

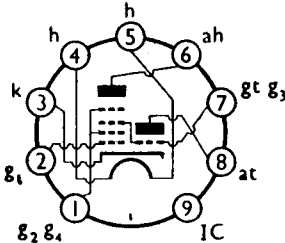


**MINIATURE
TRIODE-HEXODE
0·1A INDIRECTLY HEATED**

X109
OCTOBER, 1952

A frequency changer for operation up to 100 Mc/s.

BASE CONNECTIONS AND VALVE DIMENSIONS



View from underside
of base.

Base : B9A
Bulb : Tubular.

Overall length : 49—55 mm.
Seated length : 43—49 mm.
Max. diameter : 22 mm.

RATING

I_h	0·1	A
V_h	19 approx.	V
V_{ah}	250 max.	V
$V_{g2, g4}$	100 max.	V
V_{at}	100 max.	V
$v_{gt} \text{ (pk)}$	10 opt.	V
I_k	20 max.	mA

TRIODE SECTION ONLY

At $V_a = 100$, $V_g = 0$

I_a	10	mA
μ	22	
g_m	2·8	mA/V

CAPACITANCES (of unscreened valve)

C_{g1-ah}	0·11	pF
C_{g1-at}	0·08	pF
C_{g1-gt}	0·22	pF
C_{gt-at}	1·48	pF

C_{g1-all}	4·1	pF
$C_{at-all} \text{ (gt earthed)}$	1·5	pF
$C_{gt-all} \text{ (at earthed)}$	5·47	pF
C_{ah-all}	4·34	pF

TYPICAL OPERATION

V_a	175	V
$V_{g2, g4}$	75	V
V_{at}	100	V
$v_{gt} \text{ (pk)}$	10	V
V_{g1}	0	V
I_a	4·3	mA
$I_{g2, g4}$	3·6	mA
I_{at}	4·5	mA
g_c	710 at $V_{g1}=0$	$v_{gt} \text{ (pk)} = 0 \left\{ \begin{array}{l} \mu A/V \\ \mu A/V \\ M\Omega \\ M\Omega \end{array} \right.$
g_c	7·1 at $V_{g1} = -20·5$	
Z_c	0·25 at $V_{g1}=0$	
R_{gt-k}	0·05	$M\Omega$
r_{g1-k}^*	3·6	$k\Omega$
C_{g1-k}^*	6	pF
req noise ref $g1\uparrow$	150	$k\Omega$
* at : $V_{ah} = 175$, $V_{g2, g4} = 75$, $V_{g1h} = 0$, $f = 45 \text{ Mc/s.}$		
$\uparrow$ at : $V_{ah} = 175$, $V_{g2, g4} = 75$, $V_{g1h} = 0$, $v_{gt, g3} \text{ (pk)} = 10$		

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SCREENING

No internal or external screening is fitted to the valve. A separate screening can should be used.

MICROPHONY

Although this is of a very low order, equipment should be designed to minimise microphony.

