DIODE A.F. PENTODE

DAF96

Short grid-base pentode, suitable for a.f. voltage amplification in battery operated receivers, combined with a single diode.

FILAMENT

Suitable for d.c. operation from a series or parallel supply.

	Series	*Parallel*	
V_f	1.3	1.4	V
I_f	24	25	mA

CAPACITANCES (measured without external shield)

C_{a-g1}	< 0.3	pF
C_{in}	1.8	pF
C_{out}	2.5	pF
C_{ad-all}	1.1	pF
C_{ad-ap}	< 0.9	pF
C_{ad-g1}	0.03	pF

CHARACTERISTICS

Pentode section

V_a	67.5	V
V_{g2}	67.5	V
I_a	170	μA
I_{g2}	55	μA
V_{g1}	−1.5	V
g_m	170	μA/V
μ_{g1-g2}	16	
V_{g1} max. ($I_{g1} = +0.3\mu A$)	0	V

Diode section

The diode anode is located at the negative end of the filament.

OPERATING CONDITIONS AS RESISTANCE COUPLED A.F. AMPLIFIER

Pentode connection

V_b* (V)	R_a (MΩ)	R_{g2}** (MΩ)	R_{g1} (MΩ)	Source impedance (kΩ)	R_{g1}*** (MΩ)	I_k (μA)	$\frac{V_{out}}{V_{in}}$	V_{out} ($V_{r.m.s.}$)	D_{tot} (%)
85	1.0	2.7	10	0	1.0	85	55	5.0	2.5
85	1.0	2.7	10	470	1.0	85	50	5.0	2.5
85	1.0	2.7	10	0	2.0	85	65	5.0	2.0
85	1.0	2.7	10	470	2.0	85	60	5.0	2.5
64	1.0	2.7	10	0	1.0	60	45	5.0	4.0
64	1.0	2.7	10	470	1.0	60	40	5.0	4.0
64	1.0	2.7	10	0	2.0	60	57	5.0	3.5
64	1.0	2.7	10	470	2.0	60	52	5.0	3.5

*Based on line voltages of 67.5 and 90V decreased by the negative bias for the output valve.

**R_{g2} by-passed to earth by 0.47μF capacitor.

***Grid resistor of following valve.

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OPERATING CONDITIONS AS RESISTANCE COUPLED A.F. AMPLIFIER

Triode connection (g_2 to a)

V_b* (V)	R_a (MΩ)	R_{g1} (MΩ)	Source impedance (MΩ)	R_{g1}** (MΩ)	I_k (μA)	$\frac{V_{out}}{V_{in}}$	V_{out} ($V_{r.m.s.}$)	D_{tot} (%)
85	0.22	10	0	1.0	210	11	5.0	2.0
85	1.0	10	0	1.0	60	12.5	5.0	2.0
64	0.22	10	0	1.0	135	11	5.0	3.0
64	1.0	10	0	1.0	40	12	5.0	3.0

*Based on line voltages of 67.5 and 90V decreased by the negative bias for the output valve.

**Grid resistor of following valve.

LIMITING VALUES

Pentode section

V_b max. (absolute)	110	V
V_a max.	90	V
p_a max.	30	mW
V_{g2} max.	90	V
p_{g2} max.	10	mW
I_k max.	250	μA
R_{g1-f} max. ($I_k < 250\mu A$)	3.0	MΩ
R_{g1-f} max. ($I_k < 100\mu A$)	22	MΩ

This valve can be used without special precautions against microphony in circuits in which the input voltage, V_{in}, is not less than 20mV for an output of 50mW from the output stage.

Diode section

P.I.V.	100	V
I_{ad} max.	200	μA
$i_{ad(pk)}$ max.	1.2	mA

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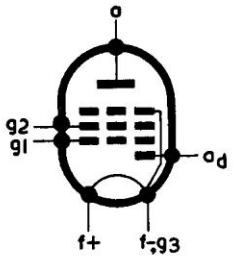
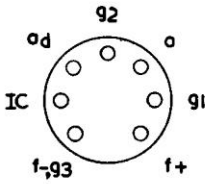
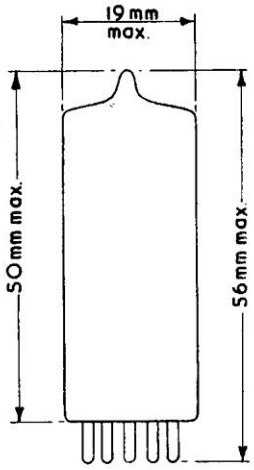




