.7	mA
R_{a-a}	10	9.0	10	k Ω
$V_{in(g-g)(r.m.s.)}$	17	20	23	V
P_{out}	340	490	780	mW
D_{tot}	5.0	5.5	6.0	%

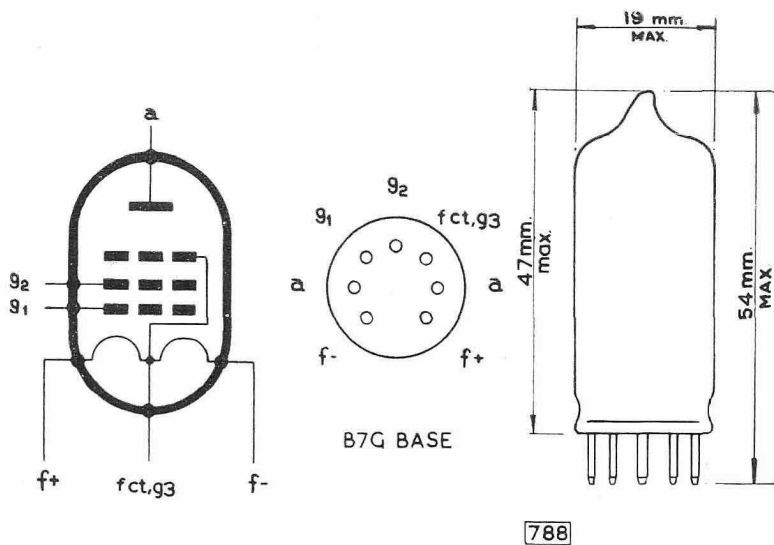
LIMITING VALUES

V_a max.	90	V
p_a max.	0.7	W
V_{g2} max.	90	V
p_{g2} max.	0.15	W
I_k max.	12	mA
R_{g1-f} max.	2.0	M Ω

