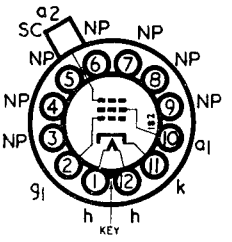
Replacement Type

TYPE **C14FM**

B12A (DUODECAL) BASE



Rectangular Wide Angle Deflection Teletube with tetrode gun, ion trap, aluminized screen and external conductive coating.

RATINGS

Heater Voltage*	12.6 volts
Heater Current	0.3 amps.
Final Anode Voltage (V_{a2})	14 kV max.
Final Anode Voltage (V_{a2})	10 kV min.
First Anode Voltage (V_{a1})	410 volts max.
Beam Current	250 μA max.
Grid Voltage	—2 volts min.
Peak Heater to Cathode Potential	150 volts max.
Peak Heater to Cathode Potential†	380 volts max.
Diagonal deflection angle	70 degrees approx.

** Under series operated conditions, the maximum heater voltage must not exceed 15 volts R.M.S. This may be ensured by the use of a suitable Brimistor to reduce the switching surge.*

† Heater negative with respect to cathode and only during warm-up period not exceeding 15 secs.

OPERATING CHARACTERISTICS

Final Anode Voltage	12 kV
First Anode Voltage	300 volts
Peak to Peak Modulation for Beam Current of 150 μA	30 volts
Grid Voltage Limits for Spot Cut-off	—33 to —77 volts
Scanning Power for Coil of Mean Length 2¼ inches	23 ampere turns/inch approx.
Focusing Requirements with ¼ inch gap	800 ampere turns/inch approx.
Distance from Modulator Grid Aperture to Centre of Focus Coil Gap	2¼ inches approx.
Field Strength for Ion-Trap Magnet*	63 gauss

** Centre of ion-trap magnet not less than 4.5 inches from reference line. Suitable magnet is the IT9 supplied by Messrs. ELAC Ltd.*

INTER-ELECTRODE CAPACITANCES

Grid to all	6.0 pF
Cathode to all	5.0 pF
Final Anode to External Coating	1,500 pF

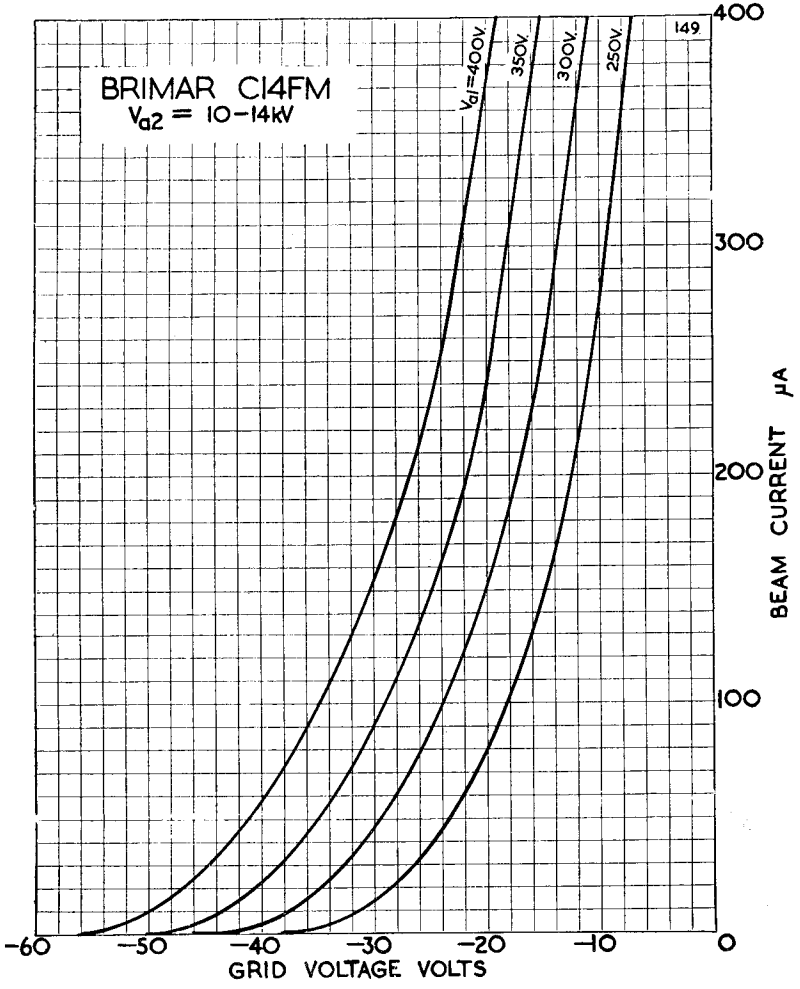
DIMENSIONS

Dimensions are the same as the C14BM, except that the overall length may be $\frac{1}{16}$ inch less.

NOTE: Tubes having a tinted faceplate will have a recessed type anode side-cap, type CT8.

ADJUSTMENT OF ION-TRAP MAGNET

The magnet should be located on the neck with the arrow pointing towards the screen along the line marked on the neck and between the top of the base shell and the line marked parallel to it. With an unmodulated raster the magnet should be slid up the neck to give the brightest picture. It may be necessary to re-adjust the focus during this operation and after doing so the magnet setting should again be adjusted for optimum brightness. It is important to set the ion-trap magnet correctly, as incorrect positioning may lead to premature failure of the tube.


BRIMAR C14FM
V_{a2} = 10–14kV
149
V_{a1}=400V.
350V.
300V.
250V.
400
300
200
100
0
BEAM CURRENT μA
–60
–50
–40
–30
–20
–10
GRID VOLTAGE VOLTS