

**GENERAL**

The 31D13 is an 8½" diagonal rectangular tube with 90° magnetic deflection and low voltage electrostatic focusing. It is intended for use in television studio monitoring equipment.

**RATINGS**

Heater voltage	$V_h$	6.3	V
Heater current	$I_h$	0.3*	A
Maximum second and fourth anode voltage	$V_{a2,a4(max)}$	16**	kV
Minimum second and fourth anode voltage	$V_{a2,a4(min)}$	8.0	kV
Maximum third anode voltage	$V_{a3(max)}$	±500	V
Maximum first anode voltage	$V_{a1(max)}$	500	V
Maximum heater/cathode voltage, heater negative (d.c.)	$V_{h-k(max)}$	200	V
Maximum peak heater/cathode voltage, heater negative (d.c.)	$V_{h-k(pk)max}$	400†‡	V

\* The cathode-ray tube heater should always be connected at the chassis end in a series heater chain.

\*\* 16kV is a design centre rating, the absolute rating of 18kV must not be exceeded.

† Absolute rating.

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

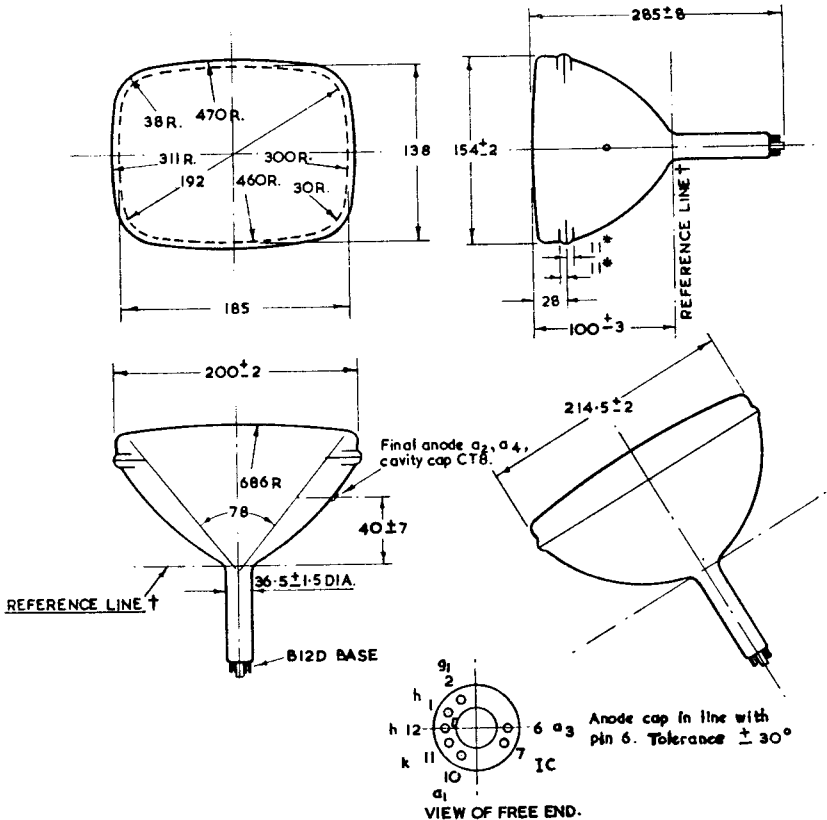
**INTER-ELECTRODE CAPACITANCES§**

Grid/All other electrodes	$C_{g-all}$	9.0	pF
Cathode/All other electrodes	$C_{k-all}$	7.0	pF

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

**TYPICAL OPERATION**

Second and fourth anode voltage	$V_{a2,a4}$	12	kV
First anode voltage	$V_{a1}$	300	V
Third anode voltage for focus (range)	$V_{a3}$	-300 to +300	V
Grid bias for cut-off of raster	$V_g$	-30 to -72	V
Average peak to peak modulating voltage for modulation up to 150µA		24	V



All dimensions in millimetres.

Not to be scaled.

### Notes

\* During the face sealing operation the glass in this area (total 22 mm) 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. 13.