

# OUTPUT PENTODE

Output pentode with centre-tapped filament, suitable for R.F. and A.F. applications.

# DL93

USA  
344

## FILAMENT

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

- (a) Series :  $V_f$  applied across the two filament sections in series, between pins 1 and 7.  $V_{g1}$  referred to pin 1.
- (b) 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.

	Series	Parallel	V
$V_f$	2.8	1.4	
$I_f$	0.1	0.2	A

For series filament operation a shunting resistor must be connected across one filament section, between pins 1 and 5 to by-pass the excess cathode current in this section. The value of the resistor should be such that the voltage across the shunted section equals that across the other section.

## MOUNTING POSITION

Any

## CAPACITANCES (without external shield)

$C_{a-g1}$	< 0.34	$\mu\mu\text{F}$
$C_{in}$	4.8	$\mu\mu\text{F}$
$C_{out}$	4.2	$\mu\mu\text{F}$

## OPERATING CONDITIONS

As Class "A," A.F. Amplifier

Filament arrangement	Parallel		
$V_a$	135	150	V
$V_{g2}$	90	90	V
$V_{g1}$	-7.5	-8.4	V
$I_{a(0)}$	14.8	13.3	mA
$I_a$ (max. sig.)	14.9	14.1	mA
$I_{g2(0)}$	2.6	2.2	mA
$I_{g2}$ (max. sig.)	3.5	3.5	mA
$g_m$	1.9	1.9	mA/V
$r_a$	90	100	K $\Omega$
$r_{g2}$	8	8	K $\Omega$
$V_{in}$ (pk)	7.5	8.4	V
$P_{out}$	600	700	mW
$D_{tot}$	5	6	%



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### OPERATING CONDITIONS

As R.F. power amplifier at 50 Mc/s. (Intermittent operation)

$V_a$	150	V
$V_{g2}$	135	V
$R_{g1}$	0.2	M $\Omega$
$I_a$	18.3	mA
$I_{g2}$	6.5	mA
$I_{g1}$	0.13	mA
$P_{out}$	(approx.) 1.2	W

### LIMITING VALUES

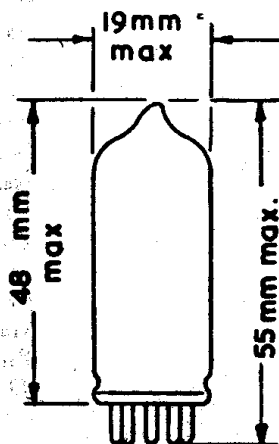
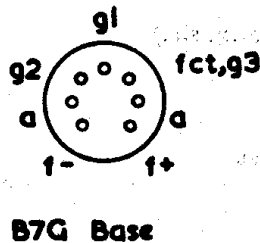
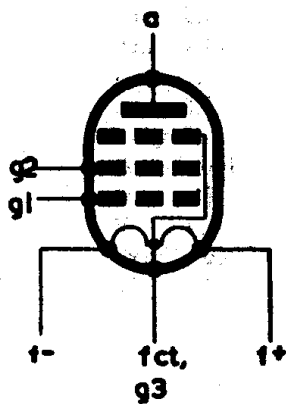
(a) A.F. power amplifier

$V_a$ max.	150	V
$V_{g2}$ max.	90	V
$P_a$ max.	2	W
$P_{g2}$ max.	0.4	W
$I_{k(o)}$ max.	18	mA

(b) R.F. power amplifier (intermittent operation)

$V_a$ max.	150	V
$V_{g2}$ max.	135	V
$V_{g1}$ max.	-30	V
$P_a$ max.	2	W
$P_{g2}$ max.	0.9	W
$P_{i2}$ max.	3	W
$I_a$ max.	20	mA
$I_{g1}$ max.	0.25	mA
$I_k$ max.	25	mA

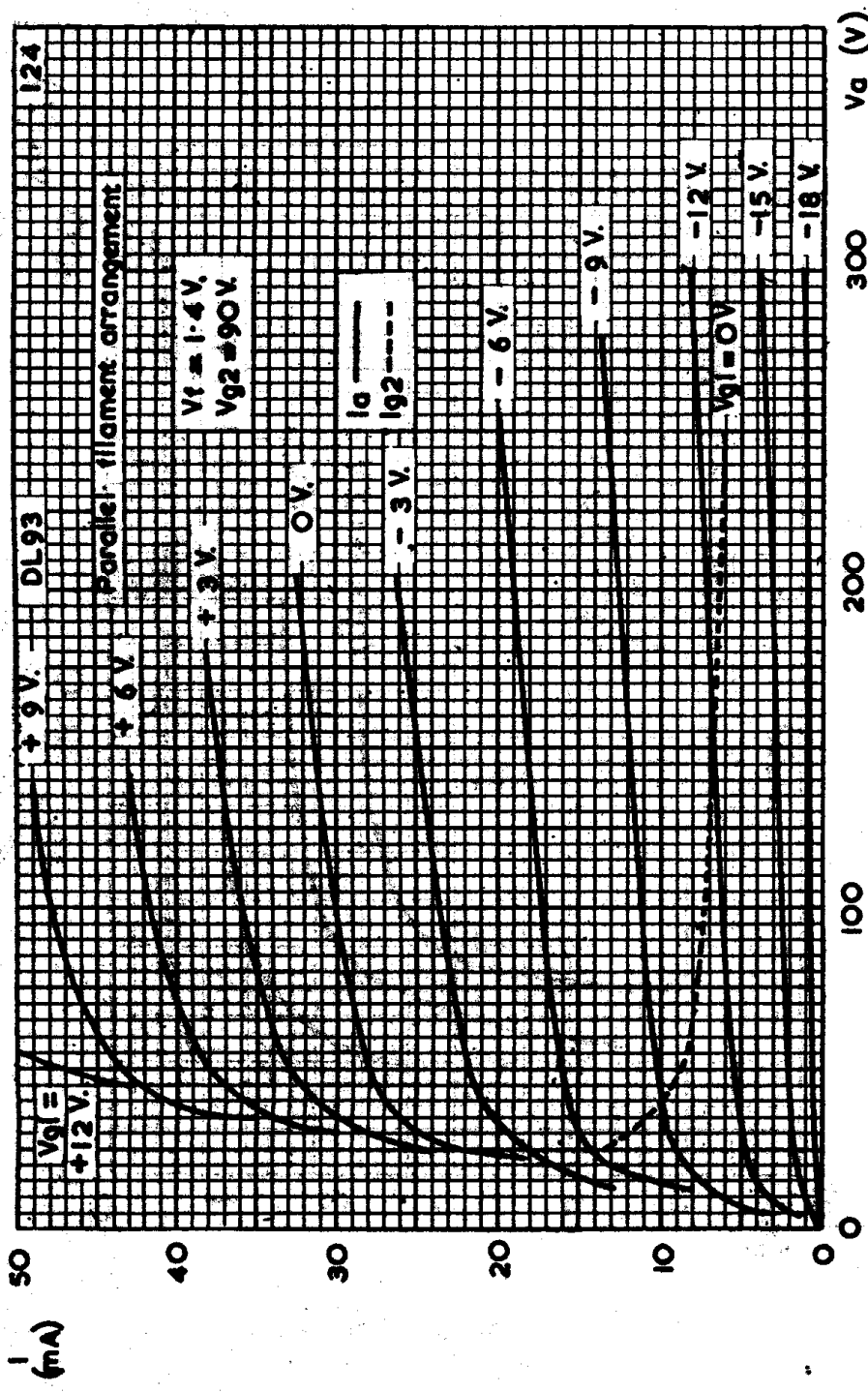
### ARRANGEMENT OF ELECTRODES AND BASE CONNECTIONS



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