B7G Base



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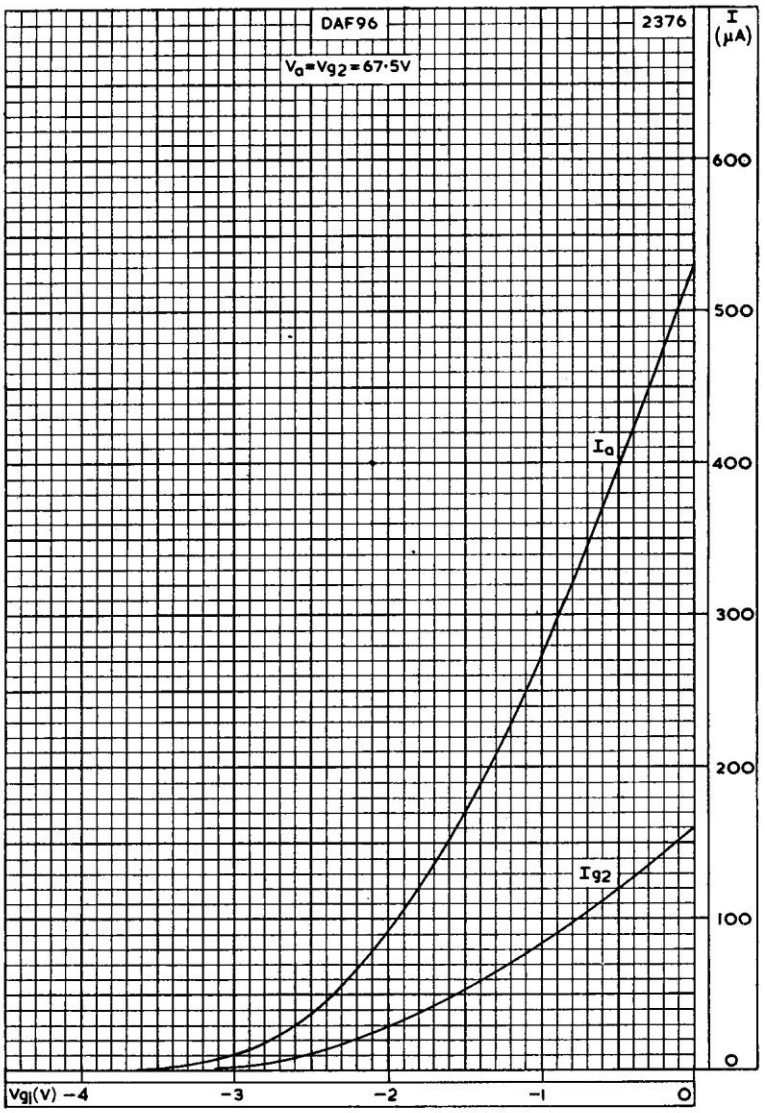

ANODE AND SCREEN-GRID CURRENTS PLOTTED AGAINST CONTROL-GRID VOLTAGE

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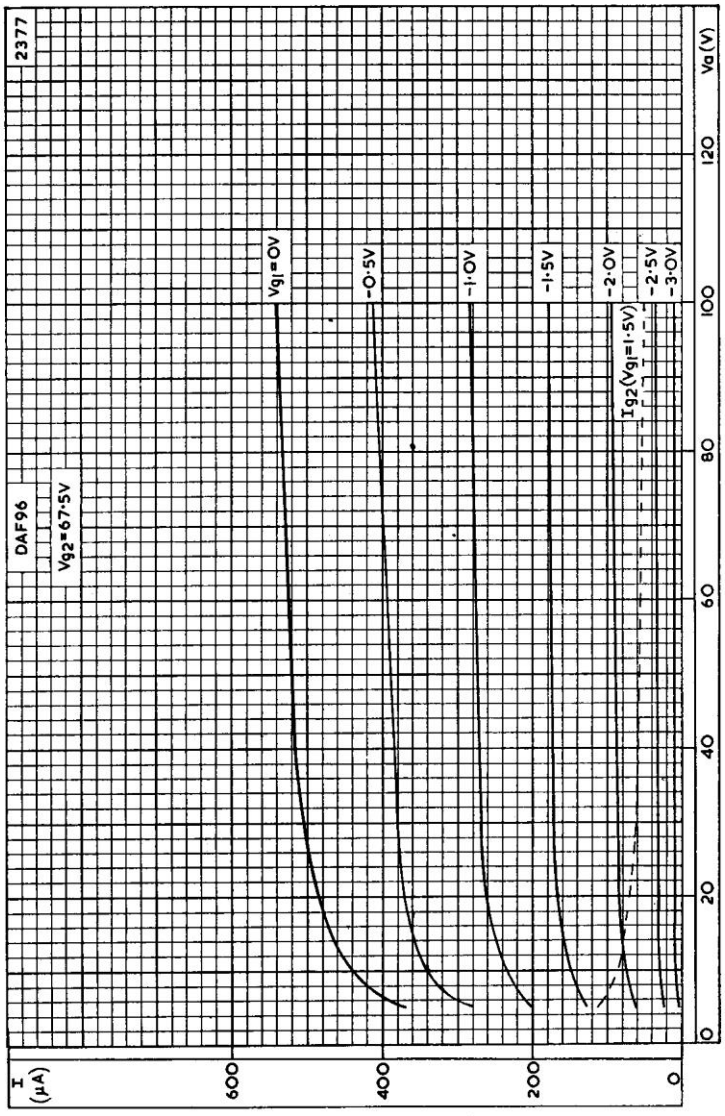
DIODE A.F. PENTODE



ANODE CURRENT PLOTTED AGAINST ANODE VOLTAGE