R.F. PENTODE

DF97

R.F. pentode for use as an i.f. amplifier, frequency changer or self-oscillating mixer in f.m./a.m. receivers.

FILAMENT

This valve is not recommended for operation in a series filament chain.

V_f	1.4	V
I_f	25	mA

CAPACITANCES

Pentode connection

C_{in}	3.7	pF
$C_{in(g3)}$	5.2	pF
C_{out}	7.5	pF
C_{a-g1}	<0.01	pF
C_{g1-g3}	<0.1	pF
C_{g1-g2}	2.5	pF

Triode connection (g_2 and g_3 connected to a)

C_{in}	1.1	pF
C_{out}	8.1	pF
C_{a-g1}	2.6	pF

CHARACTERISTICS

*V_a = V_b	64	64	85	85	V
V_{g3}	0	0	0	0	V
R_{g2}	1.5	4.7	33	47	kΩ
V_{g2}	63	61	62	57	V
V_{g1}	0	0	0	0	V
I_a	1.7	1.6	1.7	1.5	mA
I_{g2}	780	725	700	595	μA
g_m	880	870	940	900	μA/V
r_a	250	270	450	525	kΩ
μ_{g1-g2}	20	20	20	20	
V_{g1} (g_m = 10μA/V)	−3.8	−3.8	−5.0	−5.0	V

TYPICAL OPERATING CONDITIONS

Frequency changer with oscillator voltage on g_3

*V_a = V_b	64	85	V
R_{g2}	4.7	47	kΩ
V_{g2}	58	47	V
R_{g3}	300	300	kΩ
V_{g1}	0	0	V
I_a	670	540	μA
I_{g2}	1.25	0.8	mA
$V_{osc(r.m.s.)}$	12	12	V
g_c	280	265	μA/V
r_a	300	500	kΩ
V_{g1} (g_m = 10μA/V)	−3.5	−4.6	V

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Self-oscillating mixer (triode connection, g_2 and g_3 connected to a)

*$V_a = V_b$	64	85	V
I_a	1.3	1.9	mA
R_{g-f}	1.0	1.0	MΩ
I_{g1}	3.1	4.4	μA
$V_{osc(r.m.s.)}$	3.0	4.0	V
g_c	465	500	μA/V
r_a	29	26	kΩ

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

LIMITING VALUES

V_b max. (absolute)	150	V
V_b max.	120	V
V_a max.	120	V
p_a max.	250	mW
V_{g2} max.	90	V
p_{g2} max.	150	mW
I_k max.	2.5	mA
R_{g1-f} max.	3.0	MΩ
R_{g3-f} max.	1.5	MΩ
$+V_{g1}$ min. (I_{g1} = +0.3μA)	0	V

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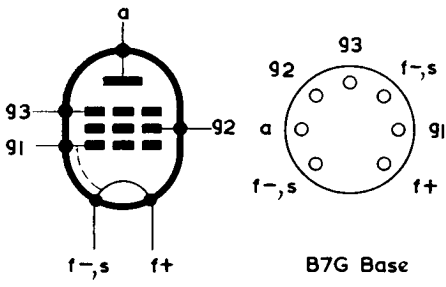

B7G Base