

Miniature heptode with variable-mu characteristics

DK 91

FILAMENT

V_f 1.4 V I_f 0.05 A Suitable for D.C. operation only

CAPACITANCES

C_{g3-all}	7.0 $\mu\mu F$
C_{a-all}	7.5 $\mu\mu F$
C_{g1-all}	3.8 $\mu\mu F$

OPERATING CONDITIONS

(See Figs. 3 and 4, pages 56 and 57)

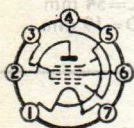
V_a	45	67.5	90	90	V
V_{g2+g4}	45	67.5	45	67.5	V
V_{g3}	0	0	0	0	V
R_{g1}	0.1	0.1	0.1	0.1	M Ω
r_a	0.6	0.5	0.8	0.6	M Ω
g_e	235	280	250	300	$\mu A/V$
$V_{g3} (g_0 = 5 \mu A/V)$	-9	-14	-9	-14	V
I_a	0.7	1.4	0.8	1.6	mA
I_{g2+g4}	1.9	3.2	1.9	3.2	mA
I_{g1}	150	250	150	250	μA
I_k	2.75	5.0	2.75	5.0	mA

Characteristics of Oscillator Section

$V_{g1} = V_{g3}$	0	V
$V_{g2} = V_{g4} = V_a$	67.5	V
$g_m (g_1 - g_2 + g_4 + a)$	1.4	mA/V

LIMITING VALUES

V_a max.	90	V
$V_{g2+g4} (b_1)$ max.	90	V
V_{g2+g4} max.	67.5	V
V_{g3} max.	0	V
I_k max.	5.5	mA



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BASE:
B7G

DIMENSIONS:
L=54 mm
D=19 mm

Miniature diode triode. Primarily designed for use as a frequency changer up to 300 Mc/s. The triode section may also be used as a voltage amplifier.

EAC 91

HEATER

V_h 6.3 V I_h 0.3 A Suitable for series or parallel operation

CAPACITANCES

C_g-k	1.7 $\mu\mu F$	C_{at-ad}	0.4 $\mu\mu F$
C_a-k	0.4 $\mu\mu F$	C_{ad-kd}	1.5 $\mu\mu F$
C_{at-g}	1.6 $\mu\mu F$	C_{kt-kd}	0.4 $\mu\mu F$
C_g-ad	<0.1 $\mu\mu F$		



4 VALVE DATA PREFERRED TYPES

B FREQUENCY CHANGERS

EAC 91 CHARACTERISTICS

(contd.)

Triode Section

V_a	200	V
I_a	7.5	mA
V_g	-2.8	V
g_m	2.8	mA/V
μ	36	
r_a	12.8	K Ω

OPERATING CONDITIONS

For circuit see Fig. 6, page 57

Coil data :

L1	Turns	3.5
	Coil diameter	10 mm
	Coil length	7 mm
	Diameter of wire	1 mm
L2	Dust cored, to tune to intermediate frequency	
L3	} Dependent upon signal frequency	
L4		

LIMITING VALUES

Triode Section :

V_a max.	250	V
p_a max.	2	W
I_k max.	10	mA
V_{h-k} max.	50	V

Diode Section :

V_a max.	50	V
I_a max.	5	mA

Max. operating frequency as frequency changer	300	Mc/s
Limiting frequency of oscillation	600	Mc/s



BASE :

B7G

DIMENSIONS :

L=54 mm
D=19 mm

ECH 21 Triode heptode with variable-mu characteristics

HEATER

V_h 6.3 V I_h 0.33 A Suitable for A.C. operation only

CAPACITANCES

Heptode Section

C_{in}	6.8	$\mu\mu F$
C_{out}	9.5	$\mu\mu F$
C_{a-g1}	<0.002	$\mu\mu F$
C_{g3-all}	8.0	$\mu\mu F$

Triode Section

C_{g-k}	3.2	$\mu\mu F$
C_{a-k}	2.0	$\mu\mu F$
C_{a-g}	1.1	$\mu\mu F$



VALVE DATA PREFERRED TYPES **4** FREQUENCY CHANGERS **B**

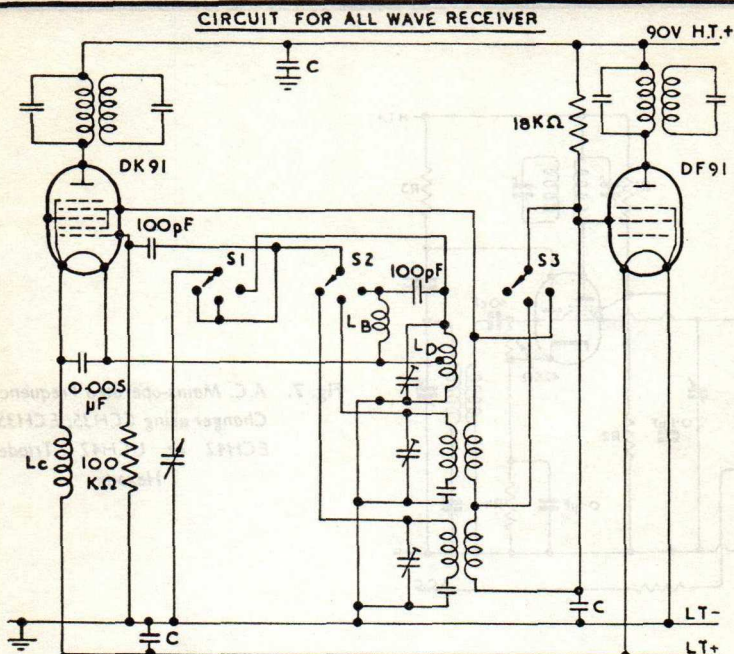


Fig. 4. All-wave Battery-operated Frequency Changer using DK91 Heptode

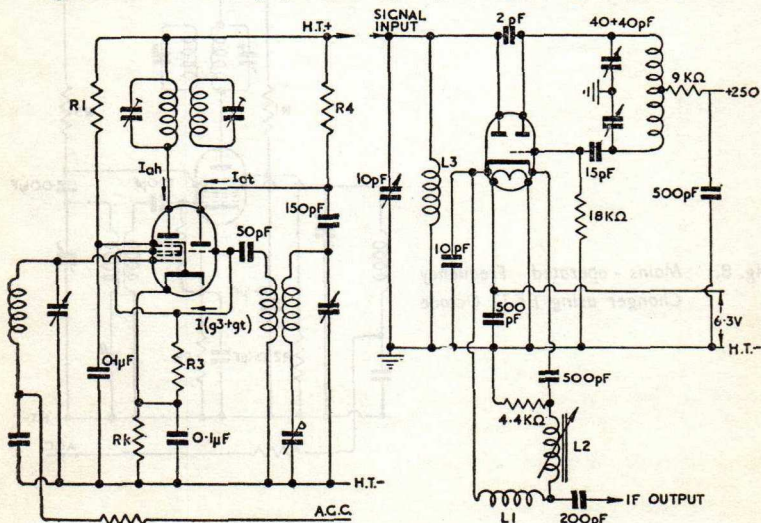


Fig. 5. A.C. Mains-operated Frequency Changer using ECH21 or UCH21 Triode-Hexode

Fig. 6. U.H.F. Mains-operated Frequency Changer using EAC91 Diode-Triode