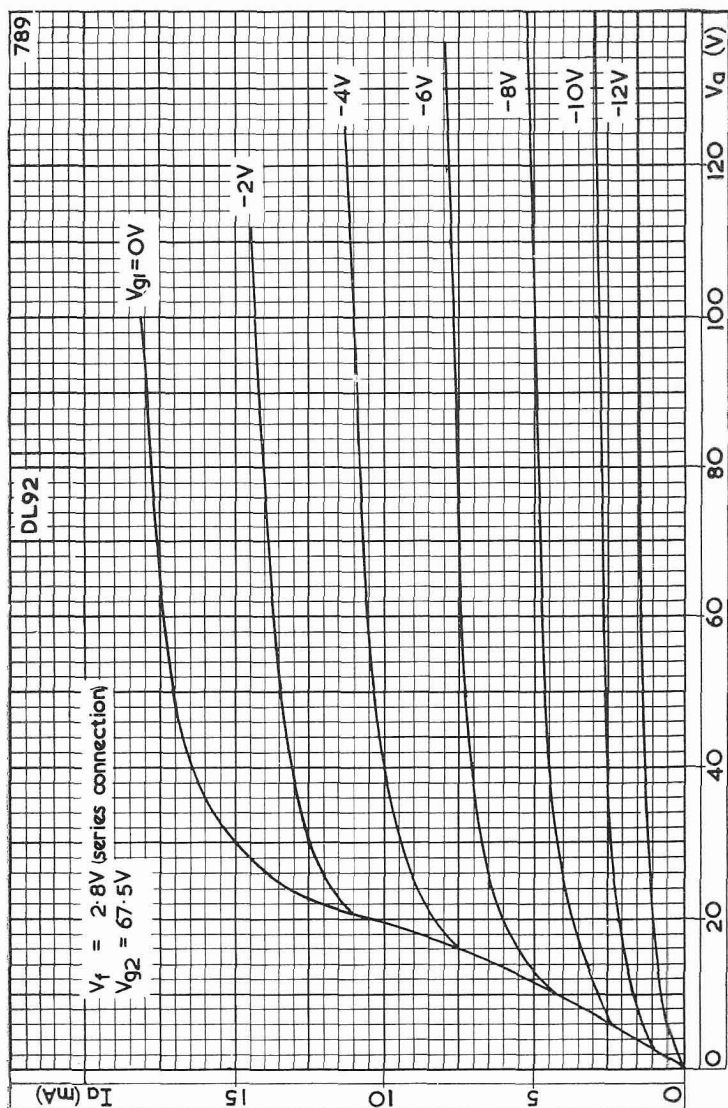
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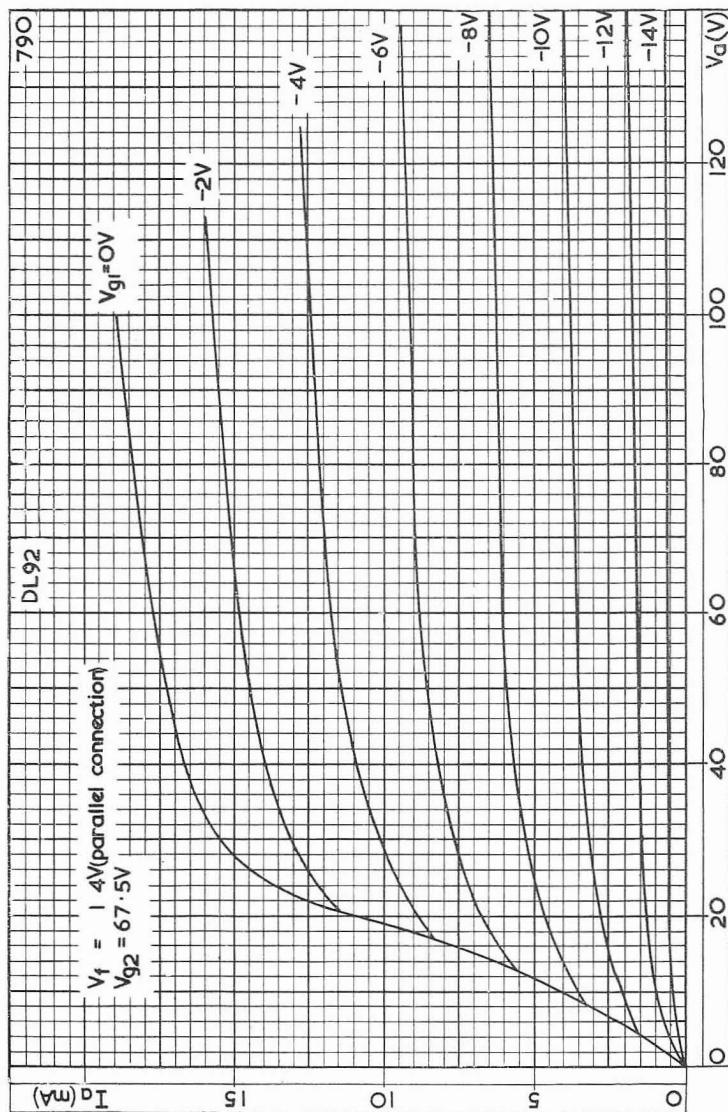


ANODE CURRENT PLOTTED AGAINST ANODE VOLTAGE
WITH CONTROL-GRID VOLTAGE AS PARAMETER FOR
BOTH SECTIONS OF FILAMENT IN SERIES

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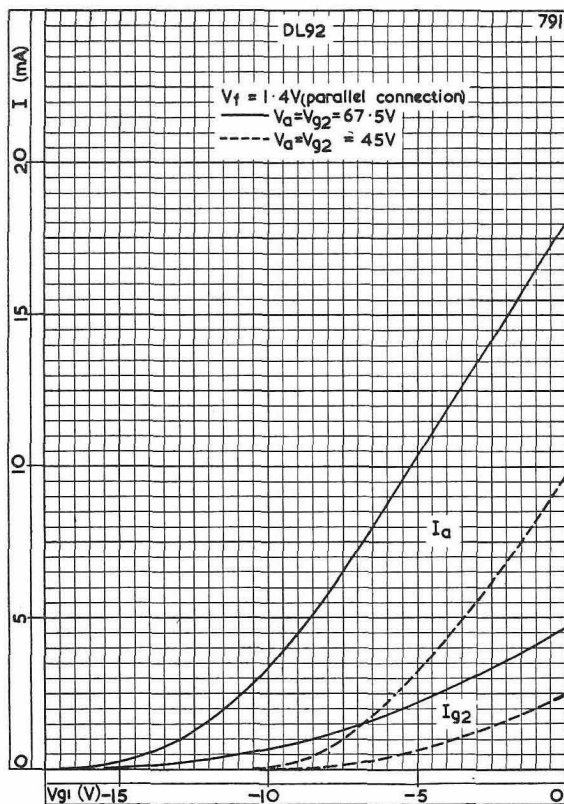


