

4 VALVE DATA **PREFERRED TYPES** **A VOLTAGE AMPLIFYING PENTODES**

EF 91 Miniature H.F. pentode with sharp cut-off characteristics

HEATER

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

CAPACITANCES

C_{a-g1}	< 0.008	$\mu\mu\text{F}$
C_{in}	7.0	$\mu\mu\text{F}$
C_{out}	2.0	$\mu\mu\text{F}$

OPERATING CONDITIONS

As R.F. amplifier

V_a	250	V
V_{g2}	250	V
V_{g3}	0	V
V_{g1}	-2.0	V
I_a	10	mA
I_{g2}	2.5	mA
g_m	7.6	mA/V
r_a	1.0	M Ω
μ_{g1-g2}	70	
R_{eq}	1,200	Ω
Input Damping (at 50 Mc/s)	7,500	Ω

OPERATING CONDITIONS

As Mixer at 45 Mc/s (See Fig. 1, page 35)

V_b	250	V
R_k	470	Ω
I_a ($V_{osc} = 0$ V)	4.4	mA
I_a ($V_{osc} = 2.25$ V)	5.5	mA
I_{g1}	0.5	μA
g_c	2.5	mA/V
R_{g1-k}	1.0	M Ω
R_{eq}	6.5	K Ω

LIMITING VALUES

$V_{a(b)}$ max.	550	V
V_a max.	300	V
p_a max.	2.5	W
$V_{g2(b)}$ max.	550	V
V_{g2} max.	300	V
p_{g2} max.	0.65	W
I_k max.	15	mA
R_{g1-k} max.	1.0	M Ω
V_{h-k} max.	150	V



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BASE:
B7G

DIMENSIONS:
L=54 mm
D=19 mm



VOLTAGE AMPLIFYING PENTODES

Fig. 1.

A.C. Mains-operated Frequency Changer
using two EF9J Pentodes, one as Mixer
and one as Oscillator

1. The first I.F. circuit consists of L2, C2 and R2, L2 being designed to resonate at 13 Mc/s
2. The Oscillator circuit, formed by L3 and C7 resonates at 32 Mc/s
3. To obtain maximum oscillator voltage it should be adjusted until the mixer anode current reaches its maximum value.

