MINIATURE HEPTODE FREQUENCY CHANGER

DK96

Miniature heptode, primarily intended for use as a frequency changer in battery operated receivers and suitable for a.g.c.

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

C_{a-all}	8.1	pF
C_{g1-all}	3.9	pF
C_{g2-all}	4.8	pF
C_{g3-all}	7.4	pF
C_{a-g1}	<0.11	pF
C_{a-g2}	<0.3	pF
C_{a-g3}	<0.36	pF
C_{g1-g2}	3.0	pF
C_{g1-g3}	<0.2	pF
C_{g2-g3}	1.6	pF

TYPICAL OPERATING CONDITIONS

*$V_a = V_b$	64	85	V
V_{g3}	0	0	V
R_{g4}	0	120	kΩ
R_{g2}	18	33	kΩ
R_{g1-f+}	27	27	kΩ
V_{g4}(approx.)	64	68	V
V_{g2}(approx.)	35	35	V
$V_{g1(r.m.s.)}$	4.0	4.0	V
I_k	2.45	2.4	mA
I_a	550	600	μA
I_{g1}	120	140	μA
I_{g2}	1.6	1.5	mA
I_{g1}	85	85	μA
g_c	275	300	μA/V
r_a	750	800	kΩ
V_{g3} (for 100 : 1 reduction in g_c)	−4.5	−6.5	V

OSCILLATOR SECTION (With g_1 connected to f+)

$V_a = V_b$	64	85	V
V_{g4}	64	64	V
V_{g3}	0	0	V
V_{g2}	35	35	V
V_{g1}	+1.4	+1.4	V
I_{g2}	1.7	1.7	mA
$g_{m(g1-g2)}$	600	600	μA/V
μ_{g1-g2}	7.5	7.5	

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

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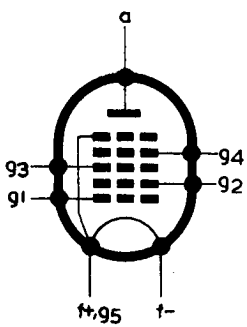
LIMITING VALUES

V_b max. (absolute)	110	V
V_b max.	90	V
V_a max.	90	V
p_a max.	150	mW
V_{g2} max.	60	V
p_{g2} max.	100	mW
V_{g4} max.	90	V
p_{g4}	30	mW
I_k max.	2.6	mA
R_{g3-f} max.	3.0	MΩ
R_{g1-f} max.	100	kΩ
V_{g3} max. (I_{g3} = +0.3μA)	+1.0	V
V_{g1} max. (I_{g1} = +0.3μA)	0	V



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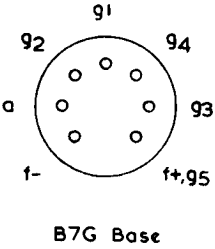

B7G Base