31C13
CATHODE RAY TUBE
Indirectly heated—for Radio DF Compass

TENTATIVE

GENERAL
The 31C13 is a magnetically focused and deflected cathode ray tube. The tube is aluminised, has a 6" diameter flat face, and is available with a "T1" screen which gives a green trace of medium persistence. It has an internal compass scale graduated with octantal correction and its face is treated to reduce specular reflection.

RATING
Heater Voltage $V_h$ 6.3 V
Heater Current $I_h$ 0.6 A
Maximum Anode Voltage $V_{a(max)}$ 10* kV
Minimum Anode Voltage $V_{a(min)}$ 7.5 kV
Maximum Heater/Cathode Voltage d.c. (heater negative) $V_{h-k(max)}$ 150 V

* 10kV is a design centre rating. The absolute rating of 12.5kV maximum must not be exceeded.

INTER-ELECTRODE CAPACITANCES
Grid/All other electrodes $C_{g-all}$ 4.7 pF
Cathode/All other electrodes $C_{k-all}$ 5.3 pF

These capacitances include an Ediswan Clix wafer type duodecal holder.

TYPICAL OPERATION
Anode Voltage $V_a$ 9.5 kV
Grid Bias Voltage for cut-off of 140 mm focused line $V_g$ -43 to -93 V
Average Peak to Peak Modulating Voltage for Modulation up to 150 μA 30 V
Maximum Peak to Peak Modulating Voltage for Modulation of limit Cathode Ray Tube up to 150 μA 35 V

A resistance should be inserted in the anode circuit in order to limit the discharge current to 100 mA(max), in the event of a flash-over inside the tube.
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DIMENSIONS
Maximum Overall Length 458 mm
Maximum Face Diameter 160 mm
Maximum Neck Diameter 35 mm
Approximate Nett Weight 2½ lbs
Approximate Packed Weight 16¼ lbs

CAP—Cavity CT8
BASE—B12A (5 Pin)

Viewed from free end of pins

CONNECTIONS
Pin 1  Heater  h
Pin 2  Grid  g
Pin 3  No Pin  NP
Pin 4  No Pin  NP
Pin 5  No Pin  NP
Pin 6  No Pin  NP
Pin 7  No Pin  NP
Pin 8  No Pin  NP
Pin 9  No Pin  NP
Pin 10  No Connection  NC
Pin 11  Cathode  k
Pin 12  Heater  h
Cap  Anode  a

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