ESA5000
FORCED AIR COOLED TRIODE
(Previously EHA.5000)

GENERAL
The ESA5000 is a three electrode valve designed for use as a Radio Frequency Amplifier or Oscillator. The anode is fitted with a special radiator and cooling is obtained by forced air. The design minimises lead inductance and this valve is particularly suitable for use in R.F. heating equipments. It is the direct equivalent of the American type 889R.

RATING
Filament Voltage (volts) \(V_f\) 11.0
Filament Current (amps) \(I_f\) 125
Maximum Anode Voltage (volts) \(V_a(\text{max})\) 8,500
Maximum Filament Emission (amps) \(F_{\text{em}}\) 9
Maximum Anode Dissipation (kW) \(W_a(\text{max})\) 5.0
Mutual Conductance (mA/V) \(g_m\) * 10
Amplification Factor \(\mu\) * 20
Anode Impedance (ohms) \(r_a\) *2,000
Maximum Operating Frequency at full rating \(\dagger 25\) Mc/s
* Taken at \(V_a=5,000\)V ; \(I_a=1,000\)mA.
\(\dagger\) At higher frequencies the maximum permissible anode voltages and inputs must be reduced.

INTER-ELECTRODE CAPACITANCES
Anode/Grid \((\mu \mu F)\) \(c_{a-g}\) 20.7
Anode/Filament \((\mu \mu F)\) \(c_{a-f}\) 2.5
Grid/Filament \((\mu \mu F)\) \(g_{l-f}\) 19.5

AIR FLOW (MAIN)
500 cubic feet per minute. In addition, 15 cubic feet per minute should be directed on to the seals.

DIMENSIONS
Maximum Overall Length (mm) 298.5
Maximum Diameter (mm) 192.0
Approximate Net Weight (lbs) 34.0
Approximate Packed Weight (lbs) 72.0

MOUNTING POSITION—Vertical.
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ALL DIMS IN ins UNLESS STATED OTHERWISE

Associated Electrical Industries Limited

Electronic Components Division
Tel.: GErard 9797
ESA5000
FORCED AIR COOLED TRIODE

SUPPORT TYPE G.C.4.

GLASS CYLINDER
DWG No MD 1181

8\(\frac{7}{16}\) to 8"

8\(\frac{3}{4}\) to 8"

2\(\frac{1}{4}\)"

7\(\frac{8}{32}\) to 7\(\frac{1}{2}\)"

METAL COVER

4 HOLES EQUALLY SPACED 3\(\frac{1}{4}\)" DIA.

5-8 M.M. WALL

\(\frac{1}{4}\) APPROX

\(\frac{1}{2}\) APPROX

NOTE THIS SUPPORT IS USED WHEN VALVE IS OPERATED IN AN INVERTED POSITION

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SUPPORT TYPE G.C.3.

GLASS CYLINDER
DWG. No. MD 1171

METAL COVER

8 3/4" + 9 3/8"

5-8 MM. WALL

1 1/2 APPROX

4 1/2 APPROX

7 5/8" + 1 1/32"

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December, 1961

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AVERAGE CHARACTERISTIC CURVES: $I_a/V_a$
($V_f=11$ Volts A.C.)
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CHARACTERISTIC CURVES: $I_g/V_a$
($V_f=11$ Volts A.C.)
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AVERAGE CHARACTERISTIC CURVE: $I_f/V_f$
(Cold resistance $= 0.0003 \, \Omega$)

![Graph showing filament current vs. filament voltage](image-url)
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CHARACTERISTIC CURVE: $I_{em}/V_f$