ANODE CURRENT PLOTTED AGAINST ANODE VOLTAGE
WITH CONTROL-GRID VOLTAGE AS PARAMETER FOR
BOTH SECTIONS OF FILAMENT IN PARALLEL

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MINIATURE OUTPUT PENTODE

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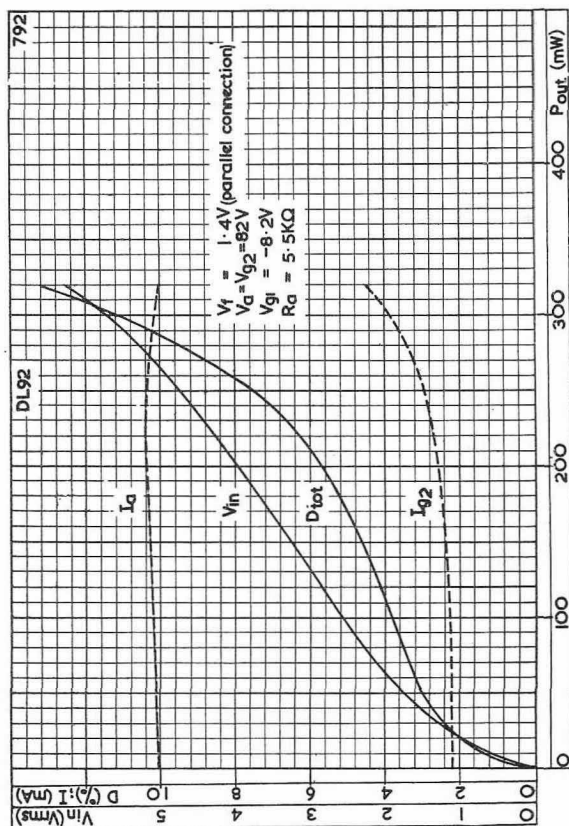


ANODE CURRENT AND SCREEN-GRID CURRENT PLOTTED AGAINST
CONTROL-GRID VOLTAGE FOR BOTH SECTIONS OF FILAMENT
IN PARALLEL

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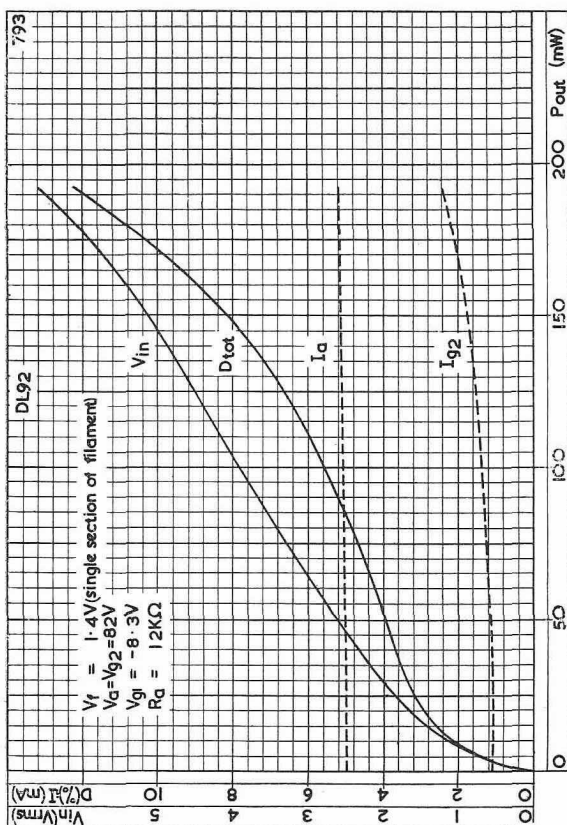


ANODE CURRENT, SCREEN-GRID CURRENT, INPUT VOLTAGE AND TOTAL DISTORTION PLOTTED AGAINST OUTPUT POWER WITH BOTH SECTIONS OF FILAMENT IN PARALLEL. FOR USE WITH 90 V H.T. SUPPLY

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ANODE CURRENT, SCREEN-GRID CURRENT, INPUT VOLTAGE AND TOTAL DISTORTION PLOTTED AGAINST OUTPUT POWER USING SINGLE SECTION OF FILAMENT. FOR USE WITH 90V H.T. SUPPLY