RETAINING

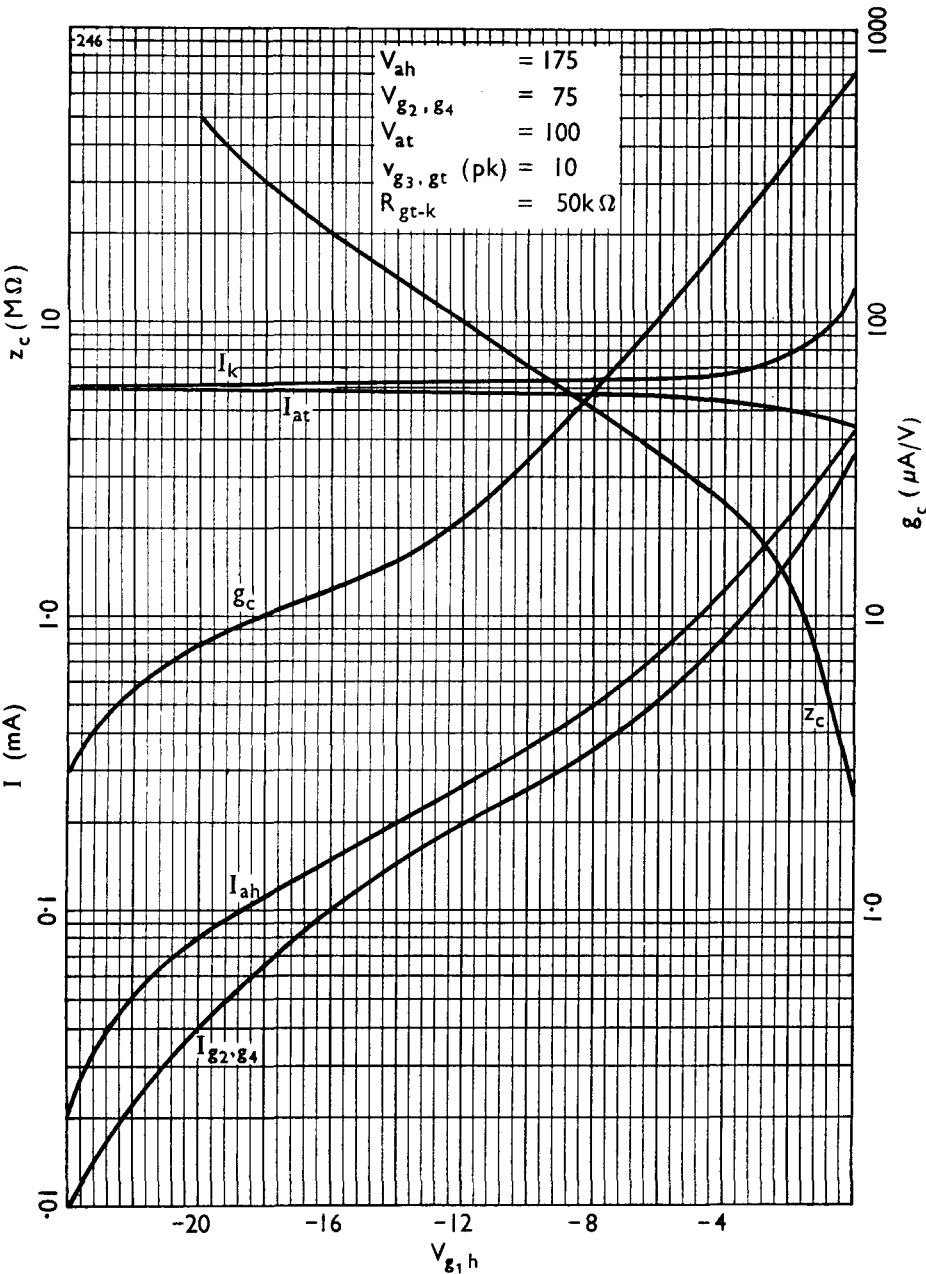
A retaining device should be used.

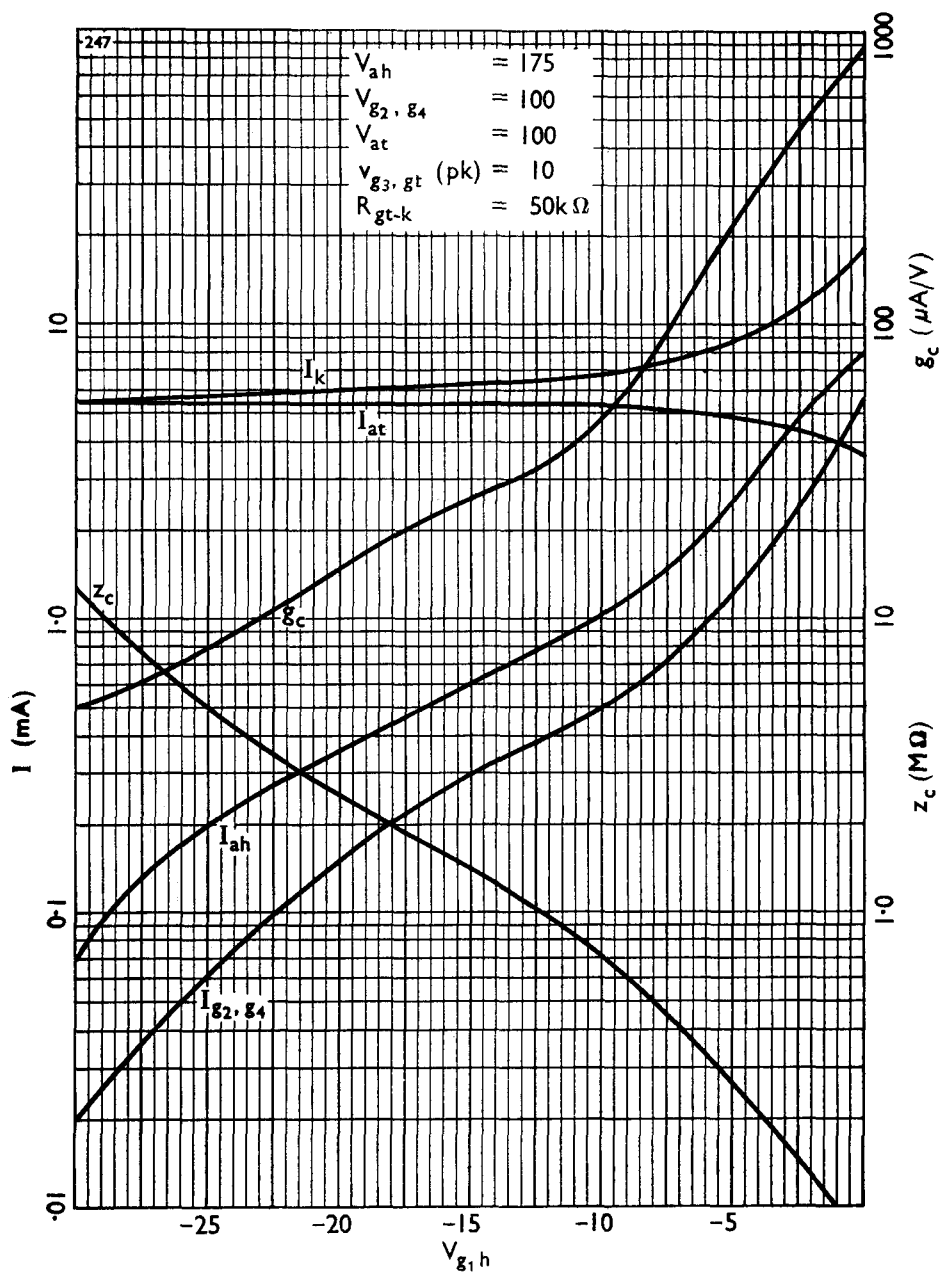
VENTILATION

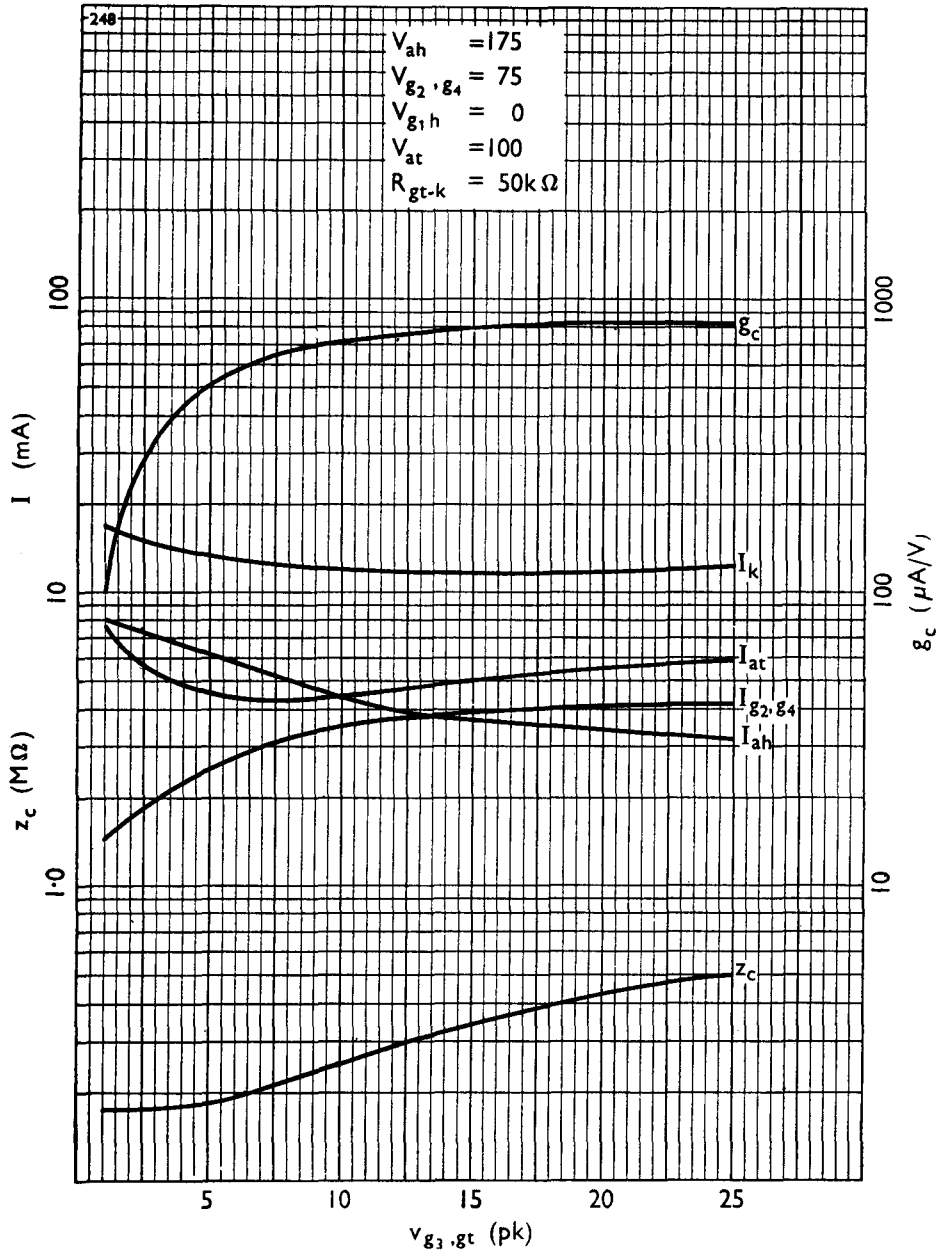
No special precautions.

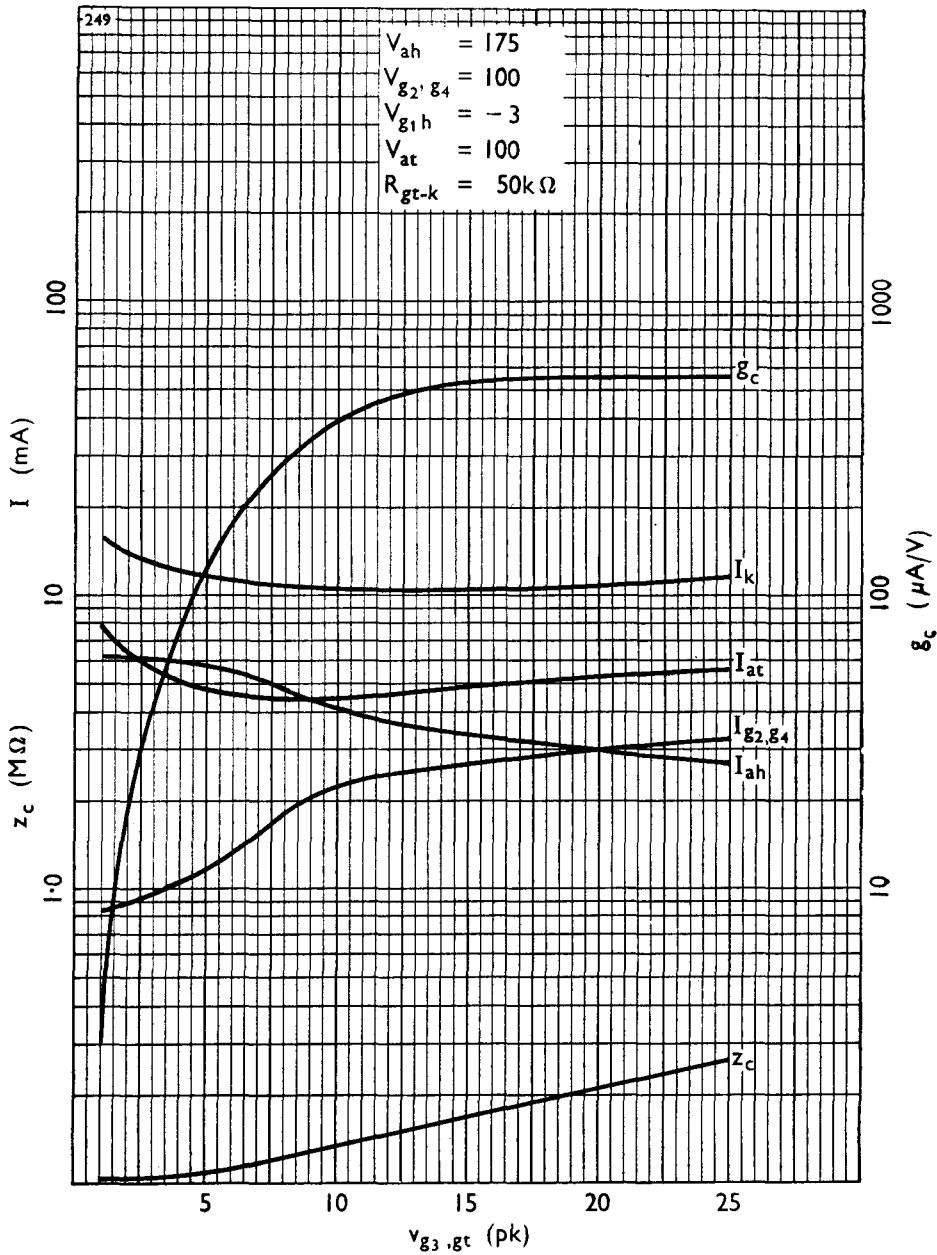
MOUNTING

Any position.









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