

GENERAL

The 31F12 is an electrostatically focused and magnetically deflected cathode ray tube intended for use in large screen oscilloscopes. It has a 17" diagonal and a deflection angle of 70°. The grey glass face of the aluminised tube is rectangular and has a total light transmission at the centre of approximately 72%. A screen type T9 is employed which has a long orange afterglow.

RATINGS

Heater voltage	V_h	6.3	V
Heater current	I_h	0.6	A
Maximum second and fourth anode voltage	$V_{a2,a4(max)}$	16*	kV
Minimum second and fourth anode voltage	$V_{a2,a4(min)}$	12	kV
Maximum third anode voltage	$V_{a3(max)}$	± 700	V
Maximum first anode voltage	$V_{a1(max)}$	400	V
Maximum heater/cathode voltage, (d.c.) heater negative	$V_{h-k(max)}$	180	V
Maximum peak heater/cathode voltage, (d.c.) heater negative	$V_{h-k(pk)max}$	400†‡	V

* 16kV is a design centre rating, the absolute rating of 17.6kV must not be exceeded.

† Absolute rating.

‡ During a warming-up period not exceeding 1 minute.

INTER-ELECTRODE CAPACITANCES

Grid/All other electrodes	C_{g-all}	9.0	pF
Cathode/All other electrodes	C_{k-all}	6.5	pF

These capacitances include an AEI duodecal holder type CRT92/7.

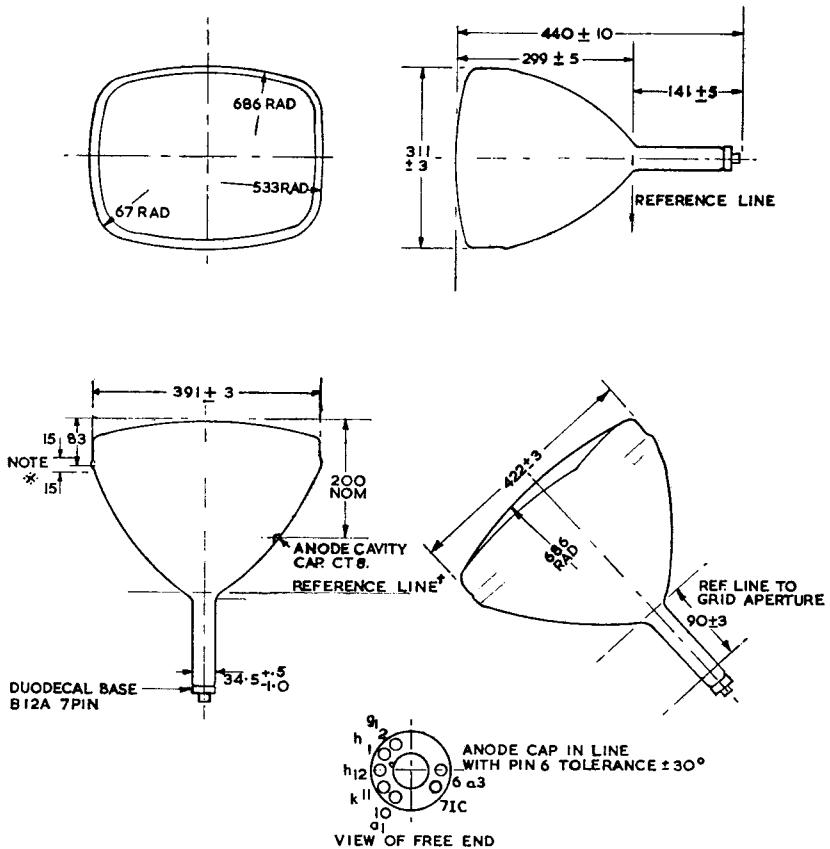
TYPICAL OPERATION

Second and fourth anode voltage	$V_{a2,a4}$	14—15	kV
First anode voltage	V_{a1}	300	V
Third anode voltage for focus (range)	V_{a3}	-100 to +300	V
Grid bias voltage for cut-off of raster	V_g	-30 to -72	V
Average peak to peak modulating voltage for modulation up to 150 μ A		24	V
Centring magnet flux density		0—10	G
Maximum distance of centre of centring field from reference line		56	mm
Persistence of T9 screen		100§	s

§ Persistence is defined as the time taken, from the cessation of continuous excitation, for the luminance to decay from 1 Foot Lambert to approximately 1% of that value.

Note

The T9 screen is liable to burn, even at low values of beam current, if operated with stationary or slow moving spot.



All dimensions in millimetres.

Not to be scaled.

Notes

* During the face sealing operation the glass in this area (total 30mm) may be disturbed. As the shape of the contour within this area may be either convex or concave the bulb should not be gripped within this region unless special precautions are taken (such as the use of resilient packing material).

† Determined by Reference Gauge No